Household Vessel Exchange and Consumption in the Inland Niger Delta of Mali: An Ethnoarchaeological Study

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Abstract

This dissertation clarifies ethnoarchaeology's role in post-positivist epistemology through both a critical re-examination of ethnoarchaeology's position within archaeology and a study of household vessel exchange and consumption in the Inland Niger Delta of Mali. I argue that ethnoarchaeology meets its epistemic *raison d'être* by achieving theoretical independence from archaeology's general theories. Independence is "built-in" to ethnoarchaeological study by focusing explicitly on the way material culture is used in daily practice; in particular, by re-embedding material culture in the "modern" contexts where it is used. Ceramic exchange in the Inland Niger Delta can not be understood apart from either the exchange and consumption of other industrial household vessels or the political economies women experience within patrilineal households. Household vessels are distinctly women's tools in the Delta and their consumption is an intimate part of the way women resist exploitation and the appropriation of their wealth within household political economies. The different roles vessels play are manifest in the distances these objects travel during consumption and are also materialized by their location within house compounds. Enamel vessels are used in displays of social and economic capital related to marriage that insulate women from exploitation; aluminum vessels are expensive items bought as part of marriage trousseaus; and plastics are relatively low value items given as small gifts or bought in local markets to insulate small amounts of wealth from appropriation. Pottery is relatively marginal within household economies; yet, potters rely on the income ceramic production creates. Thus, potters use extensive marketing strategies to sell their wares to a relatively disinterested clientele in order to

meet their own obligations within patrilineal households and to buy the other types of household vessels that they desire. The findings of this study show that archaeological studies of ceramic exchange should consider the active role that consumption plays in exchange systems and pay careful attention to the ways that objects are used by women to create and manipulate different forms of capital in gender-based political economies.

Cette dissertation clarifie le rôle de l'ethnoarchéologie dans l'épistémologie post-positiviste par un réexamen critique de la place de l'ethnoarchéologie en archéologie ainsi que par une étude de l'échange et de la consommation de récipients domestiques dans le Delta Intérieur de fleuve Niger au Mali. Je soutiens que l'ethnoarchéologie trouve sa raison d'être épistémologique en réussissant une indépendance théorique face aux théories générales de l'archéologie. Cette indépendance est « intégrée » à l'étude ethnoarchéologique en se concentrant explicitement sur la façon dont la culture matérielle est utilisée dans la pratique quotidienne; particulièrement, en réintégrant la culture matérielle dans les contextes « modernes » où elle est utilisée. L'échange céramique dans le Delta Intérieur du fleuve Niger ne peut être comprise en isolation de l'échange et de la consommation d'autres récipients domestiques industriels ou des économies politiques vécues par les femmes à l'intérieur des maisonnées patrilinéaires. Les récipients domestiques sont distinctement des outils de femmes dans le Delta et leur consommation fait partie intime de la façon dont les femmes résistent à l'exploitation et à l'appropriation de leur richesse dans les économies politiques de la maisonnée. Les différents rôles que jouent les récipients domestiques se manifestent par

les distances que ces objets parcourent durant la consommation et se matérialisent par leur situation dans l'enceinte des maisons. Les récipients d'émail sont utilisés pour étaler le capital économique et social apparenté au mariage qui isole les femmes contre l'exploitation; les récipients d'aluminium sont des items dispendieux achetés pour faire parti des trousseaux de mariage; et les plastiques à valeur relativement basse sont donnés comme petits cadeaux ou achetés dans des marchés locaux pour isoler de petits amas de richesse contre l'appropriation. La poterie est relativement marginale dans les économies de maisonnées; cependant les potières se fient aux revenus que la production de céramique crée. Elles utilisent donc des stratégies de marketing pour vendre leurs produits céramiques à une clientèle relativement désintéressée pour pouvoir remplir leurs obligations dans les maisonnées patrilinéaires et pour acheter les autres types de récipients ménagers qu'elles désirent. Les conclusions de cette étude démontrent que les études archéologiques sur l'échange de la céramique devraient considérer le rôle actif que joue la consommation dans les systèmes d'échange et porter une attention particulière aux façon dont les objets sont utilisés par les femmes pour créer et manipuler différentes formes de capital dans des économies politiques basées sur les sexes.

Dedication

This project focuses on the lives of strong African women who address with dignity the challenges of their daily lives. I dedicate this project to the strong women who long have inspired me through their perseverance, poise and strength of character:

To my grandmothers, Betty Mottus and Betty Cunningham

To my mother, Terri Cunningham

And to my wife, Deanne Robblee

Acknowledgements

Few projects truly start on the first day of field research, and this dissertation is certainly no exception. It represents the culmination of a body of research that spans 10 years and originated at the University of Calgary in a reading course on regional approaches to West African Archaeology taught by Scott MacEachern. During the course, Scott introduced me to Roderick McIntosh's concept of "symbolic reservoirs" which piqued both my long term interest in the concept of style and my fascination with West African cultural contexts. My subsequent M.A. research at the University of Western Ontario allowed me to generate a deeper understanding of the concept of style and to gain what I felt was a necessary grounding in epistemology. At Western, I benefited greatly from Mike Spence's understanding of "style" in its various forms and Alison Wylie's exceptional tutelage in feminist philosophy of science, archaeological theory, and post-positivist epistemology. Ann Brydon opened my eyes to an incredible literature on collecting, consumption and material culture studies during a course on Symbolic Anthropology and Dan Jorgensen instilled in me important lessons about the pragmatics of ethnographic research. The practical component of my M.A. research focused on ceramic variation from the Van Bree site, a small Western Basin – Early Ontario Iroquoian site just west of London, Ontario. During the analysis, I benefited from long conversations with Neal Ferris and Linda Howie about style and ceramics. The analysis was a significant turning point in my thinking because it demonstrated that "style" was in many ways a vacuous concept, especially in regards to Ontario Prehistory. Despite my best efforts to find the contrary, the site showed that "stylistic behavior"

(ethnic symbolism) was far less important in creating the ceramic patterning than were more banal and, I felt at the time, wholly boring factors such as production rates and intensities. For someone concerned with epistemology and steeped in contemporary postmodern skepticism about "data's" ability ever to resist ideological framing, the unwillingness of the Van Bree ceramic assemblage to fit the neat conceptual boxes I had prepared for it was a watershed lesson.

I entered the Ph.D. program at McGill with the purpose of continuing my study of style and epistemology, this time focused through an ethnoarchaeological study of ceramic consumption in West Africa. At McGill, I have benefited tremendously from the mentorship and guidance of a number of individuals. Mike Bisson, John Galaty and Myron Echenberg have each greatly expanded my knowledge of Africa. Scott MacEachern, now at Bowdoin College in Maine, has continued unerringly to be a source of knowledge and advice. Courses and directed readings with Bruce Trigger, John Galaty, Jerome Rousseau, Toby Morantz, and Margaret Lock provided me with the conceptual background I needed to conduct this research. Rose Marie Stano and Cynthia Romanyk guided me unerringly through McGill's opaque administrative hallways and their cheerfulness whether on the phone or in the department office made even the most trying tasks joyful.

There is little I can say about my supervisor that has not already been said better by others, ranging from stories about his impeccable editing skills and clarity of thought to his ability to achieve lightening-fast turn arounds on manuscripts and chapters sent to him for comment. At a session dedicated to Bruce Trigger's scholarship at the 2004 SAA's, Lynne Meskell stated that he was her hero. The description applies no less for

me. As most of his former students can attest, it is impossible to do research with Bruce and not find oneself profoundly changed. I came to McGill because Bruce seemed an island of calm in the turbulent seas of archaeological theory. His research demonstrates a timelessness and strength of purpose that has transcended intellectual fashions, serving as a model for any aspiring archaeologist. From his mentorship, I have learned the value of deep-time perspectives on archaeology's intellectual history and to respect the ways that preconceptions drawn from our broader social contexts and (often implicit) political agendas frame the research process. I also have learned the importance of striving always to let a body of data speak for itself. That these two often opposed truisms were taught to me by one man is a measure of my debt to him.

I gratefully acknowledge the funding bodies that supported the research on which this dissertation is based. My studies at McGill were funded by a Social Sciences and Humanities Research Council of Canada Doctoral Fellowship, a McGill Faculty of Arts and Sciences Recruitment Fellowship, A Teaching Assistantship through the Department of History and a Research Assistantship through the Center for Society, Technology and Development (STandD) at McGill. Phase I of my field research was supported by a McGill Social Sciences and Humanities Research Grant and Phase II and III were conducted with the assistance of a Sir James Lougheed Award of Distinction from the Alberta Heritage Trust Fund and a Wenner Gren Dissertation Field Research Grant (Gr. 6876). I would especially like to thank Bruce Trigger, Mike Bisson, Barbara Frank, Scott MacEachern and Adria LaViolette for providing candid comments on my application to Wenner Gren and Mary Beth Moss at the Wenner Gren Foundation for her assistance throughout the project.

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We made several close friends in Djenné and Bamako who contributed directly to the success of this project. In Bamako, I would like to acknowledge the Hôtel Maxim, and especially the manager Tukalor Mokhtar for giving us a home away from home while in the capital and for assisting us with everything from buying a motorbike to making phone calls. Boccar at the *Mission Culturelle* taught me to make strong Malian tea, tended us when we were sick and helped us dodge midnight dust storms, while our friends at the Campement Hôtel in Djenné provided a wonderful atmosphere where we could unwind, do fieldnotes, and plan the next day's work. Brahima Sow became a close friend during my early trips to Mali and became a brilliant collaborator during the last stage of the project once his own M.A. research was complete. Lasseiny and Kadjia Kayentao were fast friends during our stays in Djenné and they opened our eyes to an entirely new world by making Deanne and I the god parents of their beautiful daughter. They have shown us the hidden beauty of the Inland Niger Delta.

The analysis on which this project is based incorporates GIS, statistics and qualitative data analysis. I would like to acknowledge Bill Huber on the ESRI website's Help Forum for providing essential information at a crucial time in the project. John Salsberg introduced me to the Nudist software platform and was a source of information during the frustrating weeks while I learned the program. The analysis and write-up of the project took place away from McGill in Hamilton, Ontario and then in Calgary. Theory groups, lecture series and social gatherings at the University of Toronto, McMaster University, the University of Western Ontario and the University of Calgary, as well as the RATS Meeting at SUNY-Binghamton provided me with essential intellectual stimulation through the otherwise isolating months of data entry, drafting and writing. Mike Spence, Chris Ellis, Andrew Nelson, Christine White and especially Neal Ferris were wonderful colleagues to me while I taught at Western in 2004 and I would like to thank my Debates in Archaeology students (Anth 308) for showing me just how rewarding teaching can be. Adria LaViolette, Ann Mayor and *Section de la Géographie Humaine des Pays en Voie de Développement, Institut Géographique, Université d'Utrecht* provided me with copies of publications that otherwise would have been almost impossible to get in Canada.

Pursuing a postgraduate degree is a relatively selfish endeavor, requiring prolonged absences from friends and family and producing a level of poverty that means someone else often has to "pick up the tab", whether for a trip home at Christmas or for a night at the movies. I would like to acknowledge friends and family who have been a source of support during my postgraduate studies. My good friend – and classmate since kindergarten – Wes Gustavson has shared with me the dream of an academic career. I

would like to thank Gerry and Terri Cunningham, who became my parents far too early in their lives, but who nonetheless instilled in both of their children the optimism and *la joie de vivre* only youth can bring. They have been unflagging supporters of my quest for a Ph.D. Through their stories of perseverance as farmers on the Alberta prairie, Betty Mottus, and my late Grandpa, Art Mottus, have always inspired me to see beyond the horizon. I hope this dissertation stands as a testament to their intrepid spirit. I would like to thank my wife Deanne Robblee for saying yes both when I asked if she would like to go to Mali and again when I asked her to marry me during our trip. She has never stopped believing in me or in my preoccupation with archaeology.

Finally, I would like to thank the women of the Inland Niger Delta who allowed us to ask bewildering questions about their lives and who gave us often unexpectedly candid answers. I can only hope this dissertation does justice to the trust they put in me.

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CHAPTER 1
INTRODUCTION

Ethnoarchaeology has often gazed upon the ethnographic world with the deep-time lenses of the archaeologist. Doing so in Africa, however, means that ethnoarchaeologists must identify cultural practices that have survived the changes wrought by slavery, colonialism and economic marginalization and then identify the material correlates of those practices. This dissertation argues that ethnoarchaeology has much to gain by refocusing its attention on the daily – and unabashedly "modern" – contexts in which material culture is made and used. Embedding material culture firmly in the "modern world" allows ethnoarchaeology to achieve the epistemic importance it once aspired to under the New Archaeology. In the positivist epistemology employed by the New Archaeology, ethnoarchaeological studies were thought to generate an independent body of theory that enabled archaeologists to study scientifically the archaeological record and generate secure interpretations about the past. I argue that the

same scientific goals can be achieved in post-positivist programs of research that use ethnoarchaeology to test ethnographically the theories used by archaeologists. This study combines a critical analysis of ethnoarchaeology's place in archaeology with a detailed ethnoarchaeological study of women's production, trade and consumption of household containers in the Inland Niger Delta of Mali. My focus is on the complex mélange of processes that affect the movement of household vessels from production centers to consumer households. The material culture patterns investigated here thus have direct archaeological applications.

For archaeologists, household vessels can mean many things. When organized across a landscape, ceramic decoration may denote ethnic groups. When viewed through time, the same variability may speak of systemic changes in cultural evolution. The forms that pots have identify their roles in preparing and storing the natural resources procured from an ecological setting, while the microscopic and chemical compositions they have tell archaeologists about their places of origin. In the Inland Niger Delta, however, household vessels help women to negotiate marginal and constantly changing social positions within patriarchal households. Women display household vessels to affirm their worth to themselves and to the communities in which they live. Potters sell vessels to gain the income they need to prepare marriage trousseaus for their daughters, while their daughters transform that income into the vessels they need to meet the domestic obligations that marriage brings. A collection of vessels allows women to store wealth in a form that is uniquely theirs, keeping it safe from their husbands and other family members. Should the need arise, this same wealth can be liquidated and the proceeds used to nourish themselves and their children.

Realistically assessing the movement of pottery from production to consumption locales precludes any premature analytical segregation of pottery from the other forms of household vessels. This is what it means to embed material culture in the present. In daily practice, women routinely use pottery as part of their domestic tool kit, which may also include aluminum caldrons, enamel serving dishes, plastic buckets and tin wash basins. Pottery does predate these other items in the region by well over a thousand years and its current production and distribution are not vestigial. Women purchase pottery with the full recognition that they have other, industrial options available to them. Thus, pottery cannot be treated as if it formed a separate subsystem of society, a tradition that has survived unmodified by the changes Malians have seen in their economies and societies. The production and consumption of household vessels, including pottery, by women is attuned to environmental changes, the monetization of the modern world economy, and all forms of government – ranging from their husbands to international bodies like UNESCO.

Resisting the temptation to see pottery as an example of uncontaminated, traditional African life is especially important in the region of the Inland Niger Delta. For many, lifeways in the Delta represent an icon of untouched tradition and a window onto a simpler past. The area covered by this project centers on the large town of Djenné, a regional administrative center of approximately 12,000 people located on the banks of the Bani River in the upper (and more southern) area of the Inland Niger Delta of Mali. The Delta floods for several months each autumn, turning the countryside into a vast, shallow rice-filled lake. Djenné and some of its surrounding tell-villages become densely populated islands. In the past, the upper Delta produced abundant staples of rice,

sorghum and millet, and it has long been an integral part of Fulani cattle-pastoralism. Djenné's position at the southern end of the Delta and near the Niger River's north-south corridor made it one of the largest trading and Islamic religious centers in West Africa. Trans-Saharan trade in salt and gold has flowed through Djenné's various ports throughout its fifteen hundred year history. Archaeological researchers have even suggested that Djenné is the source of the original "Island of Gold" myth (McIntosh 1998), a connection that underscores Djenné's deep time role as a center of economic prosperity.

In recent years, the town's grand mosque, mud brick architecture, and large Monday market have made Djenné a focal point of a tourism industry aimed at showcasing Mali's rich cultural traditions. The mosque, which is the largest mud brick structure on earth, contributed to Djenné's designation as a UNESCO World Heritage Site. The town is now part of a dedicated tourist loop that passes through Mali's two other UNESCO sites, Timbuktu and the Bandiagara Escarpment. Europeans flock to Mali during the winter tourist season, recapturing images of colonial splendor and frequently catching glimpses in Djenné's narrow alleyways and simple craftspersons of their own medieval past. Cultural tourism has made the preservation and management of Djenné a central concern of the national government. A *Mission Culturelle*, complete with a museum, academics and a small group of tour guides, has been built at the entrance to the town to both interpret Djenné for the burgeoning tourism industry and to preserve local cultural resources in accordance with the UNESCO mandate.

The tendency for outsiders to see Djenné as a living expression of "the past" often conflicts quite strongly with the aspirations and lived realities of the town's inhabitants.

The national government, which until recently has been dominated by officials from the southern and western areas of the country, has often desired to keep Djenné in an idealized "traditional" state for the tourism industry. In contrast, Djenneké (inhabitants of Djenné) desire to enact changes in their community that they feel will better their lives, including changes to public works and "traditional" cultural resources. Recently, the community decided to add doors to the great mosque so that domestic animals could not enter during the night and drink water stored near the door for ablutions. A beautifully decorated door was commissioned by a wealthy member of the community now residing in Morocco and it was subsequently donated to the mosque. During a visit to Djenné by the United States Ambassador to Mali, the Imam asked the US government to donate ceiling fans for the mosque so worshipers could be more comfortable during assemblies. The US government, which has sought amicable relations with Islamic institutions world-wide since the World Trade Center bombing and its invasion of Afghanistan, quickly delivered the fans. No contact was made with any of the relevant cultural-preservation officials. The *Mission Culturelle* objected to both of these changes. New doors and ceiling fans contaminated the "traditional" character of the structure and threatened the town's UNESCO designation. The local people responded by arguing that the mosque was "for the people of Djenné" and not for the tourists or the UN. In the fallout, the *Mission Culturelle* was portrayed as an alien institution and the director was even threatened during a local radio broadcast. The threat carried little risk of actual violence, but it reflected a severe breach of Islamic norms of politeness and mutual respect, indicating to many Djenneké that they needed to defend their control over their "living" cultural resources.

The definition of Djenné as a living tradition conflicts somewhat with the indisputable fact that it is also a thriving West African urban center. Any visitor is greeted by the large TV transmitter and its aircraft warning lights located beside the main roadway into town, re-broadcasting a national TV signal sent via satellite from the capital. The town has several small hotels, its own radio station, generated power, and more recently private telephones and even two small internet cafés. People with the wealth to own TV sets typically set them up in semi-public courtyards and on street corners each evening so programs also can be watched by their neighbors. European high-drama soap operas, local and international news broadcasts and Premiere League Football draw large crowds. Not infrequently multi-lingual audience members will translate the French dialogue into Bambara or Songhai during commercial breaks. Transistor radios, ubiquitous in most areas of Mali, deliver on a daily basis up-to-the-hour international news, viewpoints and music from such broadcasters as the BBC, Radio Canada International, Radio France, and Voice of America. Such activities clash with Djenné's constructed traditionalism, which packages the village neatly for tourist consumption as a quaint peasant society complete with millennium-old architectural traditions.

Modernity is overlooked; but doing so can have dire consequences. For example, a recent dam planned for upstream of Djenné on the Bani River near the village of Talo was opposed by an American team of activists working in the region because a drop in water levels could threaten Djenné's traditional architecture. Little concern was given to the more dire consequences that changing water levels would have on annual cereal production or aquatic resources, especially in the small villages surrounding Djenné that

are not part of the tourist loop.[1] Rather than a question of famine or survival, opposition to the dam was contextualized in terms of its effect on architecture and tourism. The same group of activists also felt that the plastic wrappers and other non-perishable garbage that accumulated on Djenné's streets and middens detracted from the traditional beauty of the town. Handcarts for transporting the garbage, dust masks to protect the workers and a truck were donated to the town so that it could initiate clean-up efforts aimed at increasing tourism. In a short time, the carts were being used by porters in the weekly market, the truck was hauling goods to and from rural villages in a for-profit enterprise and the dust masks were being resold in local gas stations. The garbage remained where it was.

Potters and their wares have even become a part of the tensions between official traditionalism and daily life. In recent years, Djenneké have taken to renovating their houses by adding fired clay tiles to the existing architecture. Home owners use the fired bricks not only on floors or in courtyards, but also to veneer over the mud brick facades of Djenné's highly valued architecture. In the face of diminishing returns for other ceramic items, potters have diversified their production and gained additional funds by firing these tiles. However, the tiling of house facades has become a contentious issue. Tiles are not part of Djenné's "traditional" architectural repertoire and their use contravenes the UNESCO designation's guidelines. The sun-dried clay bricks used to form house walls are supposed to be covered by a mud plaster. Nonetheless, locals remain quite eager to incorporate tiles into their constructions. Tiling eliminates the significant annual expense of recovering house walls with plaster to repair rain damage.

[1] Other organizations with more experience in development contexts have raised these issues in some detail (Gallier 2001; Childs, et al. 2004)

Cash windfalls during a particularly good year can be diverted to tiling, which saves on re-plastering costs in subsequent years when money could be in short supply.

For anyone doing work in such an environment, there is a very real danger of falling into the trap of reifying Djenné's official "traditionalism". Ethnoarchaeologists are particularly vulnerable. The "field" is a location where they can gain access to subsistence practices and craft production that have been forgotten and obscured in their own societies. Traveling to the "developing world" seems to allow for a conceptual movement backwards through time (Gupta and Ferguson 1997; N. Thomas 1996). Modern craft producers become proxies for the ancient craftspersons archaeologists work so hard to access through material remains. Rather than embedded in the modern economy, ethnoarchaeology's subjects risk being glossed into the producers of soon-to-be-extinct practices transported wholesale into the present from a previous era of cultural evolution (see especially Stahl 1993; following Fabian 1983; and Wilmsen 1989). Ethnoarchaeology becomes a salvage mission – a quest to capture one last glimpse of a past that is disappearing under the inevitable march of a capitalist system. One only needs to scrape off the veneer of modernity to see authentic cultural traditions.

The danger in this approach lays in the passivity that it assigns to craft producers. Rarely do craftspersons produce, or their clientele consume, craft items simply because of blind conservatism. Seeking to document "traditions" that are being submerged by modernity de-contextualizes craft production from the economic realities that continue to make such production necessary and desirable. Traditionalizing craft production not only creates ethical issues regarding ethnoarchaeology's subjects, but also severely undercuts the accuracy and validity of the analogues that subsequently are developed.

Archaeology, since the end of antiquarianism, has asserted that material culture could be used to understand the past because it reflects the many aspects of human cultural life. Hence, understanding material culture's relations to society requires understanding the web-work of ties that connect material patterns to human action. Ignoring modern "contaminants" in such systems renders the resulting studies wholly artificial – neither creating a complete picture of modern social-material ties nor generating a pristine image of craft production that reflects an untouched archaeological past.

The central theme in this dissertation is that ethnoarchaeology has much to gain from engaging with the economic, social and political realities that create material systems in the present. Ties between individuals and their things – whether things they have bought or things they have made – are complex, sensual, emotive, economic and utilitarian. Things are banal and they are esoteric. Ethnoarchaeology can only meet its goals within the broader discipline of archaeology by seeking to identify as accurately as possible exactly these sorts of ties.

Organization of the Dissertation

In the following chapter, I examine the role ethnoarchaeology plays in archaeological studies. Although ethnoarchaeology predates the rise of the New Archaeology (e.g., Fewkes 1900; Kleindienst and Watson 1956), it is with Binford that we see ethnoarchaeology move from a marginal side-project to a central component of archaeological research. Binford was quite adamant that ethnoarchaeology was, to borrow Simms' (1992) terminology, the "key to a time machine". It was only through

ethnoarchaeology's "independent" identification of unambiguous behavioral-material correlates that archaeology could escape the vicious circularities of cultural historical archeology and become a scientific discipline. I argue that the search for unambiguous material correlates has been a red herring, but that the quest to develop "independent" knowledge of the processes affecting the production of material culture has a continued relevance. I suggest that independence is something that must explicitly be built-in to ethnoarchaeological research. One of the more productive ways of creating such independence is to exploit the different perspectives that archaeology and ethnoarchaeology tend to take on human action. Archaeology's more structured, deep time perspective on culture change – its focus on longer *durées* (to borrow Braudel's [1976] terminology) – contrast productively with anthropology's more immediate access to daily practice (see David 1992: 337-338). Such dissimilarities prompt different pathways between socio-cultural theories and the data they propose to explain, breaking simple tautologies and fostering theoretical independence. Thus, a degree of independence – the very property that makes ethnoarchaeological knowledge relevant to archaeology – is created by engaging with the lived and wholly modern realities of the people whom ethnoarchaeologists study.

In chapter three, I provide an overview of the social and economic context of my field research, focusing on ethnicity, the local economy and the political economy of the households in which potters and consumers live. Ethnicity is a tricky concept in West Africa. On the ground, it seems to be *the* fundamental framework for all social action. As elsewhere in Africa, in and around Djenné, ethnicity is intimately tied to occupational specializations and in some instances it is crosscut by West African caste systems.

However, identities are quite plastic and differences between castes and ethnicity have in the past been quite fluid. Economically, Djenné was once part of the trans-Saharan trade in gold and salt and functioned as a key link in north-south exchanges. Recent studies of the local economy, however, have noted that changes introduced by the French colonial government restructured these economic relations in a way that now renders Djenné largely an economic "cul-de-sac". Rather than a chain in a transnational economy, Djenné now is primarily a redistribution center for local goods. Women play a key component in the redistribution of these goods. Their positions within the marketplace, however, are relatively marginal and mimic their positions within households. In general, women are people "without power". Yet, throughout their lives, they move from possessing quite marginalized statuses in the household to become the focal point of a household political economy. It is within the framework of ethnicity, economy and political economy that the production and consumption of household vessels occurs.

In chapter four, I outline the methodology used in this study. Independence is never a given, but must explicitly be created. In order to create the independence discussed in chapter two, I frame my analysis through the use of more practice-focused theories of exchange and consumption drawn from the anthropological literature. Both economic anthropology and the anthropology of consumption have recently emphasized "low-level" studies of economic activities rather than debates about "high-level" truisms such as those found in formalist-substantivist dichotomy (Wilk 1996; Miller 2001). By counterpoising theoretical frameworks and emphasizing a pluralistic approach to cultural processes, the methodology used aims to identify the various factors that affect household vessel exchange.

In chapter five, I report the results of my study of household vessel consumption. The findings suggest that the political economy within households has a significant effect on the consumption of household vessels. Ceramics, plastics, aluminum and enamel vessels travel different distances between the point of purchase and consumer households in response to different suites of processes. Expensive enamel vessels are purchased in major centers typically as part of a marriage trousseau. Through their display after marriage, enamels demonstration a new bride's social and economic capital and insulate her from overt exploitation by her husband's family. Aluminum caldrons are also purchased as part of a trousseau, but are not included in these displays. Instead, they tend to be bought at larger market centers where prices are lower. By comparison, plastics are inexpensive and available locally; however, they travel larger than expected distances because they often are bought as gifts by people coming to visit rural areas or are purchased as souvenirs by people who have been on a voyage. In contrast, ceramic movements are highly localized. Consumers purchase most of their pots from local potters or potters who have come to their village to sell. In these cases, pottery is purchased because it can be acquired on credit or through barter.

Chapter six looks in more detail at potters and their marketing strategies. The relative low value of pottery means that most potters peddle their pots to surrounding villages. Seven distinct marketing strategies are commonly employed: local household sales, selling through intermediaries, neighboring village sales, market sales, the use of franchises, itinerant production, and itinerant marketing. Potters' choices about which of these strategies to follow continue to change in response to changing economic and ecological situations. Itinerant practices that once were frequently used have now been

replaced by franchises. Ecological and economic changes have resulted in many of the potters' ironworker husbands shifting from craft production to agriculture. The shift increases the labor potters face within their households, especially during the floods, when potters once used boats to market itinerantly. Franchises allow potters to continue selling their pottery despite increasing demands on their household labor because they employ other women to carry out the exchange.

In chapter seven, I broaden my focus to look at the factors that affect both household vessel consumption and potter marketing. In particular, the character of exchange and consumption seems to relate most specifically to ways that different forms of capital are converted from one to the other (Bourdieu 1986, 1984). Household political economy, specifically the extraction of both labor and profits from women by their husband's family, seems to have the most widespread effect on all aspects of household vessel exchange. Consumers resist exploitation in the patrilineal families where they live through large displays of enamels, while changes in potter marketing strategies reflect their own difficulties in maintaining viable craft production despite changing demands on their labor. However, while the impact of political economy on both potters and consumers is widespread, its effect is not contained within a specific material pattern that would reflect a distinct "material correlate". This suggests that ethnoarchaeological and archaeological approaches to material culture must consider the broader causal milieu in which patterns are formed. I conclude my discussion in chapter eight with a consideration of how the findings identified here fit into ceramic ethnoarchaeology, specifically how a contextual reading of the causal ties between patterning and process changes ethnoarchaeological research.

CHAPTER 2
THE INDEPENDENCE OF ETHNOARCHAEOLOGY

Every indication suggests that ethnoarchaeology has reached the end of its useful life. Although the subfield has recently received its first dedicated text book (David and Kramer 2001) and ethnoarchaeological studies continue to produce interesting results (e.g., Bowser 2000), general references to ethnoarchaeology in the literature either offer conditional acceptance or damning critique. Simms (1992) famously referred to ethnoarchaeology as a trivial pursuit and – citing its tendency to produce "cautionary tales" – an obnoxious spectator, while Stahl (1993) has charged that ethnoarchaeology remains gripped in the fantasies of unilinear evolution. Recent publications have restated two other longstanding critiques that archaeologists often use to characterize ethnoarchaeology. In an introduction to a new collection on Andean ethnoarchaeology, Kuznar (2001b) once again denigrates ethnoarchaeology's penchant to create "cautionary

tales" and Arnold (2000: 120) takes to task the subfield's eclecticism, noting the "hodgepodge of protocol and purpose subsumed within the increasingly ambiguous arena of ceramic ethnoarchaeology." While long championed by Americanist archaeology as "the key" to archaeological inferences, ethnoarchaeology seems to have lost much of its luster. Now far from its explosive and optimistic birth in the cradle of the New Archaeology, ethnoarchaeology is dominated by European researchers who increasingly produce the bulk of both cutting edge and substantive research (e.g., Beyries and Pétrequin 2001; Gosselain 2000).

The problem that ethnoarchaeology faces in North America centers on a single question: Why *do* ethnoarchaeology at all? The old standby – that ethnoarchaeology creates "middle range theory" (MRT) – seems to have now lost much of its force, given the ambiguities that now surround the concept. Binford's (e.g., 1978) original definition stated that MRT was a distinct body of knowledge that correlated material culture and human behavior. The "unambiguous material correlates" that make-up middle range theory allow archaeologists to test their theories about the past. Indeed, the most important aspect of ethnoarchaeology in archaeological epistemology is the touted *independence* of the knowledge that it produces. By identifying behavioral-material correlations, ethnoarchaeology enables archaeologists to "independently" and deductively test their original propositions. However, Binford's vision of middle range theory has received its own share of critiques. Raab and Goodyear (1984) noted in a widely read paper that the invocation of MRT as a body of knowledge about "formation processes" is not consistent with its original definition by Robert Merton (1968). Middle-range theories were originally defined in sociology as flexible mid-level hypothesis that

attempted to accommodate broad theories to a body of data. Rather than a component of deductive theory-testing, "middle-range theory is the critical *bridge* between theory and data that allows both [inductive and deductive] kinds of operations to be effective" (Raab and Goodyear 1984: 257, emphasis in original). Some recent re-conceptualizations suggest that MRT in archaeology is intrinsically tied to general explanatory schemes – they are, in contemporary jargon, really just one part of a hermeneutic circle (Hodder 1986a; Kosso 1991; Tschauner 1996). This new "connectedness" of MRT to broader cultural theory would seem to reintroduce exactly the type of interpretive circularity that drove Binford to advocate for a body of "independent" actualistic research. If ethnoarchaeology is no longer to be an "independent" field of study, then why should archaeologists bother with it at all?

In this chapter, I address the issue of ethnoarchaeology's epistemic role in archaeological research. I begin by looking in detail at Binford's original program for ethnoarchaeology, focusing on the issue of independence. Binford has revised many of his programmatic statements. However, most of his original proposals continue to have a significant influence because they were central to the very definition of ethnoarchaeology as a field of study. Building on an earlier discussion (Cunningham 2003b), I identify three roles in contemporary ethnoarchaeology and show how they are a direct outcome of Binford's original definition of ethnoarchaeology's relation to archaeology. My thesis is that there is a fundamental contradiction in Binford's version of MRT between the supposed independence of ethnoarchaeological knowledge and its close ties (or "topical symmetries") with archaeology. The definition of MRT – and of ethnoarchaeology's *raison d'être* – as the simple, empirical identification of "unambiguous material

correlates" is misleading and obscures the actual connections between archaeology and ethnoarchaeology. In contrast to Binford's view, I argue that ethnoarchaeology is a full interpretive exercise replete with its own framing theory. Rather than a nebulous *de facto* independence present because ethnoarchaeology somehow avoids interpretive circularities, I suggest that independence must be explicitly built-in to ethnoarchaeological programs.

Binford and the Quest for Unambiguous Material Correlates

One of Binford's primary concerns in his rejection of "traditional" culture-historical archaeology was breaking away from pre-scientific forms of inference about the past. Initially, this break took the form of a redefinition of the goals of archaeological research. In two early papers, Binford (1962; 1965) outlined an alternative to the "aquatic," normative model of culture that organized the archaeological record into spatial and temporal frameworks (Trigger 1989). Rather than explaining changes of "traits" in terms of migrations and diffusion, Binford argued that archaeologists needed to go beyond the archaeological record to consider the behavioral system that created the material variability. Culture was envisioned as a system made up of interacting technological, social and ideological subsystems that articulated into a complete cultural entity that enabled people to meet ecological requirements. Rather than migrations or diffusions, changes in material culture were understood in relation to ecological change and its effect on culture's subsystems. These changes were to be found archaeologically through changes in the material variability that reflected the three cultural subsystems.

In defining this substitute for traditional archaeology, Binford (e.g., 1968b: 270) was particularly concerned with finding an alternative to Raymond Thompson's (1956) suggestions that interpretations of the past could only be validated by looking at the credentials of the archaeologist who made the interpretations.[2] By redefining culture to emphasize causal process, he sought to enable the scientific study of all human behavior from material remains. The difference between the historical focus of traditional archaeology and a "scientific" approach was characterized as a change in epistemology: a scientific archaeology would add deductive testing to the usual archaeological toolkit of analogically-based inductive interpretations:

> The accuracy of our knowledge of the past can be measured; it is this assertion which most sharply differentiates the new perspective from more traditional approaches. The yardstick of measurement is the degree to which propositions about the past can be confirmed or refuted through hypothesis testing—not by passing judgment on the personal qualification of the person putting forward the propositions. The role of ethnographic training for archaeologists, the use of analogy, and the use of imagination and conjecture are all fully acknowledged. However, once a proposition has been advanced—no matter by what means it was reached—the next task is to deduce a series of testable hypotheses, which, if verified against independent empirical data, would tend to verify the proposition (Binford 1968a: 17).

Binford notes, however, that archaeology faces a problem in implementing deductive testing procedures. General theories, like the ecological model that he introduces, focus on the explanation of human behavior, not on the explanation of the archaeological record. As a result, in archaeology "general theory remains in the air, adrift from the empirical phenomena with which it could be profitably evaluated"

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[2] As Patterson (1986) notes, the New Archaeology's rejection of historical approaches also reflects a shift in power from eastern based elites to a middle class based in central and western North America. The adoption of a "scientific approach" could then be seen as an attempt to undercut exactly the sort of credentialing (and underlying cronyism) that Thompson suggests.

(Binford 1983: 54). Building a mature, deductively based archaeology therefore requires that a science of the archaeological record also be developed that explains how material culture relates to the behaviors that are hypothesized to exist in general theory. Only by making such "middle range" linkages can researchers use archaeological data in a deductive program to test broad range theories of behavior. As Binford notes, deductive inferences

> . . .would be true . . . only if the variables cited in one's explanatory argument could be unambiguously operationalized to facts recoverable from the archaeological record. Of course this ability rests with the demonstration of unambiguous cause-and-effect relationships between the causal dynamics and the derivative statics that would be cited to warrant the use of chosen static facts as measures for the [behavioral] variables in question. In short, only if middle-range research had justified the meanings assigned to archaeological observations as measures for the variables cited could such testing proceed (Binford 1983: 14)

Middle range theory provides a "bridging argument" that enables testing of the original inductively generated inference (See Figure 2.1). The procedure is quite straightforward (Binford 1968a: 17, 19-20). First, the archaeologist observes an archaeological pattern and proposes an inductively-based interpretation. For example, a geographic break in rock paintings and engravings may be interpreted as reflecting distinct cultural traditions. The archaeologist then generates a prediction that should be true if this interpretation was true. If the pattern is indicative of distinct cultural traditions, then stylistic elements in other aspects of material culture, such as "bead forms, decoration on bone implements, projectile point forms, etc" (Binford 1968a: 19), should also demonstrate the same geographic discontinuity. The bridging argument here rests on the fact that ethnoarchaeological work has established that these other stylistic

elements (e.g., "bead forms") do vary in relation to cultural traditions so that an investigation of bead forms or bone decoration can serve as a relevant measure of the original proposition. The deductive testing of the proposition requires that there be middle range theory available that establishes linkages between material culture patterns and the sorts of behavioral phenomena that archaeologists have inferred and seek to test. With these linkages, archaeologists involved in testing a proposition can deductively seek other patterns in the archaeological record that are known (from middle range research) to be relevant signatures of the same behavioral phenomena. Middle range theory thus acts as the lynch pin in the development of a scientific archaeology: "Theories generated about the past in the absence of middle range theory have little hope of being related to relevant observations on the archaeological record . . . Discussions of the past in such situations remain idle speculations . . . accepted or rejected in terms of one's subjective biases" (Binford 1983: 54).

As a body of theory that summarizes how material culture relates to human behavior, MRT has some interesting qualities. A key element of MRT for Binford is its independence from the broad range propositions that archaeologists seek to test. Binford is adamant that MRT *must* be independent of high-level or general theory:

> . . . our methods for constructing the past must be intellectually *independent* of our theories for explaining the past. That is, the theories explaining the archaeological record, the work that provides our observational language and conveys meaning to archaeological phenomena, must be intellectually independent of our theories regarding the processes responsible for past events, patterns of change, or stability. *Our middle-range theory must be intellectually independent of our general theory* (Binford 1981: 29).

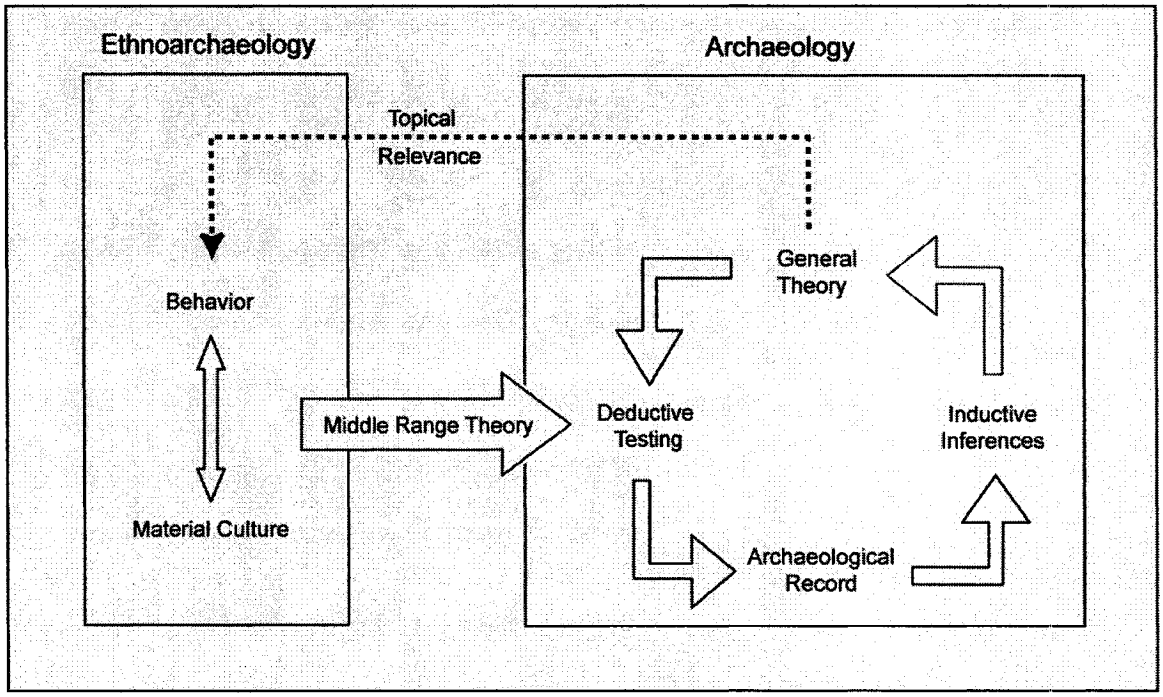


Figure 2.1: Archaeology, ethnoarchaeology and middle range theory.

Independence seems to have (at least) two related meanings in Binford's usage, the first meaning is colloquial and is typically stressed in his earlier work and the second meaning is more philosophical and is emphasized in his later publications. First, in the program outlined above, independence seems to be a general extension of Binford's rejection of traditional archeology and advocacy of a deductive-nomothetic epistemology. As an inductive procedure, traditional archaeology was trapped into tautologies (Binford and Sabloff 1982: 149). Traditional archaeologists would surmise that the three distinct patterns in ceramic decoration were an indicator of distinct ethnic groups. Further testing would progress by focusing in more detail on decoration "as if" it was a reflection of ethnicity. Binford acutely notes that such deductive testing does not *independently* test the proposition because it relies on the same assumed relation between ceramic decoration and ethnicity. Independence is established only through ethnoarchaeological research that identifies other aspects of material culture that pattern according to

ethnicity. These linkages could then be used to generate hypotheses about what other patterns should be visible in the archaeological record if the three ceramic patterns did in fact reflect three distinct ethnic groups. The independence here refers to the use of different patterns or classes of material culture to test for the existence of the behaviors originally attributed to the archaeological data (Binford 1968a). As we will see later on, this reflects a form of horizontal independence as it is described by Wylie (Wylie 1992, 2000). It is also typical of the contextual approach advocated by postprocessual archaeologists (Hodder 1986b, 1991, 1985).

Second, independence also seems to relate to the fact that archaeology and ethnoarchaeology are conducted in radically different contexts and seemingly fall under different theoretical umbrellas. Unlike archaeology, ethnoarchaeology is able to see both the action and its material residue at the same time. This characteristic of ethnographic research is interpreted by Binford as an indication that the theory that informs and/or is generated by middle range research is distinct from the theories that are used by archaeologists to explain the past. Theoretical independence takes on an especially important meaning in Binford's reading of the contextualist critiques of positivism; in particular, from his understanding of the concept of paradigmatic knowledge (e.g, Hanson 1961; Quine 1951; Kuhn 1996; Wylie 2002 for discussion). Binford (1981: 24) notes, in accordance with post-empiricist critics, that knowledge is inherently subjective: "we cannot gain a direct knowledge of the essential properties of the world. Our cognition is neither direct nor objective, but may be indirect and subjective relative to our beliefs about the world (i.e., our paradigm)." Yet, through the judicious use of ethnoarchaeological research – in particular, the exploitation of the independent nature of

MRT – it is possible to create "objectivity" that both neutralizes the circularity of archaeological interpretation (Binford 1983: 47-48, 53) and enables "productive paradigm change through rational means" (Binford and Sabloff 1982: 150)

Understanding how Binford gets objectivity from middle range research requires further exploration of what it is about middle range theories that makes them independent of general theories. The difference seems to rely on a Kuhn-inspired distinction between paradigms and theories that Binford believes is mimicked in a distinction between actualistic and archaeological research. A paradigm is a "conceptual tool of description" while theory is a "conceptual tool of explanation" (Binford 1981: 29); paradigms create definitions, like the notion of a storage room, while theories create hypotheses, such as the proposition that an increase in subsistence specialization results in an increasing dependence on stored food (Binford 1977: 3-5). Paradigmatic knowledge originates in, and is affected by, "irrational" social and historical influences originating in the broader society. Binford and Sabloff (1982), for example, note in some detail the differences between Old World and New World visions of culture, which affect the ways that archaeological materials are defined. These different perspectives are attributed to distinct social contexts in Europe and the United States. In contrast, theory is the specific "rational" knowledge created by scientific research:

> A paradigm is one's world view, translating one's experience into meaningful statements. A theory is an argument one makes about why the world is patterned in a particular form . . . theory makes prediction possible. Theory is thus derived from one's paradigm: it is a subset of it (Binford and Sabloff 1982: 138)

As the exemplification of paradigmatic knowledge, MRT has some peculiar qualities. As Raab and Goodyear (1984) have noted, Binford's version of MRT casts it

as a uniquely inductive pursuit aimed primarily at the formation processes of the archaeological record. Seemingly because ethnoarchaeology is able to see both "statics" and "dynamics" at the same time, ethnoarchaeology escapes the general skepticism that forces Binford to advocate a strictly deductive approach to archaeological testing. As he puts it, in middle range research there is "little problem of inference regarding the identity of the agent producing the pattern or traces . . ." (Binford 1981: 26). The naïve empiricism (*qua* Francis Bacon) that Binford firmly rejects for archaeological testing is considered an adequate methodology for actualistic studies (Binford and Sabloff 1982: 150); in part, because ethnoarchaeology is a relatively new field of study and thus it escapes conceptual bias:

> Archaeology is perhaps in a fortunate position. Although there is much contemporary "culture" or paradigmatic bias regarding the nature of man and the causes of history, there is very little folk knowledge regarding the formation of the archaeological record. This means that there is little explicit prior development of cognitive devices or frames of reference for accommodating archaeological phenomena in the literal, static sense of the word (Binford 1981: 24)

> What we are seeking through middle-range research . . . [is] to build a paradigmatic frame of reference for giving meaning to the archaeological record . . . (Binford 1981: 25)

Binford's understanding seems to envision middle range research as perpetually suspended in a Kuhnian state of pre-paradigmatic "fact-collecting" and/or moments of "extraordinary science" that accompany paradigm change (Kuhn 1996: 15-22, 82-86). In these cases, there is no single perspective that structures empirical research. As a result, research accelerates the pace by which anomalous findings are identified. The absence of a distinct paradigm behind formation processes thus means that ethnoarchaeology is free

of the conceptual challenges that make deductive testing absolutely necessary for archaeology.

In addition to the independence generated by simple observation of "formation processes", experimental and technical studies are also considered to be examples of middle range "independence". Here, middle range research possesses more theoretical content than formation process linkages, but because that content is drawn from theory outside of archaeology, it too is an example of independent theory. For example, C^{14} dating or lithic fracture principles draw on bodies of theory unrelated to the general culture theory that informs most archaeological interpretation. It thus reflects a body of "secure" knowledge that can be used as a check against archaeological inferences.

When combined, ethnoarchaeology and technical knowledge enable middle range programs of "theory building" (Binford 1981: 30). Because the middle range theories generated from the findings of such research are not a product of archaeology's general theory (i.e., are not tautological), these theories can be inserted into archaeological testing programs (see Figure 2.1). The result is the use of theories to test other theories and the creation of a methodological form of "objectivity" (Binford 1983: 45-55). Thus, ethnoarchaeology's "direct" or "unmediated" ("un-theory-laden") perceptions of relations between "statics" and "dynamics" are thought to give ethnoarchaeology the same independence from archaeology's explanatory theories as the independence that is created by C^{14} dating's reliance on the principles of physics. Wylie (2000) describes this as a *vertical* form of independence that originates from the use of different framing theories to develop "low-level" findings that can act as a noncircular test for a particular archaeological interpretation (see below).

The vision that Binford provides of MRT would seem to argue for an eclectic ethnoarchaeology that seeks – of its own volition – to identify "random" relations between material culture and behavior. However, despite his advocacy of an independent body of middle range theory, he is also quick to point out that ethnoarchaeology and archaeology cannot be unconnected. The suggestions he makes cause some confusion when it comes to the independence of ethnoarchaeological knowledge. He suggests that general and middle-range research maintain at the very least some form of topical symmetry with archaeological interests (see Figure 2.1 and Figure 2.2). He notes, for example, that:

> . . . any number of "correlates" between statics and dynamics might be observed in the modern world. However, the first question we must ask is whether we are observing an incidence of cause and effect, or whether there is simple correlation or coincidence. The second, and equally important, question to be considered is whether the proposed causation was also characteristic of the past. Both questions must be answered affirmatively before an actualistic observation may realistically serve as a premise for inferences regarding the past (Binford 1981: 27).

Rather than being entirely independent, general theory and middle-range theory must be developed in concert:

> Why do I suggest that the development of general and middle-range theory must proceed hand in hand? Simply because, in the absence of criteria of relevance, we may waste much time in developing middle-range theory concerning the dynamic significance of certain static facts that prove to be irrelevant to the evaluation of our ideas about the general determinant processes that promote change and diversification in living systems. The field must advance as a whole. Advances in middle-range theory divorced from general theory may prove to be a waste of time; similarly, advances in observational techniques or "field methods" may prove irrelevant once we have some idea of the kinds of data needed for evaluating our ideas (Binford 1977: 7).

The topical symmetry that Binford advocates here is contradictory to his vision of ethnoarchaeology as an independent field of theory building framed, in its entirety, by "paradigmatic" rather than "theoretical" knowledge. Independence is supposed to occur because MRT is created from straightforward, empirically-focused and inductively-generated ethnographic research that has no overt framing theory (reminiscent of "grounded theory" [Glaser and Strauss 1967]). However, topical symmetries that he also advocates seem to frame ethnoarchaeology's empirical investigations in exactly the way "theory" usually does – by defining what questions should be investigated and how the "data" used in the study are identified (see Figure 2.2). Binford suggests that the primary focus of ethnoarchaeological research should be on "regular and uniform patterns of relationships between static and dynamic conditions" which is found in the "elucidation of *functional relationships*" (Binford 1983: 50, emphasis in original). It is also clear from his rejection of any "Pompeii premise" that these functional relationships are not found in individually observable relations between a functional behavior and a material residue (as, for example, Behavioral Archaeology emphasizes), but reflect the function of those objects within the total adaptive system (Binford 1983: 233). Topical symmetries thus effectively transfer into ethnoarchaeological research the explanatory model of culture that Binford outlined for archaeology in his articles from the 1960s. It is his vision of culture as an adapting system made up of three inter-dependent subsystems that defines what behaviors are significant and what relations between behavior and material culture should be the focus of ethnoarchaeological research. Calls for topical symmetry have

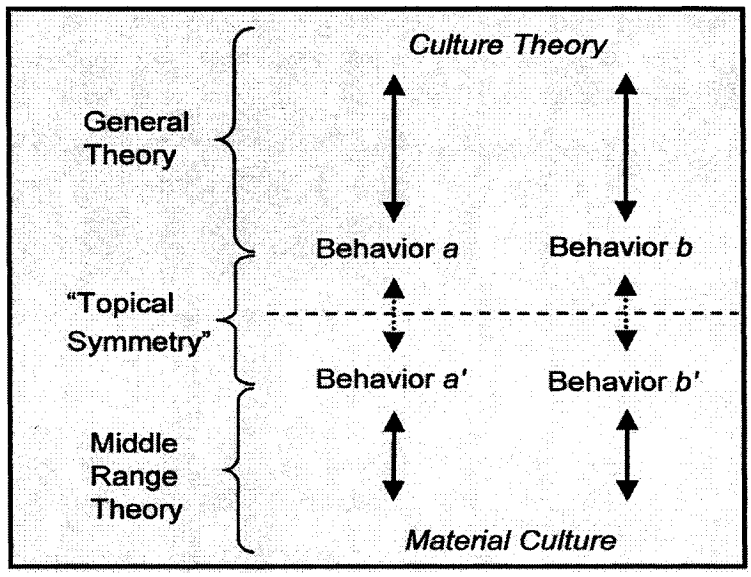


Figure 2.2: Topical symmetry.

been updated in more recent arguments for theoretical integration between archaeology and ethnoarchaeology (Simms 1992; O'Connell 1995). The problem is that such symmetries potentially nullify the theoretical independence that once was thought to make ethnoarchaeology a useful part of archaeology's epistemology.

Binford and Ethnoarchaeology's Roles

Most current ethnoarchaeological programs (including those conducted under rival theoretical schools such as Postprocessualism or Evolutionary Archaeology and even the one outlined in subsequent chapters) rely on and are deeply indebted to Binford's statements about the epistemic importance of ethnoarchaeology. The contradiction between topical symmetries and independence, however, has meant that most current forms of ethnoarchaeological research have tended to emphasize either independence or topical integration, but rarely to accomplish both tasks in the same program of research. His total program has been broken into three moderately distinctive

research foci (refer to Figure 2.1). Some research emphasizes theoretical integration and focuses on the testing of archaeologically derived propositions, other research emphasizes the use of ethnoarchaeology as research that independently discovers the processes that create the archaeological record so that knowledge can be deductively tested against the archaeological record, while a third topic of study emphasizes a purely "independent" study of material culture. Because I have identified these roles elsewhere in more detail (see Cunningham 2003b for a full discussion), here I focus on the ties between these roles and Binford's epistemic vision.

Ethnoarchaeology that tests archaeologically derived propositions reflects the first section of Binford's total program, moving from the "archaeological record" through "inductive inference" to "general theory" and then through topical linkages to "ethnoarchaeology". Archaeologists implicitly make ties between material patterning and processes when they develop their inductive interpretations of the "meaning" of material patterns. In the example given previously, archaeologists note a geographical break in rock paintings and suggest that this patterning reflects two cultural traditions. Ideally, the eventual goal is to use ethnoarchaeology to identify other material culture patterns (in "bead forms") that reflected those same cultural traditions so the initial proposition can be tested archaeologically. However, ethnoarchaeologists have often been stopped in their analysis by ethnographic findings that show the link initially proposed between the archaeological pattern and some behavior (rock paintings = cultural traditions) was erroneous. The testing program is halted and a "cautionary tale" is produced that warns the archaeologists about potential problems with their initial interpretation. Recent programs of research in ethnoarchaeology have taken as their

central focus the explicit testing of archaeological interpretations (Arnold 2000; Charlton 1981, 151-152; Gosselain 2000; Kramer 1979, 4-5; Stanislawski 1978; Wiessner 1983). The ensuing ethnographic research has often been quite formalized in order to reflect as closely as possible an "archaeological perspective" (Binford and Sabloff 1982: 151; e.g., Krause 1985). Rather than independent, this form of ethnoarchaeological research tends to show tight theoretical integration with archaeology.

The second role often adopted by ethnoarchaeology picks up where the testing of archaeologically derived propositions was derailed. Rather than seeking material correlates that address specific archaeological problems, ethnoarchaeology aimed at "interpretive discovery" (after Charlton 1981: 152) seeks to identify new analogs that could be used to interpret the archaeological record. Studies with this goal in mind predate Binford's statements about the importance of ethnoarchaeology to archaeological epistemology (e.g., Ascher 1961; Kleindienst and Watson 1956). They often focus on identifying practices that could affect material patterning in the archaeological record, but that would be hard to identify from archaeological remains alone. Placed in Binford's framework, the research would ideally seek to identify relations that could be used to test deductively archaeological propositions by moving from the independent identification of "behavioral-material correlates" through "middle range theory" to the "archaeological data" (see Figure 2.1). The new knowledge of ties between material culture and behavior were thought to enable archaeologists to "predict the past" (Gould 1980: 35; Watson 1980: 56; Atherton 1983: 96-97). Topical integration in such research is largely ignored, and instead the focus is on the independent identification of material-behavioral relations (e.g., bead forms). Recent work primarily has sought the more general goal of expanding

the range of analogues that are available for archaeologists to use in their interpretations (Costin 2000; Kramer 1997; LaViolette 1995; Lees 1979; MacEachern 1994; Bowser 2000).

The third broad role that ethnoarchaeology has adopted is an emergent phenomena created both by Binford's suggestion that ethnoarchaeology is independent of archaeological knowledge and by ethnoarchaeological findings that challenge directly many of archaeology's assumptions about human behavior. This last area of concentration seeks significantly to refocus the general understandings (the "general theory") that archaeologists use to explain past social and cultural life. David (1992: 352) refers to this as raising the "analogical consciousness" of archaeologists. The ethnoarchaeological research of this sort that is undertaken either seeks to examine material culture "on its own terms" (in a naïvely inductive sense) or borrows from the theoretical traditions of ethnography to gain a unique perspective on material culture. Hence, it would seem to embody exactly the sort of independences that Binford advocated for middle range theory. Envisioned in relation to Binford's epistemology (Figure 2.1), this aspect of ethnoarchaeological research moves dialectically through "topical integration" between ethnoarchaeology's grounded research and archaeology's "broad range theory." This ethnoarchaeological research has at times shifted its focus away from archaeology altogether, embracing more overtly anthropological fields such as material culture and technology studies (e.g., Appadurai 1986; Lemonnier 1992; Pfaffenberger 1992).

The Independence of Middle Range Theories

Binford's vision of middle range theory as a form of independent theory building based ultimately on the ability to see the "action" and the "residue" at the same time creates a series of false expectations about the relations between material culture and human behavior. It is often assumed that ethnoarchaeology should be able to identify "unambiguous material correlates" for behaviors and that any deviation from such a pursuit is deleterious (see Arnold III 2003 for a recent discussion). For every process, there should be *a* corresponding material pattern; and for every pattern, there should be *a* corresponding process (exemplified by Carr and Neitzel 1995). Ideally, these material correlates must be "unambiguous", relate to true "cause and effect" processes, and hold across both cultural and temporal boundaries in order to allow for a straightforward decoding of the archaeological record.

However, there are at least two reasons why identifying material correlates is not simply a matter of gathering uncontestable empirical facts. First, archaeologists now recognize that equifinality is an inescapable element of material systems. It is rare to find isomorphic linkages between material culture and behavior because several quite distinct processes often produce identical material signatures (Hodder and Orton 1976: 239-240). As we will see in subsequent chapters, the problem is rendered more problematic by the fact that even a single material pattern is often the *net* result of several interacting processes rather than the direct reflection of a single process or behavior. Second, human action does not fall into discrete behaviors that leap phoenix-like from the ethnographic record for all to see. Identifying even a single "behavior" in ethnographic research is an act of selected vision – of ignoring some actions in order to emphasize others. How a

researcher cuts up the complexity of human action into "behaviors" depends extensively on which actions that researcher considers "significant" (Figure 2.2). The significance of some facet of human action is identified only in the light of background knowledge that delineates which actions should be the focus of attention. Observation – whether banal or scientific – inherently possess a theoretical component (Hanson 1961). Despite Binford's optimism regarding the ease of ethnoarchaeological research, most social researchers have long recognized that ethnographic study is as prone to theoretical circularities as is archaeology.

Ethnoarchaeological research is inescapably structured by some background theory (Hodder 1986a: 95; also see Stahl 1993; David 1992; and Cunningham 2003b for discussion). Given that most ethnoarchaeologists are trained initially as archaeologists, the background theory they use – whether implicitly or more explicitly in the form of topical symmetries – is often drawn from archaeology's explanatory models. The degree of structuring varies, of course, with the specific role any one ethnoarchaeological program is pursuing. Those interested in testing archaeologically derived propositions adhere more closely to archaeological tenets than do those attempting to "raise analogical consciousness". However, there are two general ways in which ethnoarchaeological research has been framed by archaeology's theoretical visions. First, ethnoarchaeologists were supposed to follow the models of culture promoted by specific politicized paradigms in archaeological theory. At the height of the processual-postprocessual debate, archaeologists tended to essentialize their cultural models. To essentialize a cultural model is to see a certain subset of culture's many processes to be the motor that drives other aspects of cultural life (see Cunningham 2003a, b; Trigger 1998). For the

processualists, culture was cast in a materialist light that saw adaptation (Binford 1962, 1965), material constraints on behavior (Schiffer 1976; Schiffer and Skibo 1997) or evolutionary processes (Dunnel 1978, 1980) as the primary causal forces that affected human behavior, with secondary processes such as those related to ideology considered to have a minor or supporting role. Postprocessualists inverted this hierarchy and instead suggested that ideology and power drove culture. Rather than adaptations to a knowable world, the limitations of human cognition cast a veil of culture between humans and reality, which meant that human action was a record of how individuals constructed meaning (contributions to Hodder 1982a, 1985, 1986b; Shanks and Tilley 1987). In archaeology, such truisms initially prompted a search for the archaeological residues of the binary structures thought to lie behind meaning creation (after Lévi-Strauss 1963; e.g., Hodder 1990a). Ethnoarchaeological research projects were often associated directly with one or the other of these theoretical schools, and thus attempted to identify the material correlates of those processes deemed essential to their respective model of culture (e.g., Binford 1978; contributions to Hodder 1982b).

Crosscutting an adherence to cultural models, we see a corresponding tendency for ethnoarchaeology to emphasize archaeology's temporal vision. Binford has perhaps elaborated on this point more than others. For example, he was quick to emphasize that ethnoarchaeological work had to adhere to an "archaeological perspective." He noted with Sabloff that ethnoarchaeological research needed to be structured in a way that was commensurate with the limitations of the archaeological research: ". . . we must learn to see the dynamics from a perspective appropriate to the archaeological record. Such a viewpoint should be (1) nonparticipating, (2) outside, and (3) partitive" (Binford and

Sabloff 1982: 151). Indeed, Binford was quite insistent about the differences between archaeological and ethnographic perspectives and where ethnoarchaeological emphases should lie. Archaeological research focuses on slow tempo, long term changes in cultural systems; change that contrasts sharply with the chaotic experiences found in daily practice:

> The rates of culture change for most archaeologically known eras are much slower than the rates of generational replacement for participants in those systems. This fact must be appreciated in two ways. First, the beliefs and perceptions of the past participants could not have been germane to a reality of which they could not have been aware, the macrotemporal scale of systems change and the factors that were conditioning it. Second, the observations by ethnographers and historical figures, while perhaps documenting something of the internal dynamics of cultural systems, cannot be expected to be necessarily germane to an understanding of a much slower and larger-scale process of change and modification. Thus the reality with which [archaeologists] deal is one that living, breathing persons have in fact never directly experienced (Binford 1986: 473-474).

Binford's distinction between archaeological and anthropological timeframes seems to essentialize causality to a specific section of culture most visible to archaeologists – specifically the slowly changing structures or systems that lie behind daily experience (Cunningham 2004). Although postprocessualists have been critical of Binford's notion of middle range theory and have often spoken of "practice" and "being-in-the-world" (Hodder 1986a; J. Thomas 1996; Barrett 1993), much of their ethnoarchaeological research has tended to show trends not inconsistent with Binford's "archaeological perspective". Hodder's own work, for example, has shown a continued fascination with binary cognitive structures that are thought to form a framework within which individuals create daily experience (e.g., Hodder 1982b; Hodder 1990b; see

Hodder 1991: 13). Such structuring processes may be manipulated by individuals in their daily lives, but they operate as mentalities of which individuals are not directly aware. The net result for both processual and postprocessual archaeologists has been a downplaying of the specific social and historical (often colonial) contexts where ethnoarchaeology is conducted, in an attempt to access such slowly changing deep time structures.

One of the ironies here is that an "archaeological perspective" makes any direct empirical assessment of behavioral-material relations almost entirely impossible. The structured or systemic phenomena that are the focus of an "archaeological perspective" can rarely be directly observed by ethnographic research. Ethnoarchaeologists in the field experience behavior and its relations to material culture as daily practice – not as pre-packaged structures or systems. Systems and structures are second order phenomena in that they must be extrapolated from observations of everyday life with the help of theory that states how these behaviors reflect a "structure" or a "system". This knowledge is not of a general, "paradigmatic" form, but it engenders very specific and highly theoretical propositions about the causal forces behind human action.

Discussion

Binford's vision of "middle range theory" as the "independent" ethnographic production of knowledge about behavioral-material correlates is in fact misleading. By focusing ethnographic research exclusively on correlates, he diverts attention from the manner in which archaeological theories are transferred wholesale into ethnoarchaeology

from archaeology through topical linkages, rather than "*built* independently". Middle range theory could then be treated as if it was "independent" of archaeology when in fact it was quite tightly structured by partisan cultural models located in archaeology's general theory. Focusing ethnoarchaeological research only on material correlates also allowed partisan theoretical schools in archaeology effectively to insulate their cultural models from truly hazardous ethnographic tests of the validity of those models. Rather than investigating process, ethnoarchaeologists were expected to limit themselves to identifying the material correlates of processes or behaviors whose importance was predefined through topical symmetries. Ethnoarchaeologists thus were asked to truncate the complex cultural realities they experienced into findings consistent with politicized archaeological agendas.

Yet, this red herring was not always effective. As Arnold (1991) has pointed out, few of archaeology's simplistic, structured visions of human life can survive unchanged by an ethnoarchaeologist's first encounter with the complexity of ethnographic contexts. Such encounters may result in the production of the "cautionary tales" that are so vilified in the archaeological literature (e.g., Simms 1992; Kuznar 2001a). At their most basic, however, cautionary tales are suggestions that the schemes used by archaeologists to explain the patterns they see in the archaeological record are inconsistent with the findings of ethnographic study. For example, they may report that the processes (e.g., ethnic symbolism) that archaeologists assume are responsible for certain dimensions of variability in the archaeological record (e.g., decoration on pottery) are not the processes ethnoarchaeologists see causing the very same dimensions of variability in ethnographic contexts. These findings may either be part of quite explicit attempts to test an

archaeological proposition, or they may originate in the more generalized attempt to develop in archaeology greater analogical consciousness.

Cautionary tales do one of two things. First, they often show that the mid-level processual configurations that are expected by a cultural model central to some partisan theoretical school in archaeology are too narrow in their vision of the causal forces that affect behavior and material culture. Typically, this is done by suggesting that those limited number of "core processes" considered to drive a particular vision of culture – and thus to have a universal or near universal prominence (e.g., rationalism, adaptation vs. power, ideology) – were *not* responsible for the phenomena (behaviors, material patterning) being studied in an ethnographic context (Cunningham 2003b: 403). Second, cautionary tales often show that the processes causing behavior and material patterns are not restricted to the structures or systems typical of an "archaeological perspective". To use Binford's terms, ethnoarchaeologists often find that "the internal dynamics of cultural systems" – those processes operating in an ethnographic time frame – do have an effect on variability and paint a different picture of how material patterns are formed (also see Kus 1997).

In actual fact, cautionary tales are a perfect example of distinctly "middle-range" research in Merton's (1968) more conventional sense. As Raab and Goodyear (1984) have pointed out, the original use of the term "middle range theory" cast it not as a separate body of theory directed at "formation processes" of the archaeological record, but as mid-level theorizing that mediated between broad range theories like those that seek to explain human behavior and the empirical data (Merton 1968). It was meant to be a way of transforming the high level theoretical axioms that inspire research programs

into propositions that can be compared with experience. Middle range theory is where the messiness of empirical data – the complexities of the real world – clash with the simplicity and elegance of broad range theorizing. Cautionary tales are results of empirical engagements that point out inconsistencies between the mid-level derivatives or hypotheses of broad range archaeological theories and actual ethnographic data.

One of the central problems with contemporary ethnoarchaeology is the continued confusion and ambiguity that occurs between the Binfordian and Mertonian definitions of middle range theory. I would suggest that the best solution lies in abandoning the fruitless pursuit of unambiguous material correlates and instead explicitly refocusing ethnoarchaeological research on Merton's version of middle range theory. Doing so allows ethnoarchaeologists to escape the problematic positivism at the heart of his model, while simultaneously making it possible for them to embrace a more realistic and post-positivist inspired epistemic *raison d'être*. Wylie sees archaeology and ethnoarchaeology to be distinct research engagements or "tacks" that test *a common body of theory* against two different research contexts (Wylie 2002: 165-167). She notes that the theories used in archaeology were not created in a vacuum, but are abstractions constructed from our understandings of daily cultural life in the present. This theory draws from all aspects of the sciences, social sciences and humanities that bear in some way on the cultural behavior and material culture studied in archaeological research. Ethnoarchaeology's role is to assess these abstractions through a "vertical tack" that provides a series of checks and balances on the theories that are used to interpret the archaeological record by assessing their ability to explain the empirical "data" found in ethnographic contexts (Wylie 2002: 166). Standard archaeological interpretation represents a "diagonal tack"

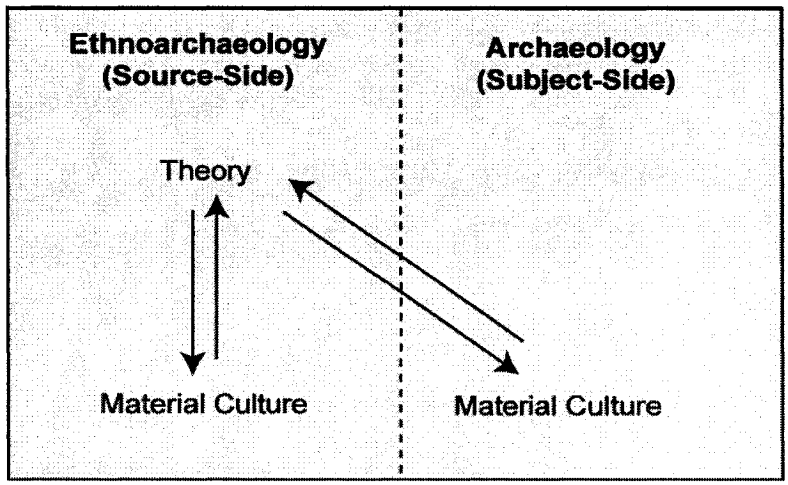


Figure 2.3: Tacking in archaeology and ethnoarchaeology (after Wylie 2002).

that uses analogical reasoning to move from the same theoretical abstractions to the patterning observable in the archaeological record (see Cunningham 2003b: 393-394).[3]

Ethnoarchaeology's real importance in a post-positivist epistemology lies in its ability to test and further develop knowledge of the causal forces acting on behavior and on material culture so that this knowledge can be used by archaeologists. To be effective, it may need to borrow from anthropological research that falls under the rubric of "material culture studies". This is because, in order to test the theory archaeologists use, ethnoarchaeology must do more than simply deal with low- or mid-level theories related to behavioral-material relations. "Behaviors" cannot be disassociated from theories that define them, thus ethnoarchaeology must be willing to test the entire range of theories used by archaeology; including everything from low-level identifications to the most esoteric generalizations about human action. To borrow loosely Geertz's (1973) terms, ethnoarchaeology should perhaps "thicken its descriptions" so that investigating a single phenomenon (such as a pattern in material culture) means understanding its broader

[3] Strictly speaking, Wylie follows Bernstein's discussion of Geertz in identifying the tacks as occurring between "experience-near" and "experience-distant" knowledge (Bernstein 1983; Geertz 1979).

significance within the cultural context where it is found. Material culture studies have long been inspired by Geertz's version of "thickening", adopting his fixation on meaning and seeking to understand how objects contribute to the "constitution of meaning" in human societies (see Conkey 1989). Yet, in seeking to embed material culture in the richness of human social and cultural life, anthropologists have also demonstrated just how complex the ties are between objects and the people who use them and – by extension – just how complex the theory may need to be that seeks to explain such ties (Miller 1998a, b; see Myers 1999; Owens 1999 and accompanying papers). Thickening ethnoarchaeology's descriptions means going well beyond "meaning" to assess of all the causal forces (ecological, social, and ideological) that affect material culture patterns. On the other hand, the focus on "patterning" and "variability" that is so iconic of current ethnoarchaeological study cannot be sacrificed as a part of any "thickening" trend. Material culture studies may explore the nuances of human-material interactions, but they often forget to delineate the material consequences of those interactions. It is the thick description of material patterning that makes ethnoarchaeological findings archaeologically significant.

Given ethnoarchaeology's intellectual history, there is a point that cannot be understated: *ethnoarchaeology has no special claim or relationship to the term "middle range theory"*. Mertonian middle range theory is salient because it is the point where the rubber hits the road – where the causal forces that broad range theories emphasize in their summaries of experience encounter the resistance of real world situations. Middle range theory is not a unique product of ethnoarchaeology; it is the point in both diagonal and vertical tacks – in both archaeological and ethnoarchaeological research – where data and

theory collide. Middle range generalizations in both tacks offer the best opportunities to adjust broad range theories in the light of the empirical data. Certainly, middle range theorizing is important to ethnoarchaeology; but, it is not any more important here than it is to archaeology, ethnography or indeed any other scientific endeavor.

Despite the connectedness of archaeological and ethnoarchaeological theory, independence remains an important consideration. Based in part on philosophical analysis of Binford's work, Wylie (Wylie 1992; 1989; 2000; 2002; also see Kosso 2001) has outlined in great detail the ways that archaeologists can and do use independence to develop security in their analogical programs. She notes that there are two forms of independence that archaeologists exploit in developing inferences (Wylie 2000: 231-232; 2002: 176). *Horizontal independence* arises from the use of independent lines of evidence to test for a given theory. If different bodies of data structured by different theories all converge toward a single interpretation, then that interpretation is more likely to be correct, because it would be nearly impossible for random "biases" or interpretive "errors" in those theories to result in a convergence to a single interpretation. In contrast, *vertical independence* comes from the ability of archaeologists to use the data that is structured or "created" by one theory to test the propositions generated by a second theory. As mentioned earlier, technical specialties like C^{14} dating, stratigraphic analysis and lithic fracture principles work exactly in this way. The theory that structures the data ("a date", "a level", "a flake scar") is drawn from a technical field (physics, geography, geology) which is not the same as that which informs archaeological interpretation. These data therefore offer a non-circular way of testing an archaeological interpretation. Vertical independence is also created by "bootstrapping" in which new theories develop

from data that were initially identified by older theories (Wylie 2002: 179-184; see Tschauner 1996: 12-14 for an example).

The theoretical connectedness of archaeological and ethnoarchaeological research means that vertical independence between the two fields is not *de facto* present. Yet, horizontal and vertical independence remain important considerations. Rather than just found in the differences between archaeology and ethnoarchaeology, independence (both horizontal and vertical) can be an internal component of both fields of research. Wylie points out that archaeologists build secure interpretations by exploiting almost any opportunities to build both horizontal and vertical independence in their research programs (e.g., Wylie 1992, 2000). They exploit horizontal independence by checking the same interpretations against multiple lines of archaeological evidence and build vertical independence by including the findings of technical specialties framed by other theories such as radiocarbon dating and isotopic studies. Because ethnographic research engenders the same interpretive circularities, it too must strive to exploit opportunities for independence in order to ensure that its interpretations are secure. Ethnoarchaeology then cannot be made up of short visits during the heat of the day to some village adjacent to an archaeological site in order to make a few observations on behavioral-material relations. David and Kramer (2001) point out that ethnoarchaeological research is a complex field of study requiring its own training and a careful consideration of ethnographic methodology. Considerations of independence should be a part of the selection of methods. As we will see in chapter 4, this is a central consideration of this dissertation.

The supposed ability to simply "see" behavioral-material relations was thought by Binford to create vertical independence between ethnoarchaeology and archaeological theory. Despite the fact that no body of ethnographic research is ever "theory-free", there are ways that *a degree* of vertical independence can be created between archaeology and ethnographic findings that deal with human behavior. This sort of vertical independence would be similar to that found in technical studies such as radiocarbon dating. It means producing knowledge of human action that is not a product of those archaeological theories for which they ultimately are used as a test. The amount of vertical independence is partial, because many models of human action are shared across the social sciences by virtue of their common intellectual history. However, there are points where such independence can be created.

Perhaps the best example is found in the difference Binford sees between anthropological and archaeological perspectives. We can understand his distinction in two more contemporary frameworks: practice theory (Bourdieu 1977; Giddens 1979) and the temporal *durées* made popular by Annales historians (Braudel 1976; see Bintliff 1991a; and Knapp 1992). Despite a recent interest in agency (e.g., Dobres and Robb 2000), archaeological research tends to see patterning in the material record and its associated culture change as a series of "structures" or "systems". This occurs because archaeological data rarely reflect all the individual actions occurring on a site (see Cunningham 2001). In order to reconstruct past behavior, it is often necessary to compare the findings from several sites (or levels from those sites) that are thought to reflect some specific holistic phenomenon, such as a socio-cultural structure or system. This bias reflects the structural component of the practice-structure dichotomy in

contemporary practice theory or the more slowly changing *longue* and *moyen durées* in Braudel's temporal hierarchy. In contrast, the short term actions visible to ethnographers reflect the chaos and phenomenological complexity of daily "practice" or the *events* level of the Annales' temporal structure (see Bintliff 1991b: 7). Most researchers inspired by practice theory end up emphasizing either a structural or a practice-focused vision in their analysis, which has created several distinct versions of practice theory rather than a single approach or method (Stern 2003). Yet, the real lesson in practice theory is that both structure and practice are essential elements of any comprehensive understanding of cultural life: structures establish potentials for human action while practice is the arena where structures are reformed. The Braudelian perspective similarly shows both the uniqueness and connections between processes operating in different temporal rhythms. As Fletcher (1992) has noted, temporal rhythms have an emergent quality that precludes any attempt to reduce one *durée* entirely to the processes operating in another. Yet, they are not entirely independent: the processes operating in one *durée* "delimit" processes operating in another (Fletcher 1992: 41-43).

Hence, archaeological and anthropological perspectives are mutually constitutive. Yet, they each contain a degree of theoretical independence. Any study of practice cannot be entirely reduced to the structures that form its backdrop, nor can the structures present in social life be entirely explained through an analysis just of practice (see David 1992: 337-338). Thus, it may be possible for ethnoarchaeologists to create knowledge relevant to archaeology, yet possessing a certain amount of vertical independence from archaeological theory if they focus their research on an exploration of daily practice. This is explicitly contrary to Binford's demand for an adherence by ethnoarchaeologists

to an archaeological perspective. Instead, ethnoarchaeology should examine in detail the actions of the people they study in daily practice and then assess the importance of those findings for archaeological theory.

One of the implications of focusing on practice is that we must reject the selective visions imported into ethnoarchaeology from archaeology. Adherence to an "archaeological perspective" once allowed ethnoarchaeologists to ignore the colonial situations of the people they studied. The effects of new materials, money, capitalist ventures or even banalities like new transportation systems were systematically excluded by seeking to find some deep-time adaptive or cognitive residues lying behind the (ephemeral) changes brought about by colonialism and the spread of global capitalism. By engaging with these forces directly, and seeking to identify their effects on both human behavior and material culture, we gain not just knowledge of the causal forces at work but also the theoretical distance that makes ethnoarchaeology independent of archaeological research. Indeed, one of the central aims of this study is to show that we gain an important epistemic advantage by engaging directly with the lives our informants actually live. We also gain the necessary knowledge of the relations between exploitive forces and material culture that is thought necessary for the development of a radical study of the archaeological past (Saitta 1992).

Conclusion

Ethnoarchaeology has no special relationship to middle range theory. Yet, middle range research – research that seeks to assess how processes articulate in empirical

contexts – is incredibly important at this point in archaeology's history. Archaeologists now are attempting to see a way past the once opposed perspectives encapsulated in processual and postprocessual theorizing. While the vast majority of archaeologists were never full converts to either the postprocessualist or the processualist visions, the vitality of the theoretical debate between processualists and postprocessualists meant that they dominated archaeological thinking over the last 25 years. Now that the fervor of the exchanges has abated, archaeologists are beginning to pull apart the oppositions that once existed and seek some form of synthesis. Yet while some aspects of the epistemological gap are starting to close (Trigger 2003a, b, 1998; VanPool and VanPool 1999; Wylie 2002), very little has been done on how we should balance the opposed views of "culture" once at the heart of the debate. Recent grounded research has tended to be quite eclectic and combine disparate elements of archaeological theory to create what Hegmon has described in North American Archaeology as a form of "processualism-plus" (e.g., Hegmon 2003). However, these low-level accretions do not address the inconsistencies that they create at higher levels of theoretical abstraction. As several other researchers have pointed out, detailed middle range research is perhaps the best way of moderating low level eclecticism and meta-theoretical incommensurabilities (Miller 2001; Trigger 2003a; Wilk 2001). Such work is never simple, but it may offer a way of forging new broad range models that are more accurate representations of the complexity of cultural life in both the present and the past. For this reason, middle range research perhaps represents at this time an important focus for all archaeologically-related forms of research.

Such research in ethnoarchaeology would focus on the ways that the processes articulate to form behavioral and material patterns. The goal is not to identify explicit material correlates for some identified behavior, but to tease out the causal factors that affect material variation so that archaeologists have a better understanding of these factors. Focusing only on the causes of human behavior and not taking the next step and looking at its material effects makes ethnoarchaeology largely indistinguishable from ethnography and other social sciences. However, our investigations of the causes of material patterns cannot be narrowly directed at low-level relations between behavioral-material patterns. Ethnoarchaeological approaches must be theory-rich and highly reflexive, focused on identifying the diverse ways that human society is reflected by the materials it leaves behind. As we will see in subsequent chapters, a productive line of middle range enquiry is to ask "what processes are responsible for a material pattern identified in *this* cultural setting".

This dissertation outlines a program of research designed to exploit both horizontal and vertical independence. In order to understand how regional patterns in ceramics are produced in the archaeological record, it identifies the processes responsible for the movement of household vessels from production to consumption locales. In the following chapter, I provide an overview of the research context. I then outline a methodology based on the use of anthropological theories of exchange and consumption in order to "build-in" a degree of independence from conventional archaeological explanations of regional patterning. The results produced by this method are provided in chapters 5 and 6, and then, in chapters 7 and 8, I examine the implications of these findings for archaeological models.

CHAPTER 3
THE INLAND NIGER DELTA

Mali is a landlocked West African nation located on the southern edge of the Sahara Desert in West Africa. It is quite easy to cast Mali only in the light of the poverty and marginalization that so often plagues narratives about Africa. Mali is experiencing the same patterns of poverty, poor infrastructure and ecological degradation that are typical of other countries that lie in the Sahel. It gained its independence from France in 1960 and, following a long dictatorship, elected its first democratic government in 1992. Economically, the country has constantly remained one of the five poorest in the world, with some 64% of the population living below the poverty line (World Bank 2005). Primary exports are gold and cotton, but these products do not dominate the economy and most of the population does not engage in these activities. The vast majority of Malians work in the agricultural sector (Pigeonnière and Arnaud 2001), despite the fact that less

than 5% of Mali's total landmass is considered arable (CIA 2005; but also see Arnaud 2001). On the other hand, Mali is perhaps the most vibrant and culturally-rich nation in the world. Malian artists pack European galleries and Malian musicians play to sold-out concert halls throughout the world. The rich cultural traditions of Mali have made it a prime location for European cultural tourists. Some of the most important archaeological sites in West Africa, as well as the UNESCO World Heritage Sites of Djenné, Timbuktu and Bandiagara, are highpoints of these visits. Recent travel and cultural films, like Michael Palin's *Sahara* (and associated picture book, Palin 2002) and the PBS/Nature/National Geographic Television production of "Love in the Sahel" from the series *Africa* (PBS 2001), as well as the 2002 Smithsonian Institution's *Folklife Festival* (Smithsonian Institution 2003) have all recently showcased Mali's rich traditions to North American audiences.

One of the most prominent features of the Malian natural landscape is the Inland Niger Delta (IND) in the central part of the country. The Delta consists of several large flood plains that are seasonally inundated by the rising waters of both the Bani and Niger Rivers. Tributaries fed by heavy rainfalls in the forests of southern Mali, northern Guinea and Cote d'Ivore flow northwards into the Bani and Niger Rivers and pass through the Sahel and into the southern extent of the Sahara near Timbuktu before swinging south past the Malian town of Gao and heading through Niger and Nigeria on their way to the Atlantic Ocean (See Figure 3.1). The IND covers some 50,000 km^2, 80% of which may become inundated during years of exceptional rainfall (Gallais, et al. 2001: 64). The low lying topography of the Delta does not guarantee predictable flooding.

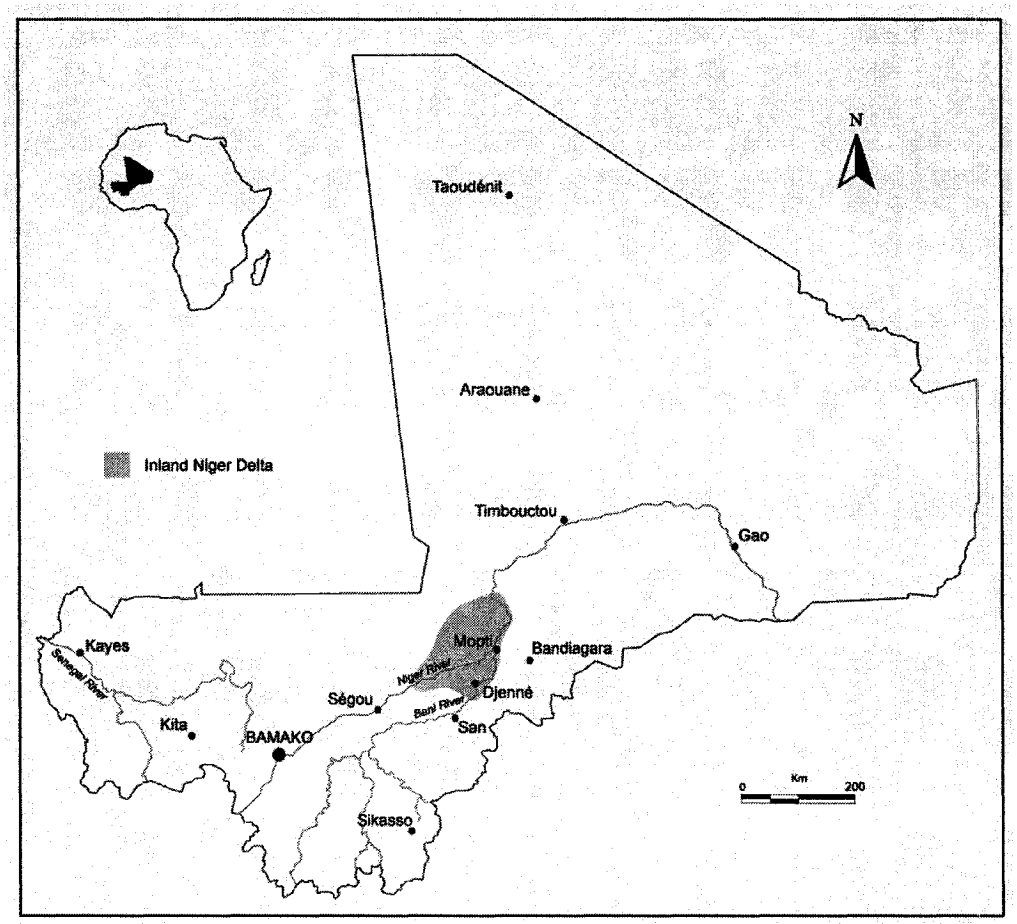


Figure 3.1: Mali and the Inland Niger Delta.

Small changes in the height of the flood waters can make substantial differences in the amount of land that is inundated. Successful agriculture (especially for rice) depends on the conjunction of a number of different factors, including the time between the onset of the first rains that germinate the crops and the arrival of the flood, the flood's velocity, the height of the inundation, and its duration (Gallais 1967: 220-224; Rasse 2001; McIntosh 1998: 99; Gallier 2001)[4]. Despite the rich potential of the IND,

[4] McIntosh (1993; 1998) has even suggested that the unpredictability of resources is a fundamental component of what he sees as a uniquely heterarchical political structure and clustered urbanism in the Delta.

unpredictability is one of its dominant characteristics and from one year to the next the same village may experience disastrous harvests or bumper crops.

The research area for the project is centered – quite literally – on the celebrated African town of Djenné located in the upper Delta (Figure 3.2). Djenné is well known as a tourist destination. Its rich mud brick architecture, including the mosque which is the largest mud brick structure on earth, has resulted in the entire town being designated a UNESCO World Heritage Site. The town was once part of the trans-Saharan trade route in gold and salt and it acted as a logistical support center for Saharan towns such as Timbuktu that had some difficulty growing cereal crops needed to sustain its population. In historical times, Djenné possessed one of the most important markets in West Africa. While it was never the capital of any of West Africa's many empires, Djenné has long been the most important center in West Africa for Islamic teaching. The nearby archaeological site of Djenné-Djeno has also been suggested by Rod and Susan McIntosh as one of the earliest examples of African urbanism.

Today, seasonal variation in the Delta is marked and has a direct effect on the agricultural cycle and annual rhythms of the people who live there (especially Gallais 1967: 73-76; also see McIntosh 1998: 94 & Figure 4.1; and LaViolette 2000: 11; and Barnhoorn 1985: Figure 3.2). In the upper Delta around Djenné, the *rainy season* begins slowly in June and ends in mid-September, with the rains falling most steadily during July and August. Rice, sorghum and millet are sown during the early part of the rainy season and then carefully watched and weeded. The floods arrive in late September, marking the onset of the *wet season*, which runs until late November. The flood first arrives via the Bani River, then later the Niger, submerging the low lying flood plains and

their sprouting rice crops in water. Travel in the countryside during this period requires the use of *pirogues* (shallow draft river boats) and the quick flow of the Bani and Niger Rivers, which may reach well over a height of 5 meters, gives some pause to small vessels seeking to cross major flow-ways. The *winter* or *cold season* follows. Harvests begin early in December and continue as the water levels and daily temperature both drop. The *décrue* follows, starting in February, and is the period when water more quickly exits the flood plains. Standing water is generally confined to the low lakes and stream channels (*marigots*). Daily temperatures begin to rise and most of the flood plains dry, allowing for transportation in the backcountry without the assistance of pirogues. However, the water trapped in *marigots* and along the Bani allow for continued waterborne transport. At the end of March, the *hot season* begins, marked by Harmattan winds and sandstorms from the north. Water evaporates in all but the deepest lakes and *marigots* and it becomes possible either to walk or drive bush taxis directly across the nearly dry bed of the Bani River. In the later stages of the hot season, farmers begin to prepare their fields for the first drops of water that mark the onset of the rainy season.

Since the late 1970s, the Sahel region throughout Africa has been experiencing a prolonged drought. The effect of this drought on people in the Delta is made worse by a preceding 15 year period of above average rainfall that started in 1955. The amount of area inundated by the flood since 1970 has tended to fluctuate between 25% and 50% of the 1955-1970 levels (Rasse 2001: 20). In the upper Delta, only 1500 km^2 continues to be regularly inundated.

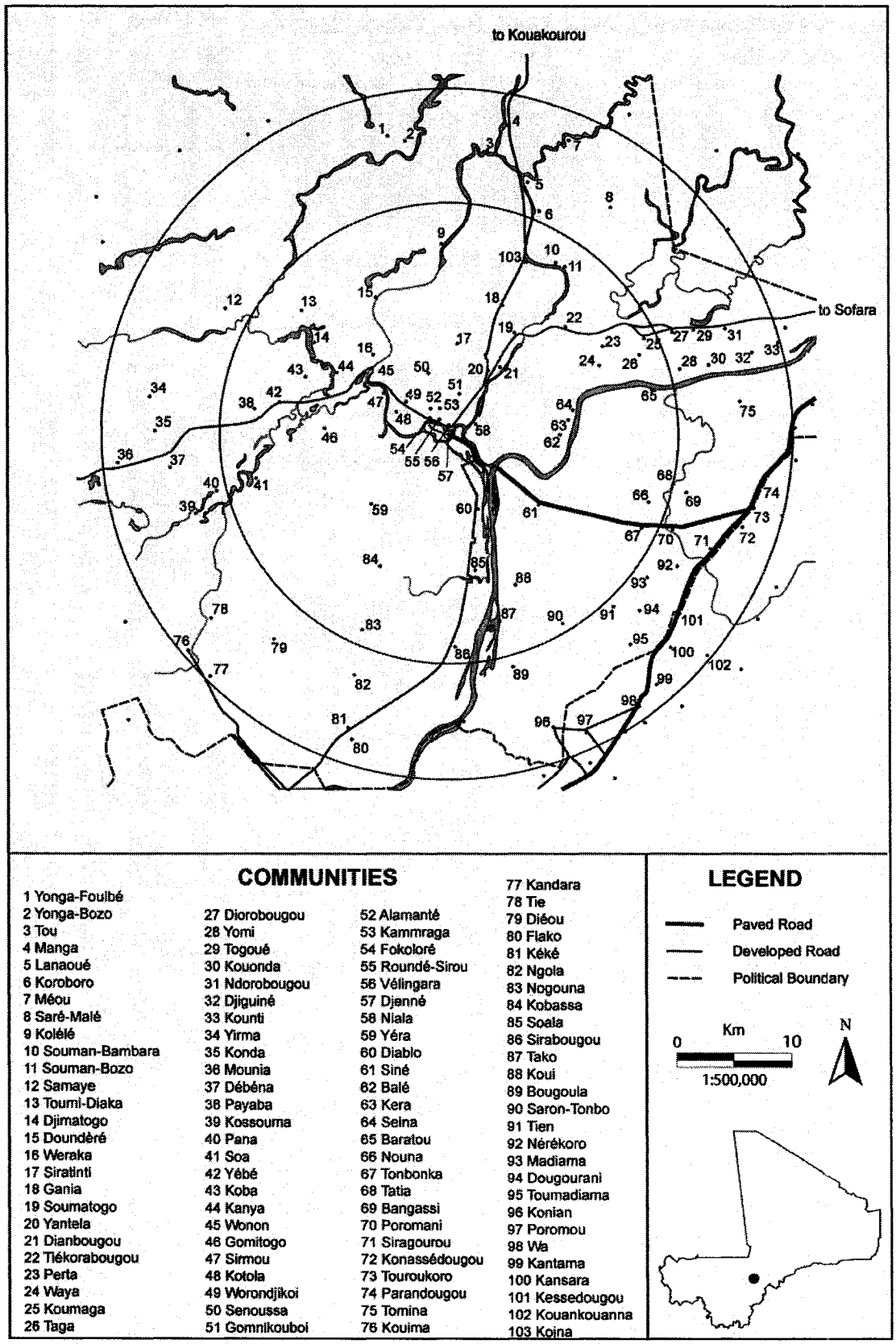


Figure 3.2: Communities in the research area.

Ethnicity and Occupational Specialization

The Delta is a unique region in part because of the way people have sought to exploit its diversity. It is both fecund and highly unpredictable, especially for agricultural and fishing activities tied to the annual flood. From some point in the distant past, the variability of the Delta has been exploited, not by the generalized economy of a single group, but by several distinct "ethnic groups" who demonstrate a high degree of occupational specialization. In contrast to the ethnic regionalism found in other areas of the country that usually form distinct ethnic regions or "*Pays*" (e.g., *Pays Bobo*), in the IND ethnic groups intermingle, sharing the villages and the territories they exploit for their livelihoods (McIntosh 1998: 95-96). The importance of ethnicity, however, is not significantly diminished because of this. Islam unites most people in the region, providing a superstructure for multiethnic economic integration; yet ethnic differences remain the dominant framework for social interaction. In most cases, ethnic groups remain relatively distinctive in their occupation, dress and language. Despite a strong tendency toward multilingualism, there is no single *lingua franca* of the Delta (Gallais 1967: 24).[5]

Two groups dominate the landscape of the upper Delta around Djenné. The Bozo are waterfolk who are known primarily as the fishermen who exploit the low lying marshes and shallow waterways in the flood zone. The Bozo around Djenné belong to a subgroup known as the Sorogo who are thought to speak the most ancient dialect of the Bozo language. Bozo groups living to the north and west along the Niger River seem to have been impacted by the succession of West African states and empires; however, the

[5] See Diallo et al. (2001: 31) for a map of ethnic groups in Mali.

Sorogo are thought to have remained quite isolated and relatively independent (McIntosh 1998: 97; Sundström 1972: 56) Oral traditions suggest that the Bozo were the first individuals to occupy the Delta. In the town of Djenné, a sizeable component of Bozo fishermen live in the older, eastern sections of town, frequently moving out into temporary camps to fish during the *decrue*. In rural areas, the Bozo tend to be lightly scattered along *marigots*, especially in the northern region of the Pondori marshland southwest of Djenné near the villages of Kobassa, Yéra, Soa and Nogouna where they fish the rice paddies, marshes and *marigots*.

In the Pondori, the Bozo live alongside Marka rice farmers who exploit the same ecological niche. Indeed, the Marka and Bozo make up two parts of a paired exploitation of the low lying swampland: the Bozo exploit the fish resources in the marshes while the Marka grow the rice. To deal with the inclemency and unpredictability of the flood, the Marka cultivate a number of different forms of rice (McIntosh 1998: 99-100), and in recent years also have begun to plant millet and sorghum. In the Pondori villages, the Marka tend to speak Bozo, while in Djenné they often speak Songhai and work as rice farmers, merchants and religious teachers (LaViolette 2000: 22).

The Fulfulbé speaking Peul (or Fulani) are the major pastoral group found in the southern section of the Delta. The Peul are most often described as cattle pastoralists; however, there is a significant degree of internal variability within Peul society. The Peul social structure falls into three semi-rigid castes with each level possessing several sub-groups (Gallais 1967: 127-131). The highest status caste is made up of chiefs and marabouts, migratory cattle herders and urban merchants. The middle class represents artisans, including praise singers, leather workers, potters and ironworkers. The lower

classes, known as the RimaïBe, are former captives of the Peul related to Sékou Amadou's theocratic reign from the town of Hamdullahi. The RimaïBe captives were resettled by Sékou Amadou as part of his reorganization of territories so that migratory Peul herders would have direct access to land and agrarian resources. The captives farmed millet and rice for their Peul overlords. By the time they were freed by the French conquest, most had lost direct affinity with their former and diverse ethnic backgrounds. To other ethnic groups in the region, the RimaïBe are somewhat ambiguous but generally considered "Peul". Within Peul society, they are considered outsiders. The Peul tend to be quite endogamous and as a group they are considered to be the furthest socially from the Marka and Bozo. LaViolette (2000: 23) has noted that Peul artisans tend to be the most endogamous group in Djenné itself, and my observations suggest the same holds for the surrounding villages. Peul are found throughout the region, often working in rural villages as herd masters for a town's cattle. Villages dominated by Peul are found along a low dune north and east of Djenné near the towns of Senoussa, Perta and Ndorobougou where they live alongside Bambara millet farmers.

The Bambara are the largest ethnic group in Mali and are often used as the model of the broader "Mandé" cultural region (Amselle 1998). Indeed, the Bambara language dominates commerce in Mali and Bambara have tended to hold positions of power within the country. However, in Djenné and the surrounding area, they form only a small component of the population. In general, rural Bambara tend to be millet farmers and live on a series of dunes called the *Nyansannari* along the Bani River south of Djenné near the towns of Soala and Sirabougou, as well as alongside the Peul north of Djenné.

In Djenné itself, the Bambara are generally of low status, despite their cultural and political domination of Mali (LaViolette 2000: 24). People in Djenné tend to be somewhat suspicious of the Bambara because they are either not Muslim or not thought to be particularly good examples of Islamic piety, being prone to drinking and other religious transgressions. Until the election of Amadou Touré ("A.T.T.") as president in 2002 – a "northerner" who was likely to represent Djenné's views – the political domination of Mali by Mandé groups located in the southeast was a minor but constant source of friction.

"Mandé societies" like the Bambara possess a tripartite class structure made up of farmers and nobles, craft specialists, and slaves. Casted specialists (*Nyamakalaw*) live under a rigid set of endogamy rules. These artisans, especially ironworkers and potters (French: *forgerons*; Bambara: *numu*), possess special occult knowledge related to their roles as transformers (McIntosh 1998; McNaughton 1988; Conrad and Frank 1995). In the transformation of raw ore into iron or clay into pottery, smiths encounter dangerous amounts of sacred energy called *nyama*. Smiths and potters are able to control this energy, but contact with it makes them both shunned and revered by other Mandé. *Nyamakalaw* are thought to be given to endogamy because it maintains their control over sacred energies such as *nyama*.

Although *numu* are generally considered to be a relatively clear sign of the Mandé cultural sphere, their identity is somewhat more ambiguous in the upper Delta. Potters who were not Peul identified themselves under the generic term of *"forgerons"* (*"numu"*) or occasionally under the hyphenated term Somono *forgeron* (*"Somono numu"*). The Somono are an interesting case in ethnogenesis and the blurring of ethnicity that has

occurred throughout Mali's history. The Somono normally are identified as a Mandé group tied to the rise of the Segou Empire during the early part of the 18th Century. Fisherfolk specialized in deep channel fishing and water-born transport were reorganized into a distinct Somono ethnicity/caste by Bambara overlords based at Segou. The Bambara wanted to control the Niger waterways and existing groups of Somono were enlarged with war captives to form an ethnic group/caste that carried out the Segou Empire's waterborne transport. Somono are thought historically to have been very migratory (Sundström 1972: 40-44) and often speak different languages depending on the regions where they primarily live. With the elimination of Segou's domination over the upper Delta in the early 19th Century by Sékou Amadou's Peul, the individuals once forced into a Somono ethnicity/caste became free to change their livelihoods and take up other trades. As Sundström (Sundström 1972: 35, 51; following Ortoli 1939: 190-191) notes, despite close contacts between the Somono and Bozo (including Somono use of the Bozo language in the upper Delta), the Somono differ from Bozo fishermen because they were *placed* into a distinct waterborne caste by the Bambara, while the Bozo have always identified themselves as a distinct ethnic group focused on fishing. In recent years, the Somono have taken up a number of distinct roles in society, often abandoning all ties to fishing and boating. Throughout the research area, the Somono are found loosely scattered in Bozo-Marka villages and live in Djenné among the Bozo in the older, eastern sections of town.

The vast majority of potters in the research area have some ties to the Somono ethnicity. In Djenné and Bozo-Marka villages of the Pondori, potters refer to themselves as *Somono numu* ("*Somono forgerons*" or "Somono ironworkers"), thus using a Bambara

term. Almost half of the potters interviewed, however, identified themselves simply as *numu* or "ironworker" without offering an associated ethnic modifier. In some cases, these *numu* probably are related quite directly to Bambara ethnic groups (especially east of the Bani) while others using the generic *numu* term are most likely Somono in origin.[6] Yet, some caution needs to be taken before assigning all *numu* potters to the Mandé cultural sphere, specifically a *Nyamakalaw*-based vision of craft production. Art historians and ethnographers have been quite willing to see the Somono potters of the upper Delta as just a northern version of Mandé, complete with associated ties to *nyama*, endogamy and rigid social status (e.g., Frank 1998). A recent study by Conrad (2002) notes, however, that there has been a tendency to oversimplify the complexity of "Somono" identity. Current understandings of Somono identity tend to rely on questionable historical accounts drawn from the time of the Segou Empire and reflect a distinctively Bambara perspective on their Somono underlings (Conrad 2002: 4-10). In these accounts, the Somono are often described as having been the slaves of the Bambara and, as a result, Mandé cultural traits have tended to be mapped directly onto Somono groups. In contrast, Conrad suggests the Somono may have predated the Segou Empire as a separate ethnic group, even perhaps carrying the Somono name. The creation of a distinct Somono caste by the Segou Empire may have functioned largely to add war captives to an existing social body in order to create enough waterfolk to carry out the

[6] *Numu* (*Nyamakalaw*) tend to see themselves as distinct from the broader Bambara ethnic group with which they are often associated. Their identity is thus simply "ironworker", which suggests distance from Bambara ethnicity in a way that blurs the distinction between ethnicity and caste. The tendency for Somono potters to do the same suggests a parallel set of ambiguities in identity, but it does not necessarily mean that Somono *numu* potters are socially distinct from "Somono" in a way that gives them exclusivity identical to other (Bambara) *numu*. See Gallay (2000) for a nice example of the ambiguities and cross-connections that occur between caste and ethnicity.

empire's needs. The Somono thus could have formed a distinct group any time between the 14th and 18th centuries (McIntosh 1998: 97).

The importance of this reconsideration of Somono identity is that the *numu* of the upper Delta may need careful consideration before being read as Mandé *Nyamakalaw*. Conrad (2002: 20-21) suggests that the Somono of the upper Delta around Djenné may be a particularly interesting case of variability. The Sorogo Bozo, next to whom the Somono live, are considered to be largely unchanged by neighboring state systems because of their location in the deep marshes (McIntosh 1998: 97). The possibility certainly exists that the Somono groups living in the same territory were also only marginally impacted by the reorganization of the Somono within the Mandé cultural sphere by the Segou Empire. A number of interesting contrasts do exist between the practices of Mandé potters and those in the study area. As LaViolette (2000) has noted for Djenné, and I observed in its hinterland, in contrast to the convex mold technologies typical of Mandé potters (Frank 1998: 94-97), potters in and around Djenné tend to use concave molds with a slow wheel and coiling. LaViolette (2000: 26, 94-95) also suggests that the rigid status structure and endogamy typical for Mandé craft producers was not followed in Djenné. Although marriage to an ironworker seemed to be preferred, and marriage to nobles was strongly discouraged, the potters I interviewed in the countryside were at least as likely to marry other Somono as other *numu*. Rather than fishermen, these Somono were primarily agricultural producers. Most surprisingly, despite relatively direct questioning, none of the potters made reference to the control of *nyama*. Discussions regarding the strength of potters ("*forte*") focused on their ability to master the techniques of potting rather than sacred energy. Direct questions about occult powers

associated with potting led to examples of local marabout's being consulted in order to get *gris-gris* (charms containing an Islamic text) that protected potters from malevolent forces. None of the practices followed by Mandé potters in the procurement of clay (Frank 1998: 79, 81), which is thought to contain *nyama*, were reported in and around Djenné. Thus, while it may be tempting to read "*Somono numu*" as an indication of Mandé casted specialists, the differences that exist in the upper Delta argue a need for caution.

A number of other ethnicities are also represented in the research area in small numbers. The Bobo are affiliated with the onion producing region southeast of Djenné. People in the upper Delta generally have some distrust for the Bobo because they remain animists and thus are believed to be unpredictable and prone to undertaking evil magical rites. The Dogon of the Bandiagara escarpment to the east of the Delta remain on quite close terms with the Bozo, with whom they share a unique "joking relationship". The Dogon, who generally are Muslim, live in Djenné as well as in small numbers in outlying villages and operate as merchants, teachers and farmers. Somono potters from Kobassa, for example, rely on a Dogon merchant in Djenné to watch their pots between markets. Finally, the Songhai are largely an urban ethnic group restricted to Djenné itself. They make up only 2000 individuals in the entire Delta (Gallais 1967: 22) and a small percentage of the town's population. However, the Songhai language is the principal language of Djenné as a result of the conquest of the town by the Songhai Empire in the 15th Century. As LaViolette (2000: 20-21) notes, the Songhai primarily operate today as farmers and wealthy merchants.

Despite the rather structured vision of ethnicity provided above, we must be cautious about reifying the timelessness of modern identity politics. Ethnicity in West African ethnographic literature – especially that focused on by ethnohistorians – is prone to treat modern ethnic divisions as if they were part of the eternal fabric of West African social relations (see Amselle 1998 for discussion). Ethnicity is the primary referent for social interaction today, but the stability of ethnic groups can be overemphasized. Its ties to occupational specialization and the importance that those specializations have in the interpretation of Mali's remote past (McIntosh 1998, 1993) risk giving modern ethnic identities an unfounded historical stability. Anthropologists have long known that "ethnicity" is not a unitary phenomenon, but may vary substantially in the degree that it defines individuals, reflects certain cultural practices, and forges social integration (Handelman 1977; Roosens 1989; Smith 1992). The complexity of social life today in the IND makes simple readings of ethnicity difficult and prone to overgeneralization. Castes and ethnicities blur as individuals deal with the economic realities of postcolonial environments (LaViolette 1995). To give one example, the Bozo – considered the epitome of ethnically defined occupational specialists and fishermen since time immemorial – seem from time to time also to have acted as part time agriculturalists (Sundström 1972: 48, note 1). Despite deep affinities for the water and fishing, Bozo friends in Djenné were preoccupied during my fieldwork with gaining access to farm lands so they could grow their own crops. Hence, while the traditional structure of ethnic relations so often given for IND groups provides a framework for social analysis, the flexibility of even occupationally-defined identities must not be overlooked.

Markets and Exchange

Today, the products generated by occupational specialists tend to circulate at small daily markets in most villages and larger weekly markets located in regional centers. An economic study of the Djenné region by cultural geographers from the University of Utrecht paints a relatively clear picture of how these markets operate (Harts-Broekhuis, et al. 1980; Harts-Broekhuis, et al. 1983; Harts-Broekhuis, et al. 1984; Harts-Broekhuis, et al. 1985; Kliest, et al. 1982; Verkoren 1984). The Delta rests in what Verkoren et al. (1984: 131) have called an economic "cul-de-sac". At one time, Djenné was intimately connected to interregional trade. It was a point for exchange along the Niger-Bani waterways and also functioned as a virtual bread basket supplying downstream trade centers like Timbuktu. Since the colonial era, Djenné's role as a market center has slowly declined. The major paved highway connecting Bamako to the north now runs along the southern and eastern edge of the Delta, passing Djenné some 30 km to the east. Colonial officials selected the once small Bozo fishing village of Mopti, located 100 km north of Djenné at the confluence of the Bani and Niger Rivers, as the principal economic and administrative center for the region. Mopti was connected to the highway by a short causeway and its market quickly became one of the most important in the Delta. Djenné's distance from the highway, and the lack of a direct bridge into town, has meant that the bulk of interregional exchange has shifted to markets located closer to the major highway at San or Mopti. Djenné now acts primarily as a redistributive market for its hinterland, offering a place where consumers can purchase imported items and where locally produced agricultural goods can be sold in order to get hard cash.

Most imported items enter the Djenné region through semi-itinerant market sellers who are mostly based in Bamako, Mopti or San (Harts-Broekhuis, et al. 1984; Harts-Broekhuis, et al. 1985; Verkoren, et al. 1984). Industrial products from outside Mali are distributed throughout the country after first passing through importers and large merchants located in the capital of Bamako. These may be bought directly by itinerant merchants at Bamako, who then circulate through regional weekly markets. Harts-Broekhuis et al. (1985: 125) note that the itinerant merchants specialized in industrial products who sell at Djenné do so as part of a large market circuit that includes purchasing stock in Bamako and sales at weekly markets in San, Djenné and Sofara. Local Djenné merchants who either sell in the weekly market or from their own boutiques will purchase stock from these traveling merchants during the Monday Market or they will procure them directly from San or Mopti. Larger boutiques in Djenné will often re-supply directly from Bamako (Verkoren, et al. 1984: Figure 5.9). A survey of the merchants in the Djenné weekly market suggested that some 44.5% of merchants were involved in selling imported agricultural and industrial items to local consumers and resellers (ibid: 110).

In addition to being a central port of entry for most imported items, Djenné's weekly market also acts as the primary redistributive mechanism for local agricultural products. Some 53.4% of merchants in the Djenné market were involved somehow in the resale of locally grown or produced products to local consumers. Producers from Djenné's hinterland tend to go directly to Djenné or larger market centers like San to sell their produce, rather than moving through more local markets.[7] While men dominate the exchange of higher valued imported items, women tend to control the sale and resale of

[7] The Pondori villages were especially prone to selling their rice directly to San.

agricultural products such as cereals, condiments and garden vegetables. In most cases, these products have been transformed by the reseller in a way that increases their value (Harts-Broekhuis, et al. 1985: 119; Robertson 1995: 50).[8] For example, women from surrounding villages may bring rice their families have produced and sell it to female merchants based in Djenné. The Djenné resellers then remove the husk with a mortar and pestle and resell it later in the same market at a higher price (Verkoren, et al. 1984: 120). In contrast to the itinerancy of men who visit a number of larger, regional markets, women generally are restricted to selling locally obtained items.

Today, there is little indication of Djenné's once prominent role as an exporter of agricultural products. Somewhere in the range of only 2% of merchants now actively come to Djenné to purchase items that they export to other regions of the country, with fish and live cattle making up the bulk of these exports (Verkoren, et al. 1984: 110). The lower flood levels that have affected the region have meant that agricultural producers grow only enough to feed themselves. The small surpluses they occasionally enjoy are then sold in Djenné, typically to other local farmers and townspeople who wish to supplement their diet with other agricultural products.

The smaller regional markets surrounding Djenné vary according to their size and the objects that they offer (Harts-Broekhuis, et al. 1985: 112-115). In general, those markets located east of the Bani River and closer to the national highway, such as Sofara, Madiama and Konian, tend both to be somewhat larger than those in Djenné's western hinterland and to possess a larger proportion of imported items. The market at Sofara may equal the 1500-2000 merchants estimated to sell regularly in Djenné and it now

[8] Indeed, while women make up 75% of the venders in the Djenné market, they are almost entirely restricted to the low-return sales of agricultural products (Harts-Broekhuis, et al. 1985: 119).

rivals Djenné in the number and diversity of its products. Both markets tend to supply imported items to the merchants who visit smaller, rural markets in the research area, such as Mounia, Kouakourou, Madiama and Konian. Smaller markets such as Taga and Yébé boast often no more than 150 merchants and generally are concerned with the resale of local products. One or two venders of imported items, such as plastic household vessels, may also be present. In most cases, the sellers in these smaller markets are producer-sellers (e.g., farmers, fishers or artisans) or they are women who had purchased items at Djenné or Sofara for local resale. The University of Utrecht study noted that rural market sellers generally formed two local circuits, one that connected markets to the north and west of Djenné and a second that connected markets to the southeast (Harts-Broekhuis, et al. 1985: 124-125). Djenné was a point of connection between these circuits, offering a place for rural sellers to restock.

While the low topography across the Delta would seem to make for easy transportation, the seasonal variation in flood heights can often make movement into Djenné's hinterland unpredictable. Most villages connect to their various neighbors with *ad hoc*, serpentine trails that change their routes to account for shifting flood waters. More established roads generally follow high areas that are above the flood zones for most of the year. In general, these leave Djenné in each of the cardinal directions (see Figure 3.2): one road goes north to Kouakourou, another east to Sofara, one south past Soala and Kéké, and a final road heads west past Mounia. Automobiles, most often large trucks and all terrain vehicles, use these roads throughout the year. However, they do not have a road bed and are not maintained throughout the year.[9] The only developed, all

[9] The government is turning the road that runs from Djenné to Mounia into a highway that will continue on south to San.

season road is the paved causeway that connects Djenné to the national highway with the help of a ferry at the Bani River.

On market days, most villages will have one or more horse-drawn wagons that operate as "bush taxis", or "community charette's", and ferry people and luggage (often material for sale on the way to the market and purchases on the way back) to and from the market for a small price (Figure 3.4). The southeastern part of the research area, adjacent to the national highway, is generally outside the flood zone and wagons can move quite freely between villages and the markets at Madiama and Konian. West and north of the Bani, transportation except during the dry season can be more difficult. During high water and the *decrue*, flooded low lying areas can make even the established roads impassible. Wagons often divert long distances to find working fords and mopeds users and pedestrians often hire enterprising pirogue owners to ferry them across *marigots*. A single trip between nearby villages can require two or three such traverses. Along the Bani River and the deep *marigots* that run north past Gania and west toward Sirmou and Soa, pirogues are often used in the place of wagons for market visits. Depending on the market and the point of origin, high water can be insignificant, beneficial or a significant obstacle to regional mobility. People in Sirabougou, for example, tend to visit different markets depending on the flood. During the dry season, local wagons will drive directly across the dry Bani River to get to the nearby market of Konian. During the height of the flood, the fear of drowning and the inconveniences of combining water-born and wagon transport direct market goers to the more distant Djenné market.



Figure 3.3: A "bush taxi" or "community charette" on the way to the Djenné market.

Gender and the Household

In general, women are well known in West Africa for their ubiquitous presence in markets. Yet, they are also relegated to the selling of locally produced, low value objects. The contrast reflects the ambiguity women have in many areas of Africa as simultaneously enterprising and marginalized (Allman, et al. 2002; Hodgson and McCurdy 2001; Guyer 1995). Such ambiguities are no less evident for the position of women within the household. Kinship structures in the Inland Niger Delta tend to be both patrilineal and patrilocal. Consistent with Islamic teachings, families also tend to be polygamous and men who have the economic resources may marry up to four wives.

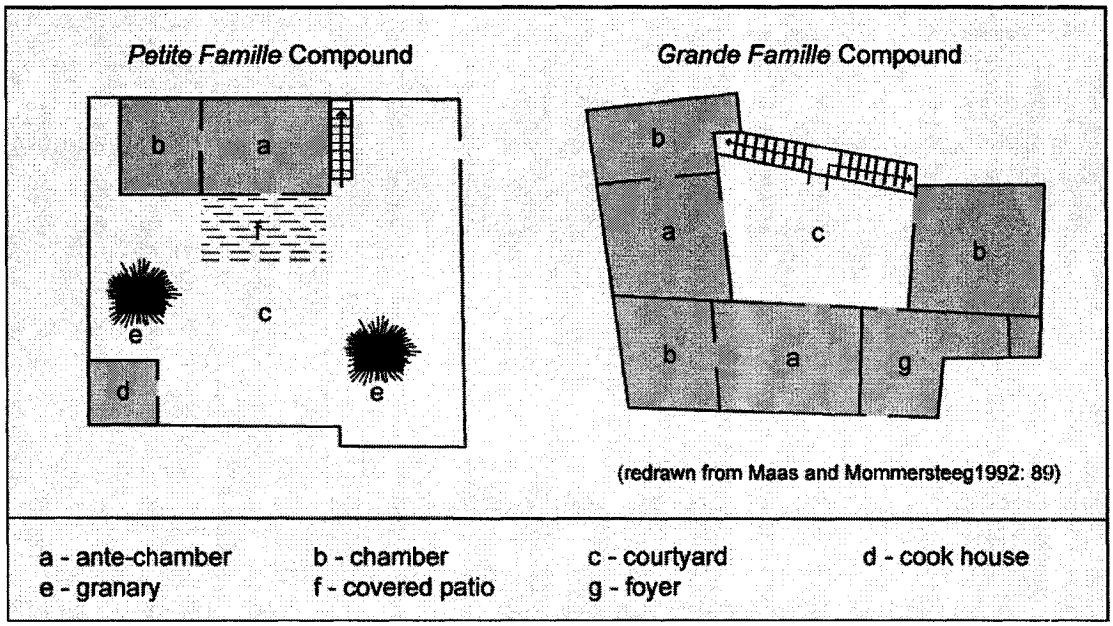


Figure 3.4: House compounds.

As Delafosse (1972: 93-98) noted long ago, two basic family types are present.[10] The typically *petite famille* is made up a man, one of his wives and their offspring. Depending on how many wives he has, a single man may belong to several such *petites familles*. In contrast, the *grande famille* is the extended patrilineal family centered on a patriarch, his younger brothers, their wives, and offspring. A *grande famille* may be centered on a single patriarchal household, but it typically incorporates several *petites familles*, each of which is headed by a junior male relative of the patriarch (also see Potash 1995: 70).

Ideally, sons and their wives will live within the same house compound as the patriarchal couple (Figure 3.3). Each wife will often have their own room block (*hu*)

[10] Delafosse uses the terms *"La famille globale"* and *"la famille réduite"*. I have opted here for the terms as they were used in Djenné – the *petite famille* and the *grande famille*. Other similar typologies of families in the region also exist. For example, Tempelman and Hackenitz (1984) identify 6 different types in the Djenné region, most of which are intermediaries between the two poles of *grande* and *petite* family types. In Chapter 4, I expand on these two types to include two other family forms identified during my survey of consumer households, an *extended petite famille* and a *boys' house*.

made up of a chamber (*tasika*) and an ante-chamber (*galia*) (Maas and Mommersteeg 1992: 68-69). The ante-chamber tends to be used as a living space, while the chamber is reserved for sleeping. In practice, housing an extended family within a single compound is often impossible, especially in dense urban settings such as the eastern quarters of Djenné or the Pondori tell-villages where there is little room for expansion. Women who marry into the family relatively late, such as second, third or forth wives or the wives of younger sons, often live in rented room blocks in other large houses or in entirely separate house compounds. In new areas, such as the west end of Djenné, or villages with room to grow, such houses may be made up of a large open courtyard that contains a single room block and some associated outbuildings, such as granaries or a cookhouse. Tensions within the family – especially between co-wives – often result in the dispersal of a *grande famille* throughout a village.

There are a number of relatively strict conventions relating to the obligations that the members of these families have to one another. As in families everywhere, these conventions and obligations are fluid and negotiable, but tradition remains sacrosanct and offers the precedents around which negotiations pivot. For example, men are obliged to partition their resources and their attention equally among their wives. They should provide for the basic needs of their (*petite*) families, including health care, education and food. In terms of household economics, men must contribute meat and staple cereals (millet, rice or sorghum) to the diet. In contrast, their wives are responsible for providing the condiments for each meal, typically fish for flavoring, oil, and spices. Women's household labor is directed to the paired tasks of preparing meals and hauling water. These tasks can consume a significant amount of time. Preparing the meal often means

purchasing the food, decortifying and/or winnowing cereals, collecting fuel, cooking and then washing up. Hauling water typically means several trips to the closest well or spigot to refill a household's many water jars.

The members of *petites familles* also have obligations and responsibilities to the *grande famille* of which they are a part (see Delafosse 1972: 97-98). Men are expected to contribute economically to the *grande famille*, either in the form of monetary gifts or purchases of food. They may also work collectively with other members of the family in fields or at fishing. Likewise, women are required to direct a portion of their labor to the *grande famille*. As in their own households, this labor is related primarily to hauling water and preparing meals. Each evening, the *grande famille* provides a large meal for its members. Not everyone necessarily attends, but the meal allows those without other means to gain sustenance on a daily basis. Because the grain and money gained from the sons usually go to providing the meal, there is a level of collectivization at the family level that redistributes the wealth of one or more sons to those who are ill or have been relatively unsuccessful in their work. In larger families with several junior women, the work in the *grande famille* is often rotated (also see Harts-Broekhuis, et al. 1984: 137). For example, in families with two or more junior women, each will work two days in a row for the *grande famille* and then change. On these days, they often work 4 to 6 hours just to prepare the evening meal. In cases where families have few sons (and thus few daughters in law), or sons who do not reside in or near the *grande famille* compound, labor can fall squarely on the shoulders of a single woman. Although they may choose to assist with the evening meal or prepare the breakfasts or mid-day meals, senior women

are generally exempt from the bulk of the work. To complete these tasks, women often rely on their children, especially young boys and unmarried daughters, for assistance.

As Monteil (1971: 160) has noted, in general women are considered people without power (*gens sans puissance*) and are lumped in with children and (formerly) slaves in the family hierarchy. Women own primarily what they bring into the family (ibid: 162). While they dominate economic activity in the market, either by selling their family's agricultural or harvested products, or materials they themselves have produced (artisanal products, vegetables, cotton), they often are obliged to pass on a portion of their income to their husbands or to members of the *grande famille*, often their mother in law. The transfer of a portion of the profit is not a forceful extraction. Women state that they alone control the money they gain from these activities. On the other hand, being a good wife and daughter in law (analogous to being a charitable and respectful son) means that profits from any economic activity should be shared with more senior members of the household. Monteil (1971: 170) suggested that giving away a portion of the profits encouraged family members with power to allow their subordinates to continue their "independent" economic activities. For women, the transfer of cash is often phrased in terms of giving money to their mother in law so she can procure the condiments necessary for the women's contribution to the *grande famille* meals. The money is also often transferred under the guise of collective savings. Women pass money to senior women in the household, who hold it cooperatively and can redistribute it according to need. If necessary, junior women can approach senior women and ask for money for larger purchases such as new clothes. The transfer of cash from women to their husbands also occurs under the rubric of showing respect; however, women generally retain direct

rights to that money. Men are described as "holding" the money for their wives. Frequently, however, the money is "eaten" ("*manger*") and none is available when women need it. As Schroeder (2001: 93-97) has pointed out, this is but one of the many ways men can gain access to the income women have generated through independent economic activities.

The status a woman has in the household changes during her life (see Potash 1995: 78). Within the structure of the *grande famille*, women bear the brunt of the household labor during the years immediately following their marriage (Coplan 2001). During this time, they are expected to be hardworking and respectful. Respect ideally is expressed by passing on a large portion of the profits generated by any independent economic activity. Once they have children, they become more integrated members of the family and gain a measure of personal independence. They are expected at this time to keep a larger portion of their income to help pay for the small needs (*petites besoins*) of their children. Not infrequently, taking care of small needs is accomplished by buying any needed consumer items immediately after they have generated some profit and before they return to the household (see Schroeder 2001: 97-101). By buying needed items immediately after they have made a profit, women ensure that they adhere to the values of charity and respect while simultaneously provisioning their families. Children may ease the domestic work load. By the age of 6 or 7, daughters are enlisted to help with meals and haul water. When a daughter reaches her mid-teenage years, she may take over the bulk of the domestic workloads, including a significant portion of the labor her mother is obliged to donate to the *grande famille*. As their daughters approach the age of marriage (15 to 20 years old), women gain independence from the obligation to pass on

profits. Mothers are required to assist their daughter prepare a trousseau for her marriage; this being the largest financial obligation that women will have in their lives. Senior women generally recognize this fact, and will encourage junior women who have a daughter approaching the age of marriage to save any income they generate for that purpose. Mothers and daughters start preparing for a marriage by buying trousseau items as many as 3 years in advance – often well before a husband has been selected. About the time that women lose their daughters through marriage, the *grande famille* gains daughters in law who take over domestic tasks. As women become more senior in the family, they become the beneficiaries of the flow of labor and money.

The actual experiences particular women have in a family setting may vary significantly from this scenario. Newlyweds today often prefer to live in their own house rather than as part of a large *grande famille* (Tempelman and Hackenitz 1984: 46) and not infrequently men and women choose to maintain monogamous relationships. Urban migration from the countryside to cities either for work or for schooling may mean that, while offspring contribute financially to the *grande famille* through gifts of cash (Harts-Broekhuis, et al. 1983: 49-52), they do not donate regularly to the household's labor pool. Women remaining in the household may then find that their workloads increase significantly. This situation has resulted in the widespread employment of domestic help in many areas of Mali. The women who work as domestics come from a variety of backgrounds. Young women as young as 13 years of age engage in paid domestic work in order to purchase the items they need to develop an adequate trousseau for their marriage. Women from poor families are most likely to undertake such work, often

migrating from rural villages to large centers like Djenné, Mopti or Bamako.[11] Harts-Broekjuis et al. (1984: 141-142) note that in the early 1980s women could make between 1,500 and 3,000 CFA per month plus food for domestic work. In Djenné during 2002, young women reported that their work as domestic servants in Bamako earned them 6,000 – 7,000 CFA plus food and lodging each month (equivalent of about $12 Canadian). While men in some areas of Africa are known to undertake migrant labor specifically related to marriage and the need to acquire bridewealth (Lovette 2001: 49-50), few have written on female migrations for similar reasons (but see Barnes 2002). It may be that the migration of girls and young women to work specifically for their trousseau is a recent change related to the notion that the ideal trousseau includes several sets of expensive enamel serving dishes.

Conclusion

As we will see in following chapters, the consumption of household vessels and the production of pottery inescapably are embedded in these ecological, economic and political contexts. Consumers buy a large portion of their household vessels as a part of marriage trousseaus that assist newlyweds in making the transition into their husband's extended family. Potters manufacture vessels to meet their financial obligations within such families as well as to generate the income they need to prepare their own daughters for marriage. While they may be ethnically defined, craft producers primarily make

[11] Marriage generally has a significant financial element to it in many areas of Africa (e.g., Ekejiuba 1995). Potential husbands are generally required to pay a bride price and the families involved may exchange a number of gifts leading up to a marriage (see Cooper 1997).

pottery to get the income it creates. As a result, they face quite directly the changing ecological and economic situations that affect modern Mali.

CHAPTER 4
BUILDING INDEPENDENCE

From the outset ethnoarchaeology's primary role in archaeology was to be focused on straightforward empirical study. It was envisioned as an inductive way to identify behavioral-material relations that was sharply contrasted to the more difficult and deductively focused inquiry that was required of archaeology. The illusion that ethnoarchaeology was some form of ethnographic fact-collecting has unfortunately resulted in a significant lack of critical theorization about ethnoarchaeological practice (David and Kramer 2001; Stark 2003). In the absence of explicit theoretical frameworks, ethnoarchaeologists have tended to rely on understandings of society and cultural process that they inherit from archaeology. These theoretical predilections have remain veiled, despite their direct influence on the sorts of questions that were asked, the data that were analyzed, and the conclusions that were drawn, because ethnoarchaeology's *raison d'être*

– the identification of "unambiguous material correlates" – was assumed not to be structured by any background theory.

Like many others, I would suggest that ethnoarchaeology's primary role is to enact detailed analyses of ethnographic cultural contexts in a way that facilitates archaeological interpretations. Ethnoarchaeology helps archaeological research by elaborating the *processual interactions* that affect human behavior and material culture. Identifying processual interactions, however, is not a matter of simply "going to the field" and reporting what is found. The history of anthropology includes numerous examples of projects that sought to do little else but characterize a single cultural context in as much detail as possible without "being burdened with 'preconceived ideas'" (Malinowski 1984: 9). These works often appear hopelessly structured by background ideas about how society operates (e.g., unilinear evolutionary thought) and produce accounts that in hindsight appear little more than justifications for specific nationalist or political views. Modern cultural anthropologists have now reached a point where they possess a large amount of skepticism about ever being able to accurately characterize an ethnographic setting (Clifford 1988; Marcus and Cushman 1982; Marcus and Fischer 1986; see Kapferer 1988; and Pool 1991 for critiques). It would be presumptuous to assume that ethnoarchaeologists somehow avoid parallel issues and gain direct empirical access to cultural settings just because ethnographic data are somehow "more accessible" than the hard fought for archaeological data generated by most digs. Despite suggestions to the contrary (Arnold III 2003), we must recognize that latent perspectives on social theory always inform ethnoarchaeology's empirical research (Cunningham 2003b). Just as archaeologists have long done, ethnoarchaeologists must recognize the theory they use

and seek ways to build a degree of independence into their analyses. There is a significant and unavoidable epistemic issue that must be confronted and doing so is neither trivial nor pedantic.

As we saw in chapter 2, the refocusing of ethnoarchaeological enquiry so that it explicitly recognizes a Mertonian version of middle range theory makes plain that ethnoarchaeology is itself a fully interpretive procedure. In contrast to the deeply reflexive engagement with ethnographic authority that characterizes post-modernist anthropology, I offer a distinctly realist approach that pluralistically seeks to identify the wide range of processes that affect the movement of household vessels from production to consumption locales. In barter and market economies, like those seen in the Inland Niger Delta, pottery moves through systems of exchange. In the following section, I provide some background to the theories I use to examine household vessel exchange. As we will see, both economic anthropology and more recent consumption studies are trying to find a way of grappling with the impact of theory on detailed empirical research. In the second half of the chapter, I outline how I have used a concern with "independence" to build a method for ethnoarchaeology.

Formalist-Substantivist Debate

The Formalist-Substantivist debates represented a rather heated set of exchanges between economists and other social scientists that began in the 1950s with Polanyi's *Trade and Market in Early Empires* (Polanyi, et al. 1957). Polanyi argued that the economy was "embedded" in social relations. This suggestion broke with standard

economic thinking at the time that argued that human rationality was the same regardless of the cultural context in which it occurred (e.g., Marshall 1982). As Wilk has noted (1996: 4), for quite some time economic anthropologists wrote almost exclusively about the differences between their perspective of an embedded economy and the formal models favored by economists (e.g., Burling 1962).

As Wilk has also noted, the differences between Formalists and Substantivists are differences relating to deeply held philosophical issues about human nature and the character of human existence, including "*free will versus determinism, rationalism versus romanticism* and *selfishness versus altruism*" (Wilk 1996: 12, emphasis in original; also see Sahlins 1972: Ch 4). Formalists include economists who often envision production as the most fundamental component of any economy. Consumers, as autonomous and rational individuals, will select the best objects available to them in an attempt at economic maximization. Even with the introduction of Keynesian economics (Keynes 1936), which rejected a base utilitarianism in human beings, classical economics had maintained the attitude that human beings will make similar economic choices regardless of their cultural contexts (see Koritz and Koritz 2001). The approach is deeply materialistic, positing that the human mind has an unproblematic access to the empirical world and that humans will tend to choose what is in their own best interest. Thus, Formalist approaches emphasize cross-cultural regularities in "behavior" (rather than "institutions"), which justify the use of formal models to characterize human decision making (see Halperin 1985 for discussion; and Wilk 1996: 9-10). Objects in this framework are desirable to individuals because of their intrinsic qualities. The attributes

they possess give them an absolute utility or desirability that is apparent to individuals regardless of cultural standpoint.

Substantivists reject the idea that all humans possess a single, utilitarian rationality, and instead have adopted the position that cultural understandings and social institutions affect all aspects of economic life (Sahlins 1976). Humans act irrationally – i.e., make choices that are not in their best ("utilitarian") interest – because choices are always made within a framework of cultural meanings. Economic choices are symbolically rich and thus may be dependent on any one of a number of cultural factors. Economic activities do not form an isolated subsystem of society, but are interconnected with all that cultures have to offer. As a result, any investigation of economic life must be particularistic and contextualized in order to draw out the linkages between culture and economic behavior. Cross-cultural regularities are incredibly rare and objects are desirable to people because of their symbolic meanings, which require a further exploration of the cultural knowledge in which those objects are embedded. Value is not a product of the inherent attributes of an object, but is ascribed by the system of exchange in which it circulates (Appadurai 1986). Substantivists reject Formalist approaches because they believe that Formalists have failed to address a significant question: Why do people want particular goods? (after Douglas and Isherwood 1979: 12-15). As Wilk (1996: 32) notes, economic anthropology has made this question its *raison d'être*: "Economic anthropology asks *why* people want things, not just how they set about to satisfy those wants".

There are several responses one could make to the question why do people want specific things. Economic anthropology, after the Substantivist-Formalist debate,

predictably has diversified along a number of different lines. In part, this is because once rationality is thought to be embedded in cultural contexts ("Cultural Reason" *sensu* Sahlins 1976), then any one of a number of connections can be made between the "economic" and the "cultural". Sahlin's early exposition, for example, sought to outline an approach to economic analysis that developed a theory of exchange value based on the desire to create and maintain social ties through the obligations created by generosity (Sahlins 1976: 297-308; also see Sahlins 1965). In this, he follows previous expositions on the importance of gift exchanges in creating and maintaining social ties (Mauss 1967). While pure utilitarianist approaches (Formalism *par excellence*) have been firmly rejected by most researchers outside macroeconomic circles, rationalist themes still reoccur in economic anthropology. Few see individuals either as instrumental maximizers or as the senseless dupes of cultural structures. This has created a plethora of different approaches and research foci and getting a handle on this diversity has become a constant source of concern. Although it is a small specialty in anthropology, economic anthropology publishes an astounding number of book-length reviews and re-evaluations of the field (Clammer 1978, 1987; Dalton 1971; Halperin 1994, 1988; LeClair, et al. 1968; Ortiz 1983; Plattner 1989a; Wilk 1996). Most of these texts explicitly seek to identify existing dominant schools in the field or to lay out what particular authors believe should become future research emphases.

To give two examples, Halperin (1988) suggests that economic anthropology suffers from a crisis of identity. In attempting to develop a new synthesis, she identifies three distinct schools in economic anthropology (Formalist, Substantivist, and Marxist) and then defines the underlying "paradigms" to which these schools map (Formal

Paradigm, Ecological Paradigm, and Institutional Paradigm). In contrast, some eight years later, Wilk identifies the dominant schools in the field as including NeoMarxism, Feminism, Ecological Anthropology, Developmental Anthropology and Peasant Studies and suggests that each of these relates to underlying assumptions about whether the motives behind behavior (and thus basic human nature) are inherently self interested, social, or moral (Wilk 1996: 13-24, 36-41). The importance, here, is that different perspectives on human nature result in different definitions of "rationality":

> Microeconomics carefully defines rationality as a form of instrumental logic based on goal seeking and efficient allocation of resources. Social economics defines rationality at the level of the group, as effective class struggle or group survival. Moral economists do think there are universal mental abilities, but they differ on precisely what they might be. For some, they include goal seeking, rational capacities to connect cause and effect, to solve complex allocation problems, or to bargain. For others, the universal human capacity is to symbolize, categorize, and communicate with language . . . [but] the values and goals that motivate people to use these innate rational capacities are entirely relative, the province of each unique culture (Wilk 1996: 120-121).

The problem in identifying definitive streams in economic anthropology has created a tendency to move away from first principles and explicit theoretical schools and toward experimentation with different – and less ethereal – ways of investigating economies. Wilk (1996: 147) suggests that anthropologists avoid reifying assumptions about human nature and instead make the economy an empirical problem. Gregory and Altman (1989: 204-205) say the same thing, but go on to offer more specific recommendations. They identify three axes of investigation in any exchange: 1) analysis of the relations between individuals, 2) analysis of the relations between individuals and

the objects exchanged and 3) analysis of relations between the objects exchanged. In their view, economic research is best directed at assessing such low-level linkages.

Consumption Studies

The lack of a single, or even several, distinct theoretical schools in economic anthropology has created new areas of emphasis that break with traditional theoretical positions. One of the most vibrant of these areas to emerge in the last 20 years is the study of "consumption". Economic anthropologists have long recognized that consumption is rarely directly considered in economic theory (e.g., Herskovits 1952: 269). Consumption studies represent the classical Substantivist theme of reconnecting economic behaviors to "culture" (see especially Koritz and Koritz 2001), of identifying why it is that individuals want specific things. In general, studies of consumption tend to emphasize how the acquisition of objects relates to individual and group-level identities (de Grazia 1996; Friedman 1994a; Howes 1996; Mackey 1997; Miller 1998b, 1995) Two distinct sub-themes exist in this literature, inspired in part by different lines of thought. The first draws on Veblen's (1994 [original 1899]) discussion of emulation and conspicuous consumption. Here, consumption is a product of competition between groups or individuals who seek to differentiate themselves from others through the (non-utilitarian) consumption of goods. Bourdieu's (1984) examination of tastes in French society and Douglas and Isherwood's (1979) critique of formal economics are well known works that expand on this thesis. The second version of consumption draws on Marx's notion of commodity fetishism and alienation. Consumption of commodities is

part of the way in which individuals cope in capitalist societies with the sense of alienation they feel as result of their disassociation from their own productive activities. Individuals thus "consume" items in an attempt to satisfy their need to create a sense of identity. As Wilk (2001: 246-248) notes, this form of consumption is often termed in the metaphors of "sickness" – as an unsuccessful or hopeless attempt by individuals to create for themselves a sense of place in a commoditized world. Capitalist consumption of commodities can be contrasted with more authentic "traditional" consumption practices. While each of these theses has an independent history, they often overlap in consumption studies.

Current approaches to consumption are not without their problems. Miller (2001: 237), for example, notes that many consumption studies have a common form which he attributes to the guilt and anxiety of American researchers. An authentic local culture is replaced by an inauthentic (mass produced or global) culture – based in capitalism – which increases the amount of commodification, materialism, hedonism and individualism that occurs in that local context. These studies of consumption show how the social and economic disparities brought about by capitalism are expressed through the acquisition of objects. The fault for this recurrent tendency lies in the global dominance of the United States. As Miller (2001: 237) points out, the underlying assumptions of such a narrative is that an engagement with consumer culture (and the corresponding increase in actual material wealth) is authentic only for America. The consumption of commodities by the rest of the world either is a form of neo-colonial oppression (if the local people desire some commodities) or (if they reject them) it is an agentive form of resistance couched in the tropes of "traditionalism" (also see Wilk 2001: 250-251 on the

"consumer imperialism thesis"). Consumption studies that take this form primarily are a way of critiquing capitalism. Yet, in Miller's mind, the trend to use consumption as a form of critique has significantly skewed the results that have been produced. In assuming consumption is capitalist, "only those consumption acts that are consistent with the dominant image of capitalism are recognized as true consumption" (Miller 2001: 233) Miller's concern is that this approach to consumption misses the actual complexity behind consumption behavior:

> . . . the task today is to rescue the humanity of the consumer from being reduced to a rhetorical trope in the critique of capitalism. The moralistic critique of consumption actually dehumanizes and fetishizes the consumer, and thereby serves the cause of the very capitalism it claims to critique (Miller 2001: 234)

Miller's solution is in effect a call for greater empiricism, for an anthropologically inspired "empathetic enquiry into experience" (Miller 2001: 234). His call echoes other proposed solutions to "premature theoretical closure" – not just to consumption studies (e.g., Friedman 1994b; Wilk 2001),[12] but also to economic anthropology (e.g., Gregory and Altman 1989: 11; Wilk 1996) and even recent reevaluations of archaeological theory (Trigger 2003a) and feminist methods (Harding 2003). Miller's critique brings us back to an old epistemic question that ethnoarchaeology now faces: how do we use theory to inform research without allowing it to – in Malinowski's terms – "burden" our empirical encounters? The fact that this problem has not been surmounted since Malinowski by

[12] Friedman (Friedman 1994b: 17) notes that there can (and should) not be a theory of consumption because "consumption" is not an autonomous section of culture. Although Wilk defends the critique of capitalism that Miller sees has problematic, he too suggests the complexity of consumption demands an empirical approach: "[academics] . . . have to do more than testify to the active agency of the poor, for their ability to take the foreign and incorporate it into new kinds of authentic local culture. All forms of consumption are morally ambiguous and problematic . . . Consuming can be constructive or destructive, coercive or free, a medium of domination or resistance, or both at the same time" (Wilk 2001: 253).

simply "doing 'better' fieldwork" suggests that there is a need for some explicit epistemic reflection.

Methodology

One of the suggestions in this dissertation is that theoretical closure can be defined in more specific terms. Closure is created when researchers believe, implicitly or explicitly, that certain favored causal processes are more cross-culturally relevant than others and thus likely dominate any context that is investigated in the archaeological or ethnographic records. These processes and their derivatives then become the focus of study from the initial stages of some project (Cunningham 2003a). When ethnoarchaeological findings in such a project confirm the dominance a favored process, there is a significant risk that the findings are tautological. In cases where ethnoarchaeological research escapes this closure and suggests that the favored processes are not as uniform as originally expected (i.e., that they do not apply in the ethnographic context being studied), it is labeled and simultaneously discredited as being merely a producer of "cautionary tales" (Cunningham 2003b). Neither option is productive.

Escaping closure in middle range research so that the findings are neither predetermined nor misunderstood and discredited is the key issue for ethnoarchaeological research. Achieving this goal necessitates casting a wider conceptual net that focuses study on identifying in a specific context what processes *are* relevant and *how* they articulate with each other to create a broader system. The quest is to create an environment where the causal complexity of a particular context can be interrogated so

that the findings are valid for some aspect of archaeological theory.[13] Such empirical studies, I would argue, should be the real focus of ethnoarchaeology's "middle range" research.

This project seeks to understand as fully as possible the movement of household vessels between production and consumption locales. Because it would be naïve to assume that this can be done without some background theory to structure the investigation, explicit steps must be taken in order to reduce closure. Focusing on a single commodity within a defined region provides an advantage because, rather than being free to find and study only items that fit certain theoretical interests and preconceptions (emulation, conspicuous consumption), I am forced to address the processes that are responsible for the movement of a particular class of objects. Yet, this in itself is not enough. As a result, four additional techniques must be used to ensure that my conceptual net is cast widely. The first two represent standard ethnographic techniques, while the later two are derived more explicitly from Wylie's discussions of horizontal and vertical independence (Wylie 2002, 2000).

The simplest way that ethnographic research can ensure that its findings are a valid representation of the context it studies comes from not focusing all the research on a single group of individuals within that community. Knowledge is distributed differently in cultural settings and we would expect that people in different social and physical spaces would possess distinct visions of phenomena such as an exchange system (Gupta and Ferguson 1992; Brightman 1995). Given the ethnic and class differences present in the Inland Niger Delta, it was thus necessary to ensure that I had diversity in the sample of people whom I interviewed. My investigation of vessel movements examines both

[13] This approach is similar, of course, to that described by Kuhn (Kuhn 1996) for extraordinary science.

consumers and producers across the region in different ethnic and class communities. By doing so, I access distinct bodies of knowledge that are both shared and unique to specific social spaces.

Second, the project is inspired by ethnographic, feminist and/or area studies approaches that seek to "work upwards" from the lived experiences and meaningful contexts in which specific individuals exist. This approach has two different components. First, it suggests that focusing on those individuals marginalized within a community often provides a unique and particularly salient vision of that community. Outsiders in a social setting, particularly those progressive individuals who seek to institute change, possess a disproportionate amount of "true consciousness". The significance here is that by working with marginalized women, who are responsible for much of the exchange in household vessels, I can gain an insightful perspective not just on exchange, but also on the entire social context. This provides me with a particularly useful way of assessing relations between household vessel exchange and broader social and cultural phenomena. The second component comes in part from techniques of analysis. Qualitative research has increased its analytical potential because of qualitative analysis software. Researchers can now begin inductively from interview notes and transcriptions to identify themes and issues that were never considered in the original research questions. Such a bottom-up approach provides some added distance from theoretical predilections. Thus, by focusing on the "marginalized" in a given context and listening closely to their perspectives, it is possible to interrogate theoretical preconceptions.

Despite an entire field of "grounded" qualitative research (after Glaser and Strauss 1967; see Densin and Lincoln 2000) – often enshrined within area studies specialties (for African Studies, see Martin and West 1999) – the pitfalls of theory-ladening have not been easy to avoid. Simply "listening closely" does not guarantee that the resulting accounts will be any less myopic or any more "authentic" than other approaches because it is in the nature of "preconceived ideas" to be implicit. Counteracting ideological preconceptions requires an active attempt to frame theory in a way that reduces circularities and builds in independence. As outlined in Chapter 2, independence comes in two forms: vertical and horizontal. To create vertical independence, the study draws primarily on theory found in ethnographic studies of exchange and consumption in daily practice rather than on the comparable archaeological literature (e.g., Renfrew 1975, 1977). Recall that vertical independence comes from using the data "created" by one theory to test the validity of another theory. By using ethnographic approaches to exchange to frame my analysis, I hope to generate results that speak to archaeological questions without them being a product of those theories. It should be reiterated that the separation here – the degree of vertical independence – is inherently partial and is never guaranteed. Economic anthropology and archaeology share common literature and the leading journal in economic anthropology (*Research in Economic Anthropology*) frequently publishes archaeological and ethnoarchaeological studies. Some of the best known studies of exchange and material culture also come from individuals such as Richard Wilk and Daniel Miller, who have strong ties to archaeological research. However, by using the differences between archaeology's and anthropology's temporal perspectives, seen in a distinction between structure and

practice, I would suggest that it is possible to "build-in" an additional degree of vertical independence. The key here is to emphasize in the research the explanation of daily practice – to do middle range research that looks at why women interact with household vessels in the ways that they do in their daily lives – and then to work toward the more structured explanations typical of archaeology.

One of the simplest ways vertical independence is built into the present study is through the parallel analysis of both ceramics and other "modern" household containers. Normally, pottery is studied in isolation as a "traditional craft" rather than as a part of a broader household economy. Restricting ethnoarchaeological studies to only those materials found in the archaeological record makes ethnoarchaeological research wholly artificial. Ethnographic materials such as pottery become stripped of their cultural (social/economic) embeddedness in order to fit into archaeology's conceptual boxes. The result is neither a representation of an "archaeological-era" survival (a true living tradition), nor a full treatment of material culture in an "ethnographic" context. Vertical independence becomes possible, however, if we re-embed material culture like pottery back in its rich and complex "modern" contexts. By focusing on both pottery and new materials, I sought to investigate the role of household vessels in general. Thus, it is not just my study of pottery that may offer analogues to the study of ancient Malian society, but my study of the processes affecting household vessels that will provide an interpretive framework for archaeological cultures worldwide.

Horizontal independence occurs when different bodies of data converge on a common interpretation. Many of the preceding methodological techniques may produce a degree of horizontal independence. For example, if people situated in different social

spaces nonetheless report that some common factor significantly impacts their own choices in the exchange and consumption of household vessels, that factor actually is more likely to be a determinant element of the social context. A more explicit, and inverted, form of horizontal independence can also be created if we frame research according to Chamberlin's (1965) method of multiple working hypotheses. The goal in this case is to create *a priori* explanatory schemes that overlap the same body of data. If interpretations converge from a body of data even when those data are framed and analyzed from several theoretical standpoints, then that interpretation is likely to be true. Thus, I hypothesized both that household vessels could move according to so-called cultural or consumptive processes (identity construction, emulation) and that they could also reflect maximization from a utilitarian stance (e.g., quest for efficiencies in use). Normally, utilitarian approaches are used at the production end of exchange systems to explain, for example, potter behavior, while cultural processes are emphasized in studies of consumption (Minnegal 1996). In my study, however, potters were interviewed to identify *both* the extent to which they sought to maximize their profits and the extent to which the production and selling of pottery was itself a "cultural" or consumptive practice. Likewise, my interviews with consumers sought to identify not just how consumption relates to personal and public identities, but also how those objects fulfill necessary functions or move according to "rationalist" factors like availability.

Semi-Structured Interviews

The central problem in developing interviews with these goals in mind was that the literature in economic anthropology has moved away from specific theoretical

schemes and toward detailed studies. Theoretical purity has long since been abandoned in ways that muddy the conceptual water between "rationalist" and "anti-rationalist" approaches. In effect, this means that alternate explanations of exchange do not cluster in ways that render them easily opposable. Processes that are "typical" of a utilitarianist approach may appear in a study of consumption, while concerns with symbolism or identity may appear in utilitarianist research.[14]

Instead of using a framework of formal oppositions, prior to fieldwork the literature was consulted with the aim of identifying as wide a range of factors as possible that were known to impact on vessel movements (Arnold III 2000; and Stark 2003: 208-213, for overviews). In general, economic anthropologists and ethnoarchaeologists have tended to follow Polanyi's (Polanyi, et al. 1957) example in demarcating the ways that ceramic exchange is embedded in social relationships. Sahlin's noted that exchange may be generalized, balanced, asymmetrical or negative and these forms are often impacted by social relationships, rank, and relative wealth (Sahlins 1976). Objects such as pottery also may exist in a specific sphere of exchange where they can only be traded for a limited range of objects. The existence and maintenance of social boundaries, the size of occupations related in exchange and "friction effects" may have a significant affect on the movement of ceramics (Hodder 1979a, 1982b; contributions to Stark 1998). Social relationships may also be a necessary precursor to ceramic exchange; and trade may even be a fundamental component either of creating or discharging social and economic obligations between social groups, classes or castes (e.g., Bowser 2000; Graves 1994; Kramer 1997; Kramer and Douglas 1992; Miller 1985, 1986; Stark 1992, 1994). Pottery

[14] This is perhaps best seen in the need for Bourdieu to constantly deny accusations that his seminal study of consumption is in fact a representation of a vulgar economism (Bourdieu 1984, 1998)

movements may reflect, then, the negotiation of power between communities or households, or between elites and craft producers (Smith 1989; Smith 1974). Social ties are believed to be most important in exchanges where participants do not have perfect knowledge of either the goods being traded (e.g., quality) or the sales conditions (e.g., normal price) (Plattner 1989b: 214). In such scenarios, social knowledge of ethnicity or kinship can build the trust necessary to conduct economic transactions. In other cases, social ties may affect the movement of potters for marriage but then be of relatively minor importance in actual market-based exchanges (de Ceuninck 1993, 2000).

In addition to social factors, the natural and economic contexts are generally seen as having a significant impact on ceramic exchange. Maintaining specialist producers requires an adequate infrastructure for exchange, including the production of surpluses, regular marketplaces, a means of transportation, the presence of storage facilities, communication channels and occasionally even middlemen traders (Plattner 1989c: 181-182). Likewise, local topography, seasonality in natural or agrarian calendars, price, the quality of an object, and the impact of competition – either from other producers or from functionally equivalent industrial objects – may directly affect ceramic exchange systems (Graves 1991; LaViolette 2000; Vossen 1984; also see Riley 1984: 59-62; DeBoer 1984). As Graves has noted, economic changes within households – such as those that result from the introduction of wage labor – may also have a significant influence on household vessel assemblages (Graves 1991). Graves' observations reflect broader studies in economic anthropology that focus on how political economies – including the ways that surpluses are used or extracted – impact peasant-based petty commodity producers (Binford and Cook 1991; Cancian 1989). As Krause (1985: 162-164) had noted, not

every individual who possesses the knowledge to make pottery necessarily does, begging the question of what drives potters to produce their wares.

As outlined above, the anthropology of consumption tends to focus its vision of exchange on the ties between objects and identity. Consumption examines how the acquisition, use, and display of objects relates to the constitution of the self (Weiss 1996) and to the creation of personal and social identities (Veblen 1994; Douglas and Isherwood 1979; Bourdieu 1984; Friedman 1994a). Recent literature has examined consumption within social classes, genders, and post-colonial settings and emphasized the role of both personal choice in consumption and the ways that structures of taste are imposed onto social settings (de Grazia 1996; Howes 1996; Mackey 1997; Miller 1998b, 1995). The implications of such research for ceramic exchange is to focus analysis on the basic issue of why it is that people desire specific objects such as pottery and how it is that such objects create, maintain or symbolize their understandings of themselves and their social groups.

When taken together, these different approaches understate the fact that ceramic trade truly is "embedded", however, not just in social relations, but also in political, economic and natural contexts. Neither the processes typically emphasized by utilitarianist nor culturalist approaches can be easily excluded because ". . . the analysis of trade [in ceramics] requires the complementary investigation of the social, technological and environmental constraints with which it interacts in any particular situation" (Allen 1984: 411).

The questionnaires on which semi-structured interviews were based were created by seeking to find ways of illuminating which of these various alternative processes

impacted ceramic exchange and vessel movements (Appendix II). Operationalization was not done formally, so that one section of interviewing focused only on "utilitarianist" approaches and a second on "culturalist" approaches. In most cases, alternatives between different explanatory schemes could be assessed by posing a single, open-ended question and remaining cognizant of the alternate hypotheses that were available. For example, utilitarianist approaches tend to see social relationships as something that emerges from self-interested economic transactions, while culturalist frameworks tend to see the social relationships as a necessary foundation for economic interactions. Potters and consumers who noted social relationships associated with household vessel exchanges were thus asked whether the relations predated or were a product of the economic encounter, or whether social categories such as ethnicity were important considerations when choosing an exchange partner. In anthropological theory, the "value" an object has may be considered a measure of its absolute utility in relation to some "need", a product of processes related to supply and demand, or a reflection of an ascribed symbolic role (Appadurai 1986). Potters were asked how they established the prices they routinely asked for objects, while consumers were queried regarding the processes that affected object selection. Avoiding premature closure in the field research thus required keeping a close eye on such oppositions and seeking to identify which of the alternative explanations most fit on-the-ground realities. Of course, as Deboer (1991: 147) has noted, ceramics may also be entirely "banal". Archaeologists sometimes are prone to seek layers of cultural significance in ceramic assemblages that may not apply. Casting a wide conceptual net means not only seeking to identify which of the alternative theories

might apply in a given situation, but also recognizing that no existing theory is necessarily accurate.

Field Research

The field project consisted of three separate visits to Mali. A short, 6 week trip was undertaken in October-November 2001 to visit with potters, conduct preliminary interviews, test the questionnaires and organize logistics. During the initial trip, I realized that field research needed to be restricted to the dry season, which ran from late-January through July. As noted in Chapter 3, the rains begin mid-summer with the flood peaking in the fall. My initial visit fell during the late stages of the flood and it became quickly apparent that the wet conditions restricted any efficient movement throughout the countryside. When the Delta is flooded, both pirogues and motorcycles are required to visit even nearby villages. Motorcycles are easily ferried across major streams that transect trails; however, the availability of pirogues is never guaranteed even along frequently used pathways. The silty soils of the floodplain become dangerously slick after sudden rainstorms, like those that occur during the rainy season. Initially, a single extended field trip was planned, but after my first visit, it was changed into two separate trips that were timed to hit the dry season. February-July of 2002 was spent in the field conducting research with potters with a subsequent trip to interview consumers occurring in a follow-up trip in February and March 2003.

To mimic the regional material patterns that archaeologists can often easily discern, the research areas were defined arbitrarily around the town of Djenné. The regions were defined according to practical limitations – namely the distance the research

team could travel by motorcycle in a single day from a base in Djenné to conduct interviews. While the links between villages in the region are old and durable, the fluctuation of the seasonal flood often results in *ad hoc* and interweaving trails along these pathways. Other than the paved road that links Djenné to the national highway, only two other established "roads" cut through the research area. Neither has a raised road bed and they are best considered seasonal trails that can be used by all terrain vehicles during part of the year. Indeed, they were only distinguished from the networks of wagon and foot tracks by the regular distance of the tread marks and the color of the line representing the roads on government maps. The 30 km travel limitation also roughly corresponded to the *Cercle*'s (administrative region) political boundary, which facilitated permitting requirements.

The field region was defined differently for the two sections of the study. The project first sought to identify *all* potters within a 30 km radius of the Mosque at Djenne, minus a small section in the SE corner that fell outside the Cercle's boundary. Following Adria LaViolette's research in the region in the early 1980s (LaViolette 1987) and that of the MAESOA research projects (e.g., Gallay and Huysecom 1989; Gallay, et al. 1996), I estimated that less than 50 fully-trained potters would be located in the research area, perhaps half of whom would live in Djenné itself. In part, this estimate was based on the (later proved erroneous) assumption that potting was a "dying" craft and that their numbers would have significantly dropped in the last twenty years. The large field region was meant, at least in part, to increase the number of potters who fell within the scope of the research project. As we will see in the chapter 6, well over 150 potters were

active in the research area, of which some 110 were fully interviewed. In total, marketing information was collected for 165 potters.

In contrast, the 100 consumers were identified from a sample of households within a 20 km radius of the Mosque. A smaller research area was used in order to ensure that most of the pottery encountered in consumer households was made by potters who had been interviewed by the project and whose pottery had been photographed. If the research areas were symmetrical, consumers on its edge could have bought their pots from a local potter who nonetheless lived "outside" the research area. The different sized research regions were meant to counter this possible problem.

The greater number of potters created some immediate difficulties. On the one hand, the initial outline for the project called for only two field visits – a preliminary trip to lay the groundwork for the study in 2001 and the following longer trip in 2002, during which both potters and consumers would be interviewed. This timeline became impossible once it became apparent that my estimates for the number of potters were too low. The solution was the implementation of an ad hoc sampling strategy, an expansion of the timeline for the potter interviews and the scheduling of a third trip during which I conducted the consumer research.

The goal in the potter research remained collecting information from all the potters in the region. The mobility of the population, the tendency for people to "take-up" potting or retire from it with ease, and to work either together or in isolation in production and sales made any *a priori* selection of potters impossible to achieve. Also, as noted in the previous chapter, potting is not just an activity, but is also intimately connected with identity. Some people who were identified as potters noted only after an

hour into the interview that they had not made pottery in over 15 years, which affected the currency of their information. In other cases, we were discouraged from interviewing highly productive pot producers in their late teens and early twenties, because they were not yet considered "full potters". As a result, potters were sampled largely on ad hoc basis, in a way that aimed to maximize variability in the information recovered. In cases where only a few potters were located in a village, all the potters in town would be interviewed. In larger towns, only a sample of potters from larger (kin-based) groups who worked closely together in both production and marketing would be interviewed. Based on the field research, approximately 60% of all the potters in the region were subject to full interviews, while marketing information was collected for over 90% of all known potters.

The field research relied extensively on translators. As noted previously, the Delta is both ethnically and linguistically diverse. No single field language is sufficient to provide easy access to a random cross-section of the population. As a result, translators would translate the interview questions and responses from local languages into French. Three individuals provided assistance in the field. Dalla Touré translated during the initial visit and through the first month of the second trip. After that period, Lasseiny Kayentao acted as translator and guide throughout the remainder of the project. As a local Bozo fisherman, Lasseiny possesses an extensive knowledge of the field region, has superior linguistic skills, and has worked extensively with previous ethnoarchaeology projects. He was able to provide both a wealth of knowledge about local customs and local pottery production throughout the region. Brahima Soa acted both as a translator and as an independent interviewer on the project. During my

preliminary visit to Djenné, Brahima was conducting fieldwork for his MA at the University of Bamako on the pillaging of archaeological sites around Djenné. After he completed his MA, he joined my project and conducted independent research during the consumption study.

Although the field research and the theory used are ethnographic, the project was conducted under an archaeological "mindset". During the research with potters, the research team (comprising myself, my wife Deanne Robblee, and Dalla/Lasseiny would fuel up two motorcycles, pack a lunch and leave Djenné. We would normally follow a looping path that would take us through several villages. At each village, we would stop at a public location where a group of people were assembled (either the village's small daily market or at the well) to enquire as to whether or not there were any potters in the village. If none were present, we would continue on to the next village. If there were potters in town, we would arrange to see the village chief in order to gain permission to work in the village and then go to the potters' compounds. In most cases, a single potter or a small potter-family (comprising co-wives, sisters in law or a mother and her daughter in training) would be present in the village. We would identify any work groups and then interview senior potters in each group. Generally, the other related potters would attend the interview and this provided us with an opportunity to elicit responses from them about their marketing strategies. Several times, at the completion of the interview, an informal "focus group" would begin discussions on some of the points that had been raised.

In villages with large numbers of potters, like Soa and Kobassa, identifying which potters to interview was far more complicated. These villages contain several

intermarried lineages of potters. Indeed, when we stopped to ask if there were any potters in town, the response we got was that the entire quarter (*quartier*) was made up of just potters. In these cases, a rough sampling regime would be used to try to maximize the variety of information that was collected. Thus, only one or two potters in a larger group who worked together, sold together and (normally) lived and worked within the same patrilineage would be interviewed, while the others would be queried informally during that interview. Identifying the propinquity of potters turned out to be a major problem. Normally, a number of elder potters would be consulted in order to generate a list of potters in each extended family group and identify work groups. Courtesy would then dictate that we interview the more senior potters in each work group. The other potters would hear of our arrival and attend the interview, and we were thus able to collect sales and marketing information from them. We would finish each interview by taking a digital photograph of the potter and then of a selection of her pottery.[15] Over 1,500 pictures were eventually taken.

The survey information with potters was supplemented by detailed discussions with friends whom we got to know in a variety of villages. In the region, it is expected that visitors will have a single contact person in a village who offers hospitality. We would normally leave our motorbike in their house compound while we worked in town and take lunches with them. In most cases, our local contacts were the first senior potters who we would interview in a single community, while in other cases it would be an acquaintance or distant relative of Lasseiny. In Djenné, and the villages of Senoussa, Soa, and Kobassa, we developed keen friendships with several potters. Through informal

[15] People in the delta found it notoriously difficult and expensive to get photographs. As a result, photographs of each potter were later developed in Canada and then they were gifted to the potters when I returned to Mali to do the consumption component of the project.

discussions over lunches and at the start and end of the day, we gained a deeper insight into their lives and aspirations.

In addition to the semi-structured interviews, information was collected from potters informally in both the Djenné and regional markets and during social visits. I often made note of the dates for upcoming firings and I was able to visit and socialize with potters during several of these. At firings, I noted the number of pots of each type that were being fired and the numbers that had broken, in addition to asking questions about firing procedures. Potters were also encountered as they prepared to sell their wares in the villages and rural markets. In some cases, I was able to document directly the number of pots that were being transported on these marketing trips.

The consumption study followed a similar set of field procedures, but with the addition of an explicit sampling procedure. Based on work with potters, it was decided that 100 consumer interviews could productively be undertaken. However, because Djenné is a primate center within its *Cercle*, containing 25% of the total population, it was disproportionately sampled. Based solely on population, Djenné should have received 25 of the 100 interviews. In order to increase rural representation, it was instead granted only 13 interviews (50% of what it would have received in a random sample) and the remaining 12 interviews were scattered throughout the rural population. The results of the census and the interviews were then weighted during statistical analyses.

Sampling was done randomly based on population statistics from the 1987 Census of Mali. Villages in the region were assigned a proportion of the 87 remaining interviews based on their population. Households in each village were selected randomly. The identification of randomness in the villages created some problem. Quarters in a village

are ethnically distinct, which makes simply talking to the first household encountered problematic. Air photos and detailed maps of each village were also quite expensive and difficult to obtain. A simple procedure was thus developed using a 6-sided dice purchased in the Djenné market. A form was created that contained a circle representing the village and the numbers 1 through 6 on all four sides. For each interview, the dice would be rolled 4 times, one for each side, and the numbers connected with a line. This would provide a randomly generated point within the circle representing the village. The interviewer would then seek to obtain a household as close as possible to the point on the map. If the household selected turned out to be abandoned or was temporarily vacant, than a second roll would be done and a new point would be selected. In this way, each household in the village had an equal chance of being selected and no spatial bias should be present.

Field procedures were similar to the first phase of the project. The research team, comprised of myself, Lasseiny and Brahima, would meet early each morning for breakfast, select villages to visit and randomly identify households to visit. We would then fuel up, purchase supplies for lunch, and leave Djenné on motorcycles. Once we arrived at the village, we would consult the village chief and ask permission to conduct research; then we would try and identify the location randomly generated that morning. In large extended family households, interviews would be conducted with the most senior woman. At the end of the interview, pile sort tests with photographs of pottery and new materials were conducted.[16] Then the vessels in the household would be subjected to a census, their positions within the household would be noted on a sketch map and a selection of the objects would be photographed in situ. During the first 20 interviews,

[16] The analysis of this component of the study will be the focus of a forthcoming postdoctoral project.

Brahima, Lasseiny and I worked together, but once Brahima was competent with the methodology, we split into two separate research teams that conducted interviews simultaneously in the same or adjacent villages.

Reciprocity was an important component of the project. At the end of each interview, potters were gifted a small amount of money roughly equal to what they required each week to buy condiments at the market (1500 CFA or $3). The gift was given after an interview as we were leaving the house compound. In this way, we hoped to avoid "paying for information" in a way that could affect potential answers. In contrast, consumers were given a small package consisting of tea and sugar that could be enjoyed by the entire house compound. Several times, we also gifted community leaders small amounts of money according to local tradition.

In addition to the work with potters and consumers, other information was gathered from a number of individuals. New materials venders, especially those in the Djenné Market and regional markets, were consulted regarding the pathways that plastics, enamels and aluminum vessels traveled to enter the research area.

Analysis

The field research produced information that fell into a number of distinct formats, each requiring its own form of processing. The interviews elicited a significant narrative component, which necessitated a qualitative assessment of themes, while the semi-structured nature of many parts of the interviews allowed for coding and statistical manipulation. Finally, most of the interviews contained a spatial component, which opened up the possibility of using GIS to search for spatial patterns.

Interviews were recorded on forms in the field which were transcribed into text files that could be imported into the Nudist Qualitative Data Analysis Software platform (See Appendix II). Nudist allows researchers to identify themes in the narrative and save these sections of text as "nodes" that can easily be recalled, compared, combined and searched. The benefit of using this software is that it allows key themes to be identified inductively from across several interviews or even from disparate sources of data. The original field notes that are the basis for the nodes can be easily retrieved so that cross-interview themes can be constantly checked against the particular situations where they emerged. The qualitative analysis also allowed for the identification of broader categories (such as marketing systems) the patterning of which was not readily apparent from the raw interviews. Once patterns were identified in Nudist, it was possible to search for other related themes or to compare those themes to statistical findings and the maps created by the GIS software.

Information was also entered into SPSS 11.0 for statistical assessment. Sections of the potter and consumer interviews that could be easily translated into a database format were entered into SPSS to look for overall patterns in demographics, household structures and economic variables. Statistical analyses were used most extensively to examine vessels in the household census and to look at measures of central tendency in potter marketing strategies. In general, the nominal level of analysis used in the interviews necessarily results in a reliance on frequency distributions; however some basic descriptive techniques and correlative statistics are also used.

GIS analyses were done using ArcView 3.2. While several different sorts of information could be displayed through the software, the bulk of the analysis was

restricted to two distinct components of the study. First, because interviewees knew the point of purchase for many of the vessels identified by the household census, it was possible to map the movement of vessels across the region (Chapter 5). Second, because potter marketing strategies usually referenced specific villages, it was possible to map their movements (Chapter 6). The extensions on the software package also made it possible to easily calculate linear distances once the data were projected into a standard map format. Village location data from GEOnet Names Server (National Geospatial-Intelligence Agency 2004) were imported into ArcView and projected in the same format as the field maps (1:250,000 Topos based on UTM 1927), the distances were calculated, and then they were entered into the existing SPSS databases to flesh out the census and marketing data.

Perhaps the largest single benefit to using qualitative, statistical and GIS analysis comes from the ability to switch easily between them while testing hypotheses and generating new inferences. The maps offer an excellent way of representing in a different format many of the patterns identified through statistical analysis. Regional patterning could also be checked against the specific narratives of individuals to ensure that their "real experiences" did not become lost. In a similar way, both statistical and GIS data could be recoded according to the nodes identified in individual narratives, which provided a way of checking whether something that appeared idiosyncratic might actually be part of a regional pattern. One of the central goals in combining these analysis systems was to ensure that none of them became an end unto itself. GIS, statistics and now even qualitative analysis software is starting to develop into specialties that are so methodologically focused that their combined interpretive potentials become

lost. Here, the use of these technologies was explicitly minimal. Each technology was to be a tool in the analysis, rather than the analysis a tool for the methodology. By using several different formats for analyzing the information collected during interviews, I was able to check interpretations from a number of different vantage points, providing further opportunities to build-in a measure of independence.

Conclusion

I conclude this section by noting some conventions adhered to in the following three chapters. I have not opted to use pseudonyms when referring to specific individuals. Instead, I have quoted an interview number that corresponds to two *Interview Lists*, one for potters and one for consumers, in Appendix I. On these lists, the interviewee's initials and the date and place of the interview are listed. Interview numbers with potters begin with the letter "P" (e.g., P1, P55) while interviews with consumers start with the letter "C" (e.g., C43, C94). I have adopted this approach because of the sheer volume of interviews that were conducted. Any list of pseudonyms would quickly become confusing for the reader. Also, the popularity of both first and last names means that most pseudonyms I could develop would probably correspond to someone's actual name in the same village. When absolutely necessary for my narrative, I have opted to use the individual's first name only.

CHAPTER 5
HOUSEHOLD VESSEL CONSUMPTION

Miller's critique suggests that, done properly, studies of consumption are less "a theory" than they are detailed empirical engagements. However, beginning my discussion with an analysis of consumption versus production can be read as an expression of a theoretical bias typical of the Substantivist-Formalist debate. Formalists normally begin with production and seek to show its effects on consumption patterns (availability, etc.). Substantivists do the reverse (see Minnegal 1996). I have opted here to begin my discussion with an overview of consumption. However, my goal is not to disqualify from the outset overtly "rationalist" considerations. Instead, the order of my discussion is a consequence of both the findings of the project and practical issues. As we will see in the next chapter, one of the principal conclusions of this dissertation is that potters in the Inland Niger Delta are also consumers. Like other women, they are

embedded within a cultural tradition that defines the obligations and roles women have within society – obligations and roles that have a direct impact on their consumption choices. The production and marketing of pottery is the way potters generate the income they need to meet these obligations. By examining consumption practices first, I am able both to introduce the broader social context in which potters live and in which pottery production takes place as well as to overview the economic context in which household vessels are consumed.

Household Vessels

Household vessels in the study fall into four broad categories according to their composition: pottery, plastics, aluminum and enamel. Pottery production has been extensively researched within the IND. Pottery is produced by women, each of whom is a casted specialist in one of several different ethnic groups. Researchers working on the MAESAO project ("Mission archéologique et ethnoarchéologique suisse en Afrique de l'ouest"), for example, have noted that pottery throughout the IND is made using one of four different production sequences and each relates to specific ethnic groups (Mayor 2003; Gallay, et al. 1998; Gallay, et al. 1996). Three of these sequences have some presence in the region covered by this project (Huysecom 1994a), although only two are frequently encountered in Djenné and its hinterland (e.g., LaViolette 2000). Fulani (Peul) Griot potters use a paddle and anvil technique, employing convex molds to make larger vessels and concave molds to start smaller vessels. Forgeron potters related to the Somono ethnic group tend to use a coiling method with concave molds and a slow wheel.

Less frequently encountered Bambara Forgeron potters, in contrast, use convex molds to form their pottery without the aid of a paddle and anvil or a slow wheel. The pottery resulting from these different traditions is in some cases quite distinct, although the most noticeable differences occur between Griots and Forgerons, the fast majority of whom are Somono. Griot potters tend to produce a smaller range of pottery types and, as one would expect from paddle and anvil production techniques, the vessels are generally thinner and much denser. Griot pots also show some differences in decoration and form when compared to Forgeron pottery. Water jars and sauce pots tend to be decorated with bands of triangular designs encircling the neck and shoulder of the vessels. Water jars are spherical and smaller than Forgeron pots with no defined neck. In contrast to Griot pots, the combination of a coiling method and slow wheel used by Somono Forgeron potters produces a wider range of pot types and in general they tend to be heavier. Water jars are footed, with older styles having extended necks, and they may have small handles placed on the sides. Decoration falls into bands which vary from very simple geomorphic designs to alphabetic characters and even stylized images of daily Malian life.

Pottery is available locally throughout the region. Two villages in the flood zone to the southwest of Djenné called Soa and Kobassa, as well as Djenné itself, have high concentrations of potters. Other than these three areas, potters tend to be loosely scattered throughout the research area and can be found in most villages (See chapter 6). Pottery can be purchased from potter households or from their firing locations at the edge of the village. Pottery is also transported by potters to weekly markets in small rural villages, to the regional Djenné market, and to other villages. In this last case, potters use three different marketing strategies. A potter may visit a neighboring village for the day

to sell a small number of pots and then she will return home that evening. She may bring a wagon load of pottery and stay with a contact in town for several days and may even leave the pottery with that contact to sell on her behalf. Although it is relatively rare now, potters in the Delta also are known for their itinerant marketing practices. Potters may circulate during the flood in large pirogues full of pottery to sell in more distant villages. They also occasionally relocate to other villages – especially those experiencing good harvests – with their potting tools in order to make pots for local consumption. Most rural villages in the region thus have steady access to pottery.

Aluminum items likewise may be locally produced, but they are also made by larger operations based in Bamako and other large West African cities. The aluminum items produced in Djenné are cast from ingots imported from Nigeria and Ghana. Local aluminum workers produce items such as caldrons, pails, spoons and various other small utensils. Local producers will also recast damaged aluminum caldrons for a fee that is a fraction of the cost of buying a new one, but doing so normally results in a smaller vessel. In general, aluminum products are only available in the Djenné market and they are rarely seen in any of the smaller rural markets in the region. Despite the presence of local producers, the bulk of aluminum items in Djenné and larger markets (e.g., Sofara) are sold by traveling venders. Tin pails and large wash tubs, which are not produced in Djenné, are usually also for sale in these stalls.

Plastic vessels are both produced domestically in Mali (by *Maliplast* and *Simplast SA*) and imported from other countries in West Africa (*OK Plast*). Plastic plates, bowls, goblets, "tea kettles", wash basins and buckets are the most frequently encountered items and several large plastics venders sell in Djenné at each market. Plastics are also readily

available in rural areas at local markets and occasionally in small stores located in the foyers of a merchant's house. Entrepreneurs would occasionally buy plastics in Djenné and then visit daily markets in rural towns. Although no traveling salespersons selling plastics were encountered, several consumers noted that they would occasionally come to their villages (C6, C19, C72, C82). In one case (C19), the vender was seeking to trade plastics for bead necklaces that he could pass off as antiquities and sell to tourists.

Finally, elaborate enameled serving dishes, from China, Nigeria and Ghana, are available in both urban centers and in larger markets such as Djenné, Sofara and Konian. These items are beautifully decorated and generally come in sets of varying sizes with complementary print schemes. While individual objects may be purchased, consumers can normally get a better deal if they buy a complete set. Enamel vessels generally come in two forms. The first is a round serving dish with a lid. These items are favored by many rural women, especially the "*Komas*", variety which is heavier and more durable than lighter vessels. The second form is a "casserole" dish designed for use in gas or electric ovens. They are oval and significantly smaller than rounded enamel vessels. In addition to painted enamels, stainless steel bowls are also sold by enamel retailers. Women often refer to these as "*Le Super*" because of the name stamped on the bottom. These vessels come with stainless steel lids and, although they are similar to stainless steel mixing bowls in North America, they are primarily used as serving dishes.

Pottery, then, is the only locally produced household vessel that is also available throughout the region. Most plastics, enamels, and aluminum items enter the local economy through traveling venders who set up stalls at the Djenné and Sofara markets. A survey of venders at the market on March 25, 2002 showed that they were largely

based in the town of San some 80 km south of Djenné (Table 5.1). Five of the six large-scale sellers consented to be interviewed. Four of these were based in San, with the other individual's home location being the town of Sofara. Venders will normally hit several markets in a given week. Transportation is by dual axle truck and venders will often pay a single price to have the same operator move them between weekly markets in different villages. For example, Vender 3 makes a circuit from the Djenné market on Monday to the Sofara market on Friday and normally pays a single price (3-5000 CFA) for the week. Enamels and tin items, which tend to be quite expensive, are often bought in Bamako and then resold locally by the same vender. In contrast, lower cost plastic items are bought and sold several times, the last stage of which is from San or Mopti to Djenné, Sofara and Madiama.

Table 5.1: Origins and market circuits used by household vessel venders in Djenné.

Venders of Household Vessel at the Djenné Market (March 25, 2002)					
Vender	**Ethnicity**	**Home**	**Products**	**Suppliers**	**Markets Visited**
1	Marka	San	Plastics	San	Djenné Madiama Sofara
2	Marka	San	Enamels & Aluminum	San Koutiala	Djenné Sofara
3	Bozo	San	Enamels & Tin	Bamako	Djenné San Fangasso Madiama Sofara
4	Peul	San	Enamels	Bamako Burkina Faso	Djenné Matombo Téné Madiama Kouin
5	Forgeron	Sofara	Plastics & Stainless Steel	Mopti	Djenné Soumadougou Sofara Djamaka

Table 5.2: Ethnicity of the consumers interviewed by the study.

Consumer Ethnicity	Raw score	Weighted Percent
Peul	26	26.4
Bambara	22	19.3
Bozo	15	14.9
Marka	11	10.5
Somono	6	5.3
Songhai	6	8.8
Forgeron	3	2.6
Djenneké	2	3.5
Wolosso	2	1.8
Bambara (Forgeron)	2	1.8
Dogon	2	1.8
Mandinga	1	1.8
Bobo	1	.9
Unknown	1	.9
Total	100	100

Table 5.3: Occupation of the consumers interviewed by the study.

Consumer's Occupation	Raw score	Weighted Percent
Homemaker	58	57.9
Homemaker (small merchant)	17	18.4
Merchant, small	14	12.3
Merchant	4	3.5
Retired	1	.9
Fisherwoman	1	.9
Hair Dresser	1	.9
Unknown	4	5.3
Total	100	100

Table 5.4: Occupation of consumer's husbands.

Husband's Occupation	Raw Score	Weighted Percent
Cultivator	53	46.5
Cultivator (& merchant)	3	2.6
Cultivator (& Wage Laborer)	2	1.8
Cultivator and Marabout	1	.9
Herder	7	7.9
Fisherman	1	1.8
Ironworker	1	.9
Weaver	2	1.8
Mason	2	2.6
Tailor	2	3.5
Butcher	1	.9
Mechanic	1	.9
Merchant	6	8.8
Wage Labour	2	3.5
Marabout	4	4.4
Village Chief	1	.9
Retired	1	.9
Unknown	10	9.6
Total	100	100.0

Consumers & Consumer Households

The individuals interviewed represent women from a random sample of households in a 20 km circle surrounding Djenné. Based on the 1987 census, the number of individuals in the research area numbered 49,349, with 12,152 individuals living in Djenné. One hundred house compounds were randomly selected, with Djenné disproportionately sampled at 50% of what it would normally receive based on its population. Doing so increased the number of households visited in the countryside. Djenné's findings, both in the vessel census and the demographic spreadsheets, were then re-weighted to preserve a representative sample. In some cases, I have offered two scores in frequency tables. The first is the raw score based on the actual number of interviews and the second is the weighted percentage.

Ethnically, the consumers reflect the diversity present in the region (Table 5.2). However, since consumer ethnicity was recorded emically, it varies slightly from the ethnic structures some individuals have identified in the region (Gallais 1967, 1984; McIntosh 1998; LaViolette 2000). During the potter interviews that preceded the consumption study, I noted that women would often describe themselves as belonging to the "Forgeron ethnicity". Most researchers consider this to be a "caste" that is cross-cut by ethnic identities like Bambara, Bozo or Somono. Because one of the operating hypotheses in consumption studies is that consumption relates to identity, I tried not to impose a predefined structure on the identity information I was given. In this case, I simply recorded the responses I received to the open-ended question "what is your ethnicity".

Almost half of the consumer's husbands primarily worked in agriculture (Table 5.4). Some 52% were considered by their wives to be cultivators with an additional 10% working as herders and fishermen. The women interviewed had a mean age of 37.7 years (standard deviation 9.7 years), with the youngest individual interviewed being approximately 18 years old and the oldest 70 years old. Most women in the region (75%) considered their primary occupation to be that of a homemaker (Table 5.3). Some 18% of these also engage in some form of small enterprise. Four of the women in Djenné reported that they produce bracelets at home and sell them in the Djenné market (C89, C96, C97, C98). Rural homemakers report a number of different activities, including selling wild food stuffs and wood they have collected as well as their own garden products in the market (C7, C33, C63), selling grain (C22, C47) and milk (C43), making and selling mats (C14, C41), and spinning cotton for local weavers (C13, C19, C34, C40). In one case, a homemaker from Kolélé noted that she would buy grain locally and then make a profit by reselling it at the Djenné market (C47), while a different individual would buy peanuts at the Djenné market and resell them in her home village of Koba (C63). Several individuals stated that they were either small scale merchants (*"faire petite commerce"*) or full-time merchants. In general, these activities seem to be an intensification of previous economic pursuits that were once supplementary to housework. Older women gain a reprieve from housework once they can pass it on to junior women in the household such as unmarried daughters or daughters in law. These women then can concentrate their labor on commercial activities. Women who considered themselves primarily "small" merchants collected wild produce and wood (C16, C21, C72), sold grain (C2, C30, C51, C52) and fish (C1), wove mats and spun

cotton (C9, C31, C32), repaired calabashes (C38) or resold in their village condiments that they had bought in Djenné (C28). A "full" merchant from Sirabougou made *bogolans* (mud-painted cloth) and sold them to a dealer in Djenné who in turn exported them to France (C11), while three other women operated small, home-based retail outlets in rural villages (C37, C44, C83).

Most of these activities garner sporadic returns and rarely result in a significant or steady form of income. Sales of grain or garden products or wild produce are all subject to seasonal fluctuations that may restrict economic activity to a small part of the year. Other activities seem to be primarily driven by short term opportunism. During my first two visits to Djenné, many of the Bozo women in town were busily making plastic bracelets that were at the time in high demand. During the same period, I was interviewing potters and those in Djenné constantly noted that they were selling a number of wood burning braziers to Bozo women who were engaged in producing these bracelets. Potters even seem to have increased production of these items to meet Bozo demands. By the time I returned for my work with consumers the following year, the bracelets had fallen out of fashion and most women had quit selling them in the market.

The number of vessels present in a given household and who "owns" them depend to some extend on the size and structure of that household. As noted in chapter 3, households tend to be identified into two main types. The extended family household, or *grande famille,* is located in the home of the oldest male in an extended family. In colloquial usage, the *grande famille* household is the place where the evening meal is prepared for the entire extended family on a rotational basis by one of the daughters in law. In contrast, the *petite famille* normally is centered on a single woman and her

offspring and typically is limited to a single two-room dwelling. Approximately 21% of the households in the sample are *grande famille* households, while 66% percent of the households belonged to a *petite famille*. A further 10% are *petite famille* households that are extended and contain some extra family members. Within the *petite famille*, most of the pottery belongs to the female head of the household, while *grande famille* households typically contain vessels belonging to several different women (Table 5.5). Additionally, women who live in the same village as the *grande famille*, but possess their own *petite famille* household, may leave a number of their vessels at the *grande famille* residence for the days when they must prepare the meals. Consequentially, this not only elevates the actual number of pots in the *grande famille*, but also results in a corresponding decrease in the number of pots in nuclear households (Figure 5.1). *Petites familles* have an average of 20.5 vessels while *grande famille* households contain nearly double the average at 40.1 vessels per household. In some cases, however, poor relations between wives and their husband's family may result in vessels not being left with the *grande famille*. In one case (C70), the second wife of one husband did not get along well with either her co-wife or her mother in law, both of whom lived in the *grande famille* compound. As a result, she preferred to take the pots she needed to the *grande famille* on the days she was responsible for cooking and bring them back to her compound when she was done (see below).

Table 5.5: Frequency of pot owners by family type.

		Family Type				
		Petite Famille	Petite Famille (extended)	Grande Famille	Boy's house	Total
Pot Owner	Husband	.9%				.9%
	Wife	59.6%	4.4%	5.3%		69.3%
	Several Women Cooperatively			2.6%		2.6%
	Several Women Independently	5.3%	6.1%	13.2%		24.6%
	Mother				2.6%	2.6%
	Total	65.8%	10.5%	21.1%	2.6%	100.0%

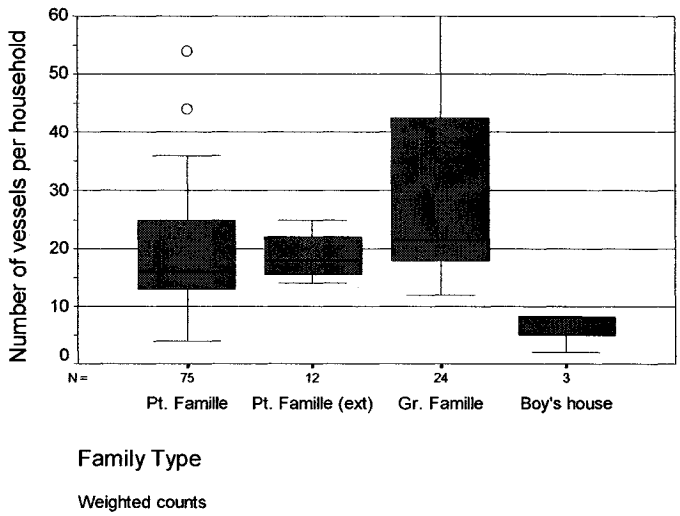


Figure 5.1: Average number of vessels per household by family type.

In three cases, the women of different *grandes familles* noted that their pots were all held in common (C2, C6, C55). As we will see later, this is quite rare given the importance that household vessels have for women's economics. In two separate households (C2, C55), co-wives had decided to pool their resources and jointly decide on purchases after marriage. Because all the meals were taken together and prepared on a rotational basis, there was little reason for each to maintain a distinct collection of objects. Many male friends in Djenné stated informally that this was an ideal situation –

one they were quick to compare with the conflict often present in their own polygamous households. In part, the communal pooling of the vessels seems to be a product of the amicable relations between the co-wives, combined with a degree of economic dependence. None of the women in the pooled households was engaged in any economic activity outside the households and thus they were dependent on their common husband either for money or for the grain they sold to buy household containers.

Two boy's houses were also randomly identified, one in Djenné and one in Payaba. Young men who enter their mid-teens enter into a period described as the *maquillage* that is in some ways analogous to the Moran age-grade in East Africa. Boys move out of the home and into a property they rent on their own or that is loaned to them by a family member. Several boys will live together in a single set of rooms, free both of the labor obligations of childhood and the financial responsibilities of a full adult. Friends in Djenné spoke nostalgically of their own *maquillage* periods when they stayed out late dancing at the local cultural center, drinking cola and strong Malian tea and working at odd jobs in order to purchase the fashionable western clothing that was appreciated by young women. In both cases, the buildings were largely abandoned and operated as store houses by the owners (in one case, to house cattle). They would then clear out one or two rooms for the boy's use. A small number of vessels belonging to one of the boys' mothers were present in these households, typically an old water jar or a plastic kettle for ablutions.

Consumers & Markets

Table 5.6: Average distance consumers travel to markets.

	N	Min	Max	Mean (km)	Std. Deviation
Primary market	114	.0	28.0	6.689	6.0361
Secondary market	50	2.6	80.8	19.222	16.3518
Tertiary Market	21	12.8	88.4	23.051	16.2835
Note that the decreasing number of responses (N) for Secondary and Tertiary Markets occurs because many individuals did not visit a secondary or a tertiary market on a regular basis.					

Economically, the market at Djenné dominates its hinterland (Table 5.6). During the interviews, I asked consumers to identify their three most frequently visited markets. Over 73% of the individuals sampled within 20 km of Djenné identified it as their most frequently visited market, with Yébé (8%), Taga (6%) and Konian (4%) also identified among the top four. Those individuals who did not identify Djenné as their primary market listed it as a secondary or a tertiary market, while 70% of those who identified Djenné as their primary market did not feel it necessary to visit on a regular basis any additional markets.

Within the research area, individuals traveled an average of 6.7 km to their primary market, while the distance to secondary markets and tertiary markets was significantly longer, at 19.2 km and 23.1 km respectively. The presence of other markets seems to have some effect on the extent to which Djenné dominates a given locality. Figure 5.2 demonstrates the connections between consumer locations and the communities they identified as their primary market. While Djenné is the primary market for a vertical zone in the center of the research area, the markets at Yebe, Taga, and Konian draw people from nearby villages. This suggests that, although Djenné's diversity and wealth of products make it a draw for a large portion of the population, people residing close to smaller rural markets used them on a more regular basis than

Djenné. Normally, individuals stated that they would use the nearby market to acquire daily goods and go to Djenné for anything they could not find locally.

There are, of course, exceptions. For example, a young woman from Senoussa noted that her primary market was Mounia, despite the fact she was 20 km closer to Djenné (C86; see Figure 5.2 *a*). Most of her household vessels had in fact been bought in Mounia as a part of her marriage trousseau. In this case, the young woman was a newlywed in her early 20s who had relocated to Senoussa after her wedding. She returns to Mounia regularly to visit her family and combines these visits with a trip to the market she grew up with. This suggests that, in general, individuals will visit their closest market or pass by local markets in order to visit larger regional centers. In extremely rare cases, social ties may also result in regular access to more distant small markets.

Table 5.7: Household vessel overview.

	Frequencies		Age (years)		Vessels Per Household	
	N	%	Mean	Standard Deviation	Mean	Standard Deviation
Pottery	750	35.2	9.41	12.82	7.59	5.74
Plastic	382	17.9	2.58	2.58	4.56	3.32
Enamels	472	22.1	6.92	6.78	8.09	22.11
Aluminum	527	24.7	9.49	8.67	5.80	3.45
Total	2131	100.0	7.35	9.56	24.04	23.37
*Material information unavailable for 1 case; Age information unavailable for 975 cases; Cases are weighted						

Table 5.8: Average distance between the point of purchase and household.

Material	N	Mean	Standard Deviation	5% trimmed mean	Median	Range	Skewness	Kurtosis
Pottery	452	5.64	13.85	3.10	0.00	89.6	3.749	15.278
Plastics	339	95.44	217.29	59.52	10.96	963.6	2.681	6.191
Enamels	196	235.37	373.36	186.54	18.38	1427.9	1.800	2.483
Aluminum	347	110.50	211.21	75.75	13.40	1048.3	2.485	5.965
Total	1335	89.43	222.74	48.28	8.95	1427.9	3.320	11.774
*Units are in kilometers; Distance information unavailable for 797 vessels; Cases are weighted								

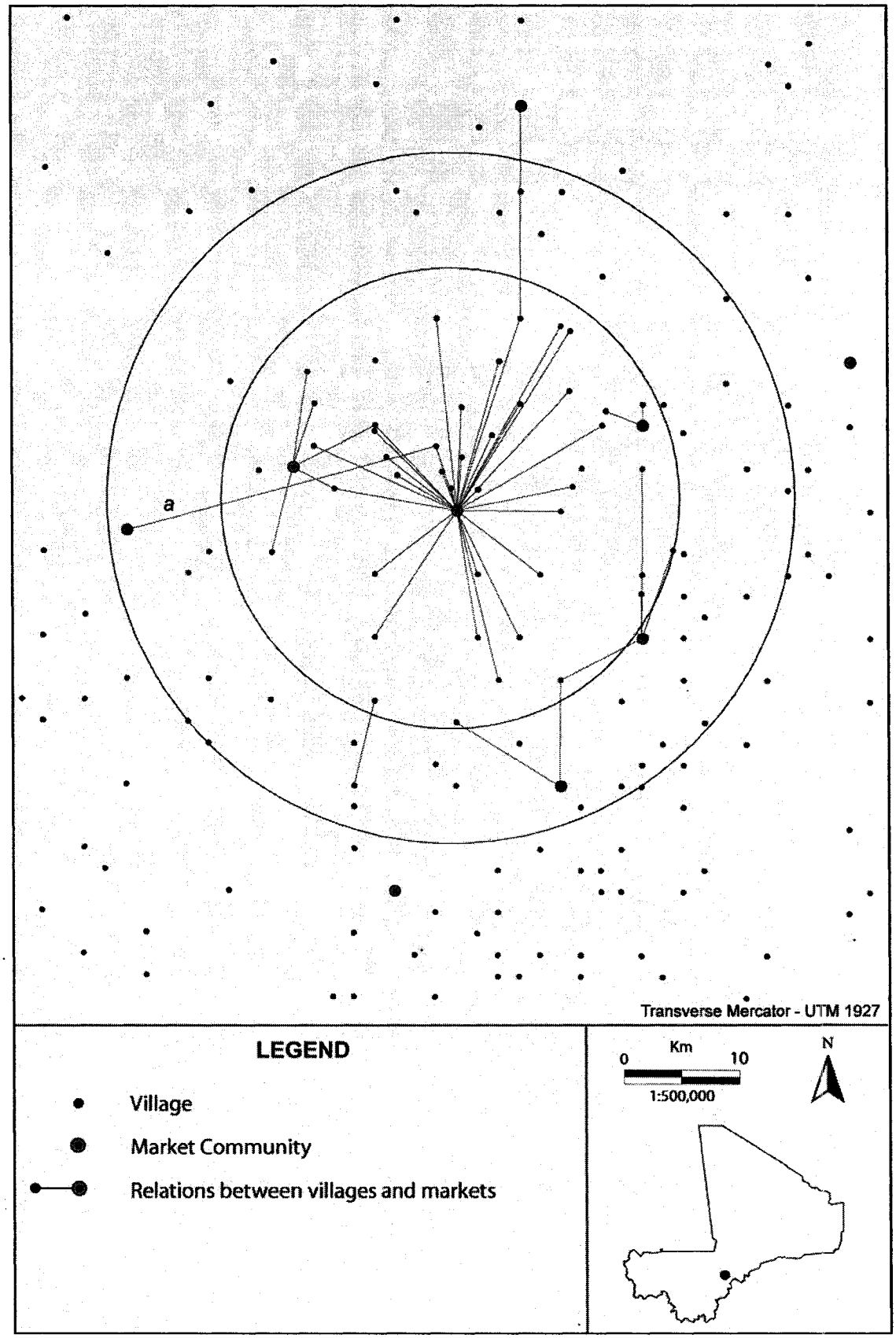


Figure 5.2: Relations between villages and their primary markets.

Consumption Patterns

Understanding the movement of household vessels in the region requires a consideration not only of the market system, but also of the social and cultural contexts in which vessels are given value. Certainly, not all pots are the same when it comes to exchange and consumption, a point that is made clear from the average distances that objects travel between the point of purchase and the households (Table 5.8). While pottery would be expected to travel shorter distances to households because it is locally produced, the figures for plastics, aluminum and enamels are far more than one would expect based simply on availability. Recall that even tertiary markets are on average less than 25 km away and all major object classes can be found in these markets. To understand the systems of consumption, it is therefore necessary to look at the roles that household vessels play in the local social and economic context.

Marriage and the Trousseau

One of the more surprising findings of the research was the pervasive role that marriage plays in the procurement and movement of vessels. Women relocate to polygamous and patrilineal households once they marry, not infrequently moving some distance from their original home. When women move, they are expected to bring with them a trousseau that contains all the objects necessary for "women's work". At the minimum, women are required to possess at least two caldrons (one for cooking rice and a second in which to prepare sauce), a wash basin for clothes and pails for hauling water (normally plastic, but tin if it can be afforded), and an assortment of pottery, including water jars and wash pots (e.g., C01, C19, C27, C66, C67, C70, C78, C80). The

obligation to assemble these items normally is carried both by the bride and her mother, but other family members and friends often contribute gifts to the bride to help her establish her household. The future husband and even a bride's father may purchase items for her. In some cases, these purchases are made years before marriage and even before a husband has been identified. One consumer, for example, noted that her father bought her a very large caldron as a gift three years before she was to be married (C81).

Table 5.9: Average price paid by consumers for trousseau-related household vessels.

Vessel	Average Price Paid (CFA)
Caldron	3026
Wash Basin (Aluminum)	3959
Wash Basin (Plastic)	1800
Bucket (Tin)	3771
Bucket (Plastic)	939
Terracotta Water Jar	1499
Wash Pot (toilet)	271
Enamel Serving Dish	1905

Some of the items in a normal trousseau are incredibly expensive, especially for rural women who often do not have regular access to the cash economy (Table 5.9). Many women find it necessarily to move into large urban centers such as the capital and work as domestic servants in order to save enough money to purchase the items they are obliged to have. One interviewee even moved to Bamako after her marriage because once she was married she found that she did not possess all the items she needed to fully establish her household (C39). The trips to procure a trousseau can often take several years. Salaries remain quite low in the city, usually no more than 5,000 CFA per month (C70). Out of this, young women must pay their living expenses and occasionally send money home to family members. Hence, girls in their early and mid teens are often away for several years while they work. In some cases, social networks developed at home

play a key role in helping women get established in larger centers. If they are unable to find employment that includes room and board, they may stay with relatives or family friends who have often migrated from the same village.

While this entry into a waged economy is typical of the exploitation generated by capitalist expansion, for young women it can be a period of relative freedom that is not unlike the *maquillage* experience for young men (see Barnes 2002: 170-172 for a broader discussion of women's migration in Africa). Some women find employment in larger local centers, such as Mopti and Djenné, but many other young women choose to go directly to larger centers like Sikasso or even the capital Bamako. Despite hard work and low wages, as domestic servants young women gain for the first time an income, often for doing exactly the same type of work they were required to do at home for no remuneration. For many, this is the first instance when they receive cash that is theirs to spend. Living in the city provides them with an opportunity not only to buy trousseau items, but also to socialize with friends, court suitors, and generally enjoy the attractions and energy found in vibrant African cities.

Aluminum Caldrons

When asked where individuals normally would go to buy aluminum items, respondents pointed to a number of market centers in the region (see Figure 5.3). Predictably, Djenné accounted for 78% of the responses, followed by Mopti (6.5%) and then large rural markets like Sofara and Madiama (3.7%). When the distances to these locations are averaged, they give a figure of 17.7 km. This represents the average

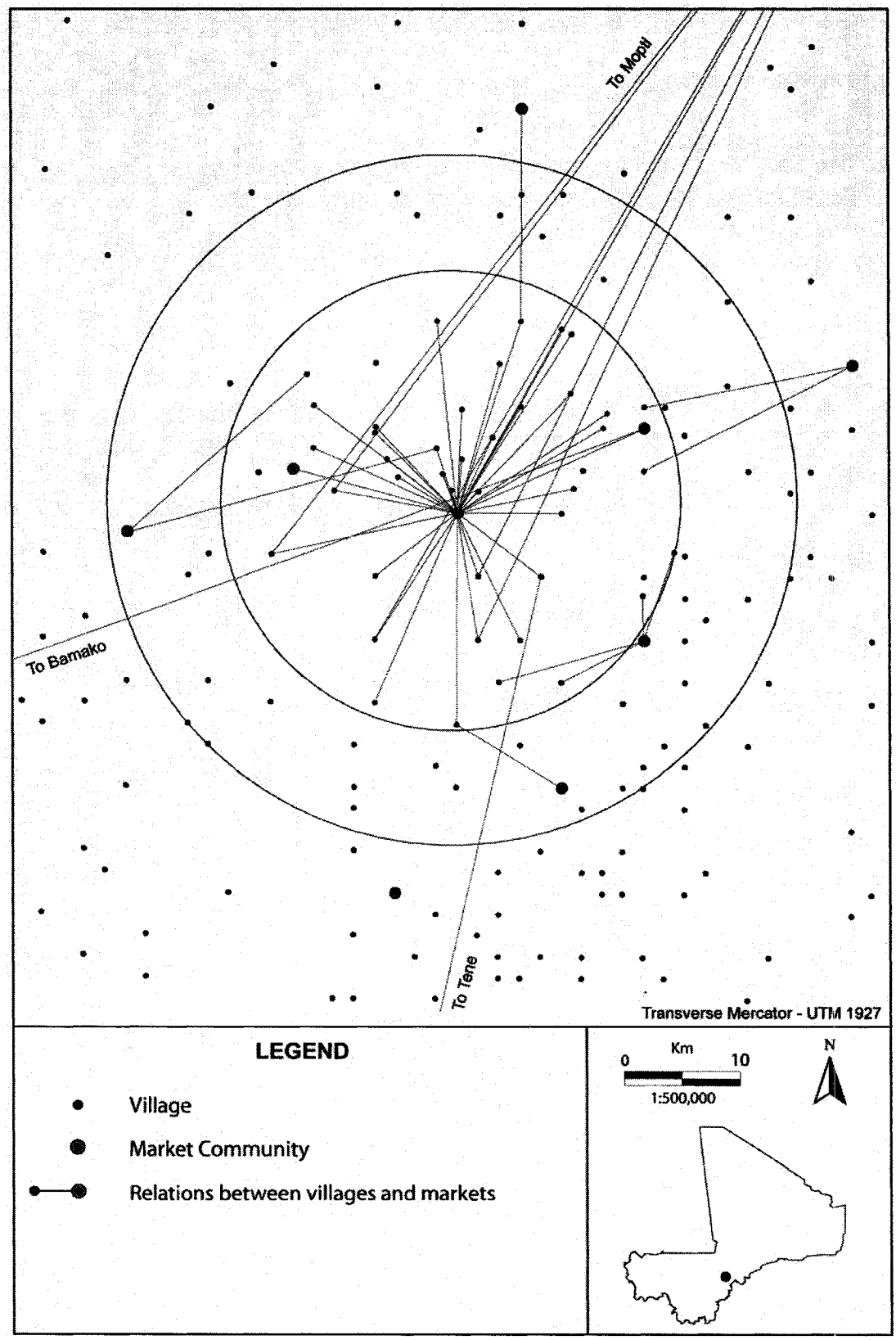


Figure 5.3: Where consumers state they can buy aluminum vessels.

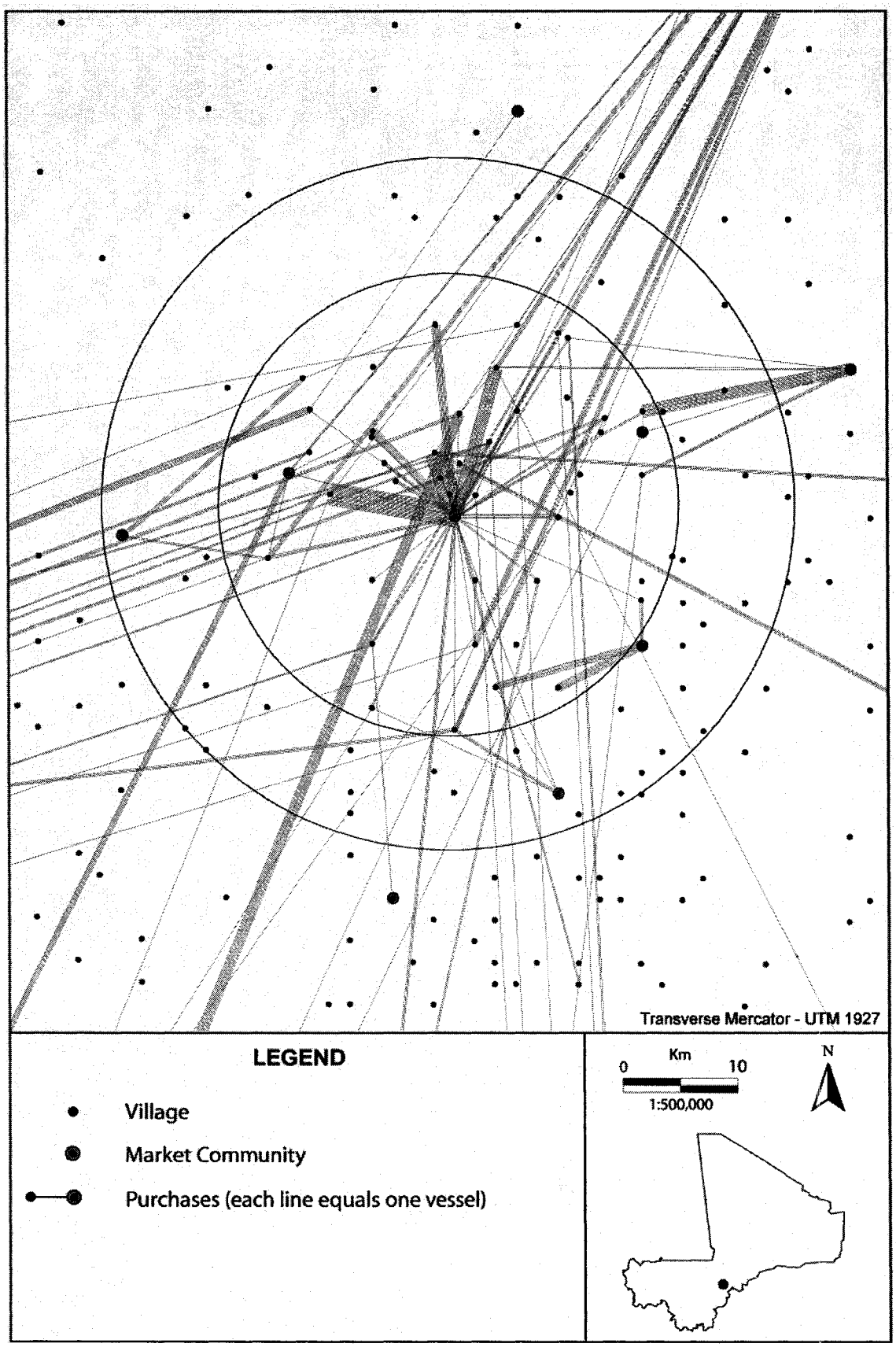


Figure 5.4: Actual aluminum vessel purchases by consumers.

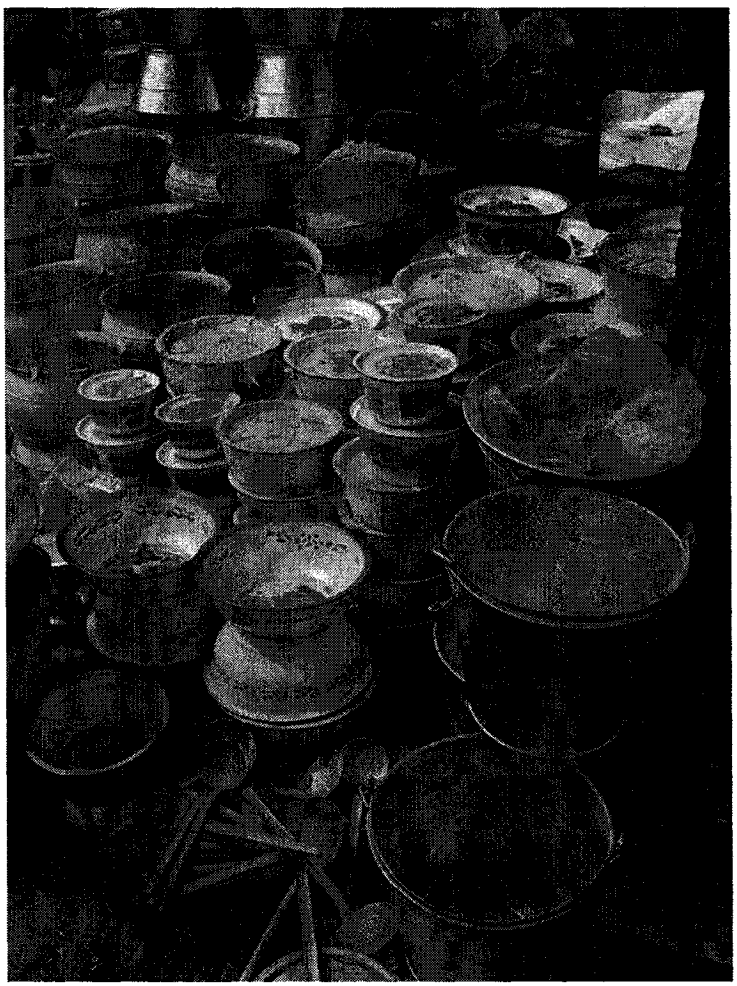


Figure 5.5: Aluminum and enamel vessels for sale in the Djenné market.

distance needed to procure aluminum items based on people's knowledge of where they are most readily available.

The statistic is significantly different from the mean calculated from the census, which shows aluminum items travel an average of 110.5 km from the point of purchase. The Djenné market is the location where the most aluminum items were bought in the region, but it nonetheless accounts for only 46% of the vessels for which purchase locations were known. Other market centers that were mentioned had figures above

expected values, with Mopti accounting for 9.2% of vessels and Sofara and Madiama each accounting for 4.9 % of purchases. A map showing relationships between households and the markets where aluminum items were purchased forms a virtual spider web (Figure 5.4). Aluminum items enter the local economy from as far away as Abidjan (1.7%), Niamey (0.9%), Ouagadougou (1.2%) and Yamoussoukro (2.0%). Other Malian centers like Bamako (8.4%), Sikasso (3.2%) and Fangasso (1.2%) also contribute aluminums to local households.

One reason for the discrepancy relates to marriage. Aluminum items have a mean age of 9.5 years, which indicates the majority were probably purchased as part of a trousseau. Trousseau purchases, especially more expensive items such as aluminum caldrons, are often made in the major centers, and caldrons make up over 2/3 of the aluminums identified in the census. The motivation for buying items away from home is often stated to be because of differences in price as well as the greater diversity of objects found in the capital versus rural markets. The diversity of objects seems somewhat overstated for caldrons, which stylistically are quite uniform. The primary benefit of moving to larger centers is the ability to do some "comparative shopping" for the best prices. At one point, there seem to have been some significant differences in price for caldrons. For example, the Sikasso region in southern Mali was identified by some women as one place where caldrons used to be less expensive (e.g., C22). One individual noted that in assembling her trousseau, she first worked for a while in Mopti, where she bought one caldron, and then she took a trip to Koutiala (southern Mali) to both visit family and buy four additional caldrons and an aluminum serving dish (C67). Currently, in and around Djenné, caldron prices seemed to be fixed. All caldrons are cast with a

number on their side, ranging from 1 to 25, which represents their size. The price of a caldron is considered to be 500 CFA times their size – hence, a size 10 would cost 5000 CFA and a size 5 would cost 2500 CFA. However, while the frequency of cases where statistics could be calculated is too low to draw meaningful conclusions, the census suggests that there are some fairly significant differences according to region. The average price paid in Djenné for caldrons was 3625 CFA (n=62), while in Mopti it was 2210 CFA (n=19) and in Bamako it was only 2300 CFA (n=10).

There are additional reasons why women tend to purchase expensive items like caldrons while they are away from home. Aluminum items are staples of the trousseau and, even if a woman purchases more caldrons later in life, she is likely to keep her original set for quite some time. The special importance and long life that a set of caldrons will have makes them the sort of items that demand a special shopping trip, often somewhere more exotic. Thus, even women who work in local places like Mopti may go elsewhere to buy their caldrons. For those individuals who go away to work, buying caldrons before returning home may be a way of insulating their earnings from appropriation. When people come into some money, they are expected to distribute it to family and friends (see Shipton 1995). This either takes the form of small gifts of cash to senior family members (and, after marriage, to husbands) or of meeting requests for "loans" from friends and acquaintances. Individuals are reluctant to refuse such requests, especially if they actually have the money on hand. Yet meeting these obligations can quickly eliminate any hard earned savings.[17] By buying items the moment they have

[17] This point was made clear to me through an elaborate payment scheme that one of my colleagues asked me to use when paying his salary from the research grant. Rather than regular payments, he asked not to be paid until the end of the project. However, because he occasionally needed cash for family expenses, he would "borrow" money from the project (at a set weekly amount) that I was to then deduct from his total

money on hand, women convert cash to a non-liquidatable format and ensure that they have little cash on hand when they return home. Not infrequently, women will return home with only a little money, a collection of vessels and cloth for their trousseau and perhaps a small assortment of plastic items that they give away to family members. Thus, purchasing vessels away from home allows women the ability to meet the ideal of generosity, while simultaneously allowing them to convert a significant portion of that wealth into trousseau items.

Enamels

While caldrons, basins and pails form the essential core of the trousseau, many women also seek to assemble a large collection of enameled serving dishes while working in urban centers. Several women noted that from a utilitarian standpoint enamels are not necessary for the trousseau because they are primarily used to decorate the front room of the house (e.g., C19). Yet, enamels make up 22% of the total vessels identified in the census and in narratives they often seemed to become a focal point of women's purchases for a trousseau.

Consumers felt they could go to many of the same places to get enamels that they did to find aluminum (refer to Figure 5.3). Djenné was where 79% of consumers felt they would go to purchase enamels, with Mopti (5.6%), Madiama (3.7%) and Sofara (3.7%) rounding out the most frequent responses. Enamels could be procured with an average trip of just 17.0 km. However, the census shows that enamels have the highest

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earnings. By calling these dispersements "borrowed money" (rather than a "salary" or an "advance") he was able to claim poverty when confronted with the inevitable requests for money. This arrangement both assuaged his conscience from the trauma of denying someone's request and allowed him effectively to save most of his earnings – in this case, to make a large payment on a pinasse.

mean distance of all of the material classes at 235.4 km. Djenné only accounts for 45.7% of all enamel purchased. Bamako is the next largest center, responsible for 9.6% of the sample, with Sikasso and Yamousoukro each contributing 7.1 % of the vessels in the census. Mopti ranks fifth with 6.1 % of the total, followed by Abidjan (4.1%), Abuja (4.1%) and then the local market of Mounia (3.6 %). When mapped, the census data suggest that enamels tend to enter the region from a smaller number of major centers than was seen with aluminum, particularly Bamako, Sikasso and Mopti (Figure 5.6).

Enamels seem to have taken over the role that calabashes once played in the exchanges of goods between families of the betrothed and gifts to the engaged couple from friends and family. Cooper (1997: 94-102) notes the importance of calabashes in Hausa wedding ceremonies around the turn of the 20th century in the Maradi region of Niger. Calabashes were gifts from other women in the community that would be passed through the bride's mother to the bride so she could "decorate the room" in the bridal house. The calabashes themselves would be decorated with chalk designs and then proudly displayed in the women's room of the household. As Cooper notes (1997: 94), the number of calabashes would indicate the breadth of the social network in which the bride and her mother participated, suggesting not just her social standing within the community but also the number of friends and kin they could call upon for aid. Indeed, the number of calabashes received often exceeded the number that any one individual could actually use and the calabashes themselves could not be sold because they possessed little economic value. They did, however, reflect an overt demonstration of the

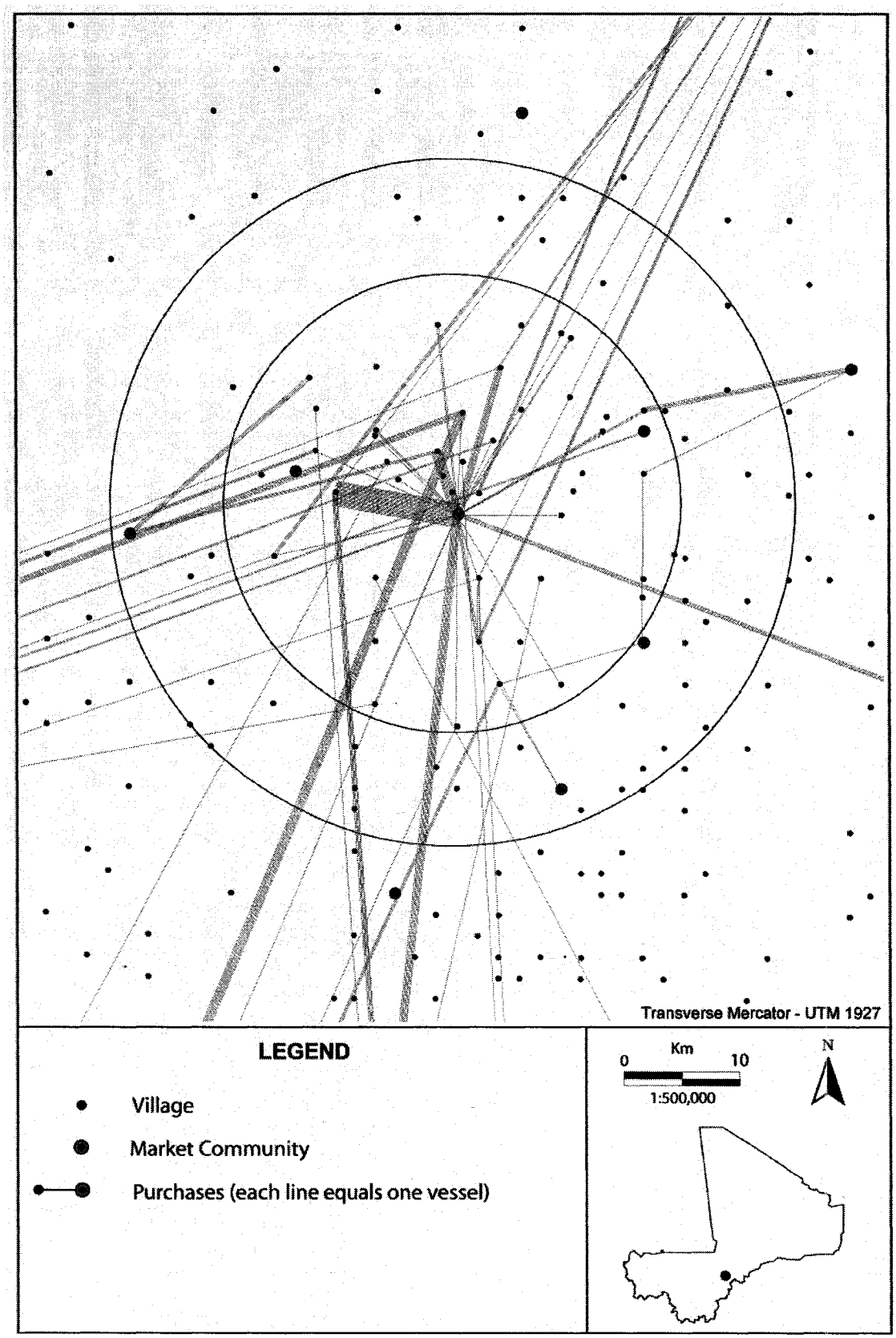


Figure 5.6: Enamel purchases by consumers.



Figure 5.7: Rural enamel display.

bride's social capital, and thus insulated her from any exceedingly abusive or exploitive practices that she might encounter as the newest and lowest status member of her new family. By the 1950s, Cooper (1997: 105) noted that calabashes were being replaced by enamel serving dishes, something she interprets as a shift in emphasis from social capital and to overt displays of wealth. Older informants in Djenné noted that enamels had replaced calabashes at approximately the same time, though imported household vessels were certainly available in Djenné by at least the early 1900s (Monteil 1971: 273). The majority of the women interviewed were also quick to link a reliance on calabashes to relative poverty, while the possession and exclusive use of enamels was thought to be an indication of financial success.

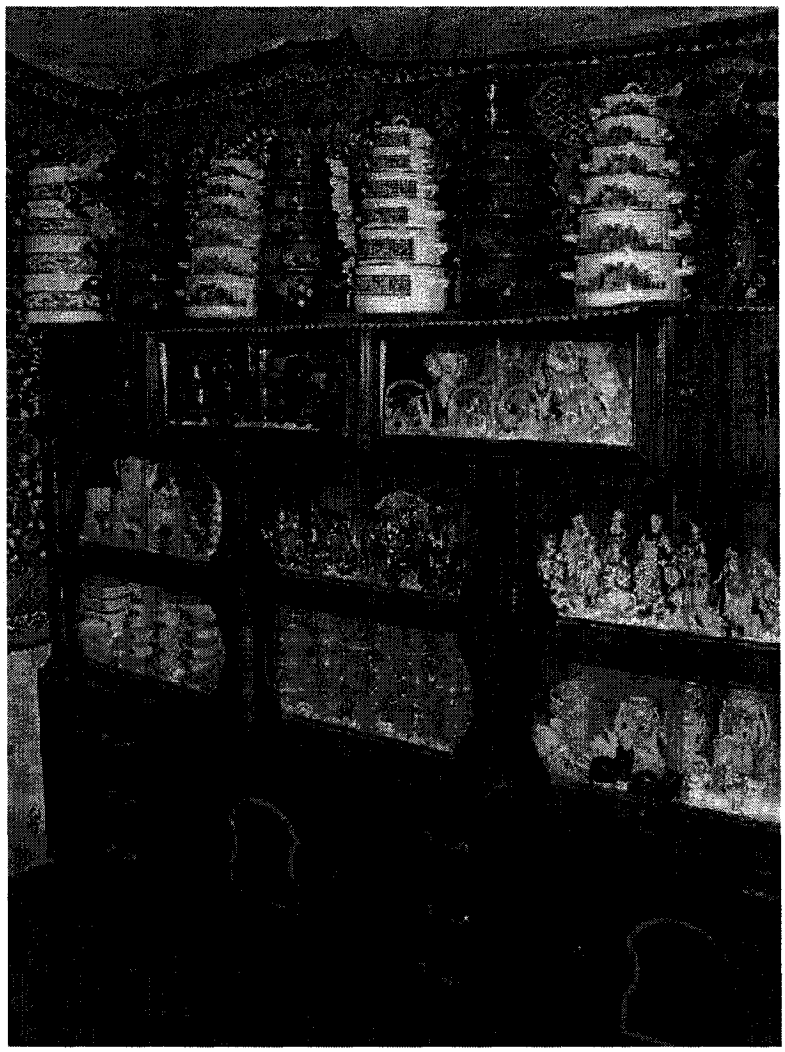


Figure 5.8: Urban and relatively ostentatious enamel display.

For most rural women, these displays consist of several sets of enamels placed on a wooden table in a corner of the front room of the household. The room remains decorated for up to 5 years after a marriage, at which point some objects are given away as wedding gifts, some may be sold, and others are placed into storage to replace objects currently in use at a later date. In Siratinti, for example, we encountered a couple who had been married some 3 years previously (C70; Figure 5.7). The front room of the

house was still "decorated", containing a table on which were displayed an assortment of plastic and enamel containers framed by brightly colored blankets known as *tapis de mariage*. Kotimé possesses a collection consisted of 8 enamel serving dishes, 2 plastic serving bowls and an aluminum cook pot (foreground), all of which she purchased the year before her marriage in Sikasso, where she had been working washing clothes. The other objects, including four large enamel serving bowls (background), were purchased in Bamako at the age of 13 when she was staying with her aunt in the capital and working as a domestic servant.

In contrast, wealthy urban women often have elaborately decorated rooms. Figure 5.8, for example, shows the front room that belongs to a woman who lives in Djenné and whose father is believed to be one of the wealthiest men in Mopti. Her room contains an armoire, a bed and sideboard; all crafted to display proudly an array of enamel and ceramic objects. The objects themselves include several complete sets of enamel casserole dishes, ceramic figurines, china tea sets, pyrex cookware, and elaborate flower vases, including a collection of plastic flowers. Rather than hung with a few *tapis de mariage*, the walls are dressed with tapestries and the floor is covered with linoleum. All of these were procured by the family without the daughter entering any form of employment. There seems little doubt that for the wealthy, such ostentatious demonstrations are an example of conspicuous consumption meant to convey the economic power of the bride's family. While some of these objects may have been gifts from friends and distant relatives, and perhaps conveyed some sense of social capital, they were generally interpreted by locals as a reflection of the family's wealth. Yet, the consumption patterns of most individuals are markedly different. Although the room

pictured above was famous throughout Djenné and served as a very public icon of a well "decorated room", it represents an anomaly when put into a regional context. Indeed, the random sample identified only one house in Djenné (C96) with an explicit display of conspicuous consumption, including casseroles, figurines and tea sets and several ceramic clocks. The house pictured above was found by asking friends if there was a "rich person's" decorated room I could see.

As iconic as such consumption may be – and as tempting as it is to interpret all enamel consumption as being along such lines – for many people the acquisition of enamels is far more complex than just emulation. Enamels fulfill a number of distinct roles for women, especially in the early years of their marriage. First, a collection of enamels is a socially acceptable way of storing wealth. Storing wealth in a form that can both be liquidated, but not too easily, is a significant issue in many areas of Africa. Women especially often have significant difficulty storing wealth in ways that cannot be appropriated by other individuals. Enamels fulfill this role. They are objects that women uniquely own and men's power over enamel items is severely restricted. None of the enamels recorded in the census was owned by men and only three enamel items were bought by husbands for their wives. Enamel vessels thus form a type of capital that, once purchased from retailers, can be accessed and controlled exclusively by women. Even after basic trousseau items are secured, girls living and working in major centers may continue to store the extra money they earn by purchasing more enamel vessels.

This collection gives women a pool of wealth independent of her husband's family that she can draw on during the uncertain early years of marriage. In cases of illness, divorce or a negligent husband, she can sell items to gain the cash she needs. One

interviewee noted that her mother had bought her so many enamel pieces that she could have "made an armoire" (C98). Just after her marriage, however, her father-in-law died. As the eldest son, her husband became the head of the patrilineal household, but his income as a cereal merchant was insufficient to cover the extended family's expenses. A series of hardships since that period – including the need to care for her husband's mentally ill sister – forced her to sell off her entire collection in order to meet the basic needs of herself and her children.

Second, for the rural poor, these vessels retain some of the characteristics of the calabashes they have replaced. Rather than only being an expression of wealth, enamels seem still to function as a measure of social capital. Of the enamel pieces for which the purchasers could be identified in the census, almost one in three (28.9%) were gifted to the bride from her mother. These gifts are not purchased exclusively by the mother of the bride, but instead are given to her from friends in her social network. In many cases, these items are gifts from friends and the daughters of their friends who are now established in their marriage and are beginning to redistribute the enamels that they had used to decorate their own front rooms (see Potash 1995: 78 on women's changing roles in African households). Although it was impossible to measure directly, this suggests that a significant amount of enamel recycling occurs. Gifts in the form of cash are also transferred to the bride's mother from her friends, and she may use this money to purchase stylish new enamels. Friends also noted during informal conversation that there is a spirit of "one-upmanship" to these exchanges. If someone gives a plastic goblet for a friend's wedding, the counter gift will often be something more elaborate. In terms of

women's implements in Djenné, enamel serving dishes represent the top of this hierarchy.

Third, because women from poor families often cannot procure a collection of enamels through their social networks, a display of enamels stands as a visible symbol of the bride's industry. People generally know the circumstances surrounding the presence of a collection of enamels at a wedding. They understand which families are poor and thus could not easily afford even the basic items needed for the trousseau. Even modest collections of enamels proudly displayed in these situations are taken to reflect the "courage" (*bonne courage*) of the bride and stand as testaments to her willingness to move away and work hard in order to acquire not just the minimum number of items she needs, but also the additional enamel pieces used to decorate the room. In part, these collections represent an indication of her future potential – of how hard she will work for the household, to care and raise children, and enact her own forms of commerce.

The meaning behind a collection of enamels thus at least partially depends on the contexts in which the displays are made. The individuals for whom these displays are intended constitute a body of knowers who understand not just the broader symbolic meanings of enamel collections (economic capital, social capital or future potential), but also which of these applies to a particular display. Although it is often phrased as a desire to make the room beautiful, the symbolic functions of the objects frequently are the explicitly stated reason behind their acquisition. Enamels establish a reputation at a time when all attention is focused on the bride. Informants noted during casual conversation that the ability of a woman to display a collection of enamels at her wedding was more important than anything else she did thereafter. Wedding pictures, both of the

couple and visiting relatives, were often taken in front of enamel displays. They represented a very public measure of her abilities and position in the community. For this reason, families who could would even "sell two cows" to ensure their daughter was appropriately outfitted for her new home.[18]

For a new wife, getting a good reputation through a display of enamels can have some very real social consequences. After the wedding, a woman becomes a junior member of her husband's extended family. She will often be responsible for a disproportionate amount of the household labor and, until she gives birth to children, she is particularly susceptible to exploitation and even abandonment (see Lovette 2001; Coplan 2001). As was the case with calabashes (Cooper 1997: 96), a collection of enamels can act to insulate women during this period from excessive exploitation or accusations of sloth and rebelliousness. This is no less the case with women from wealthy families whose displays constitute a demonstration of economic capital. One house identified in Djenné during the random sample (C96) contained a quite elaborate armoire, complete with 65 pieces of enamel casserole dishes, imported aluminum and pyrex cookware, tea sets, figurines and even 3 mantle clocks. Yet, the owner's cookware (including 6 of her 7 caldrons) and her actively used enamel serving dishes were located in the *grande famille* household, where she was responsible for preparing all the family meals. Regardless of wealth, she too was required to meet her obligations within the patrilineal household. The material presence of such collections, proudly placed within a household, serves as an undeniable symbol both to a bride's new family and to the entire community either that she has wealthy backers, is part of an extensive social network or has proven herself to be a hard and dedicated worker.

[18] Field Notes, March 5, 2003

Fourth, for most women in the sample, enamels are practical objects that have a real, daily use in serving meals. Meals are normally cooked in aluminum caldrons and terracotta pots over wood fires or charcoal braziers and the food is then served in enamel dishes. Men and women will sit separately, but each will eat with their hands from around a large communal dish. Round platters, especially ones that are large, make it possible for more people to eat simultaneously. These types of enamels can also be quickly reheated over the same brazier just before a meal by simply placing them on a charcoal burner. As a result, rural women generally purchase large, round enamel serving dishes like those in Figure 5.7 to decorate their rooms. These vessels may be used to replace ones currently in use that become worn-out.

The preference for "practical" enamels can be contrasted to those enamels that are useful only for display purposes. Wealthy women, for example, display quite proudly pyrex cookware and enamel casserole dishes like those found in the armoire in Figure 5.8. These items are designed for use almost exclusively in an electric or gas oven. They are also part of a distinctly European style of dining that requires associated items like plates, cutlery, tables and chairs. Areas remote from the capital – including Djenné – do not possess the infrastructure to support the regular use of gas or electric ovens even by those who can afford them. Regardless of wealth, meals still are prepared in aluminum caldrons over braziers or open fires and usually are eaten from a common bowl rather than from personal plates. For the wealthy, casserole dishes function much like figurines and china tea sets – their use is primarily symbolic. As Bourdieu (1984: 40, 54-55, 176) notes in his review of consumption in French society, elites are unique in their ability to distance themselves from economic necessity. They often adopt a "stylization of life" in

which even everyday objects operate primarily in an aesthetic realm disassociated from practical functions. Casseroles seem to be objects used in stylized elite consumption; they have few practical uses in local food preparation and service and thus have been adopted as symbols of idealized high culture.

For most people around Djenné, even those enamels used in symbolic displays have some direct utilitarian applications. For most rural and/or relatively impoverished women, there seems to be little desire to possess items for which there is no practical use. Indeed, 70 of the 71 casseroles identified in the census – some 99.3% (weighted) – were found in a single household (C96). The choice seems quite explicit. Casseroles and round serving dishes are both available and are often for sale side by side in the same stalls in markets in Bamako and even Djenné. Their prices are also not significantly different. During interviews, individuals were asked about the types of vessels they desired to have. Casseroles were never mentioned. Instead, two forms of serving dishes were repeatedly described as the most desirable. The first is a new form of round, stainless steel serving dish ("*Le Super*") which many women considered to be "*a la mode*". These were desired not just because they were thought to be especially durable, but also because they were beautiful and very expensive. Indeed, the brilliance and reflective qualities of stainless steel made them an impressive item in any display. The second object often noted was an enamel wash basin. In many cases, these were mentioned during interviews when a fully functional tin or plastic basin was in plain view. When queried, women noted that the use of these objects was not for washing clothes, but to use to serve meals to many people at large parties (C9). In some cases, these were linked with a "number 15" caldron, which was expensive and thus difficult for

women to buy (C80). Another individual emphasized that she wanted not just an enamel wash basin, but the "*Komas*" wash basin because it was heavier than the others and thus was considered exceptionally durable (C13). The desirability of household vessels among the lower echelons of society – even for objects that primarily have "symbolic roles" – includes a degree of pragmatism and a consideration of the entire range of practical uses an object will have.

The desire for large enamel wash basins stems from an anticipation of the responsibilities older women often have to sponsor large social gatherings such as those associated with a daughter's wedding. Women need to both cook a large meal and serve it, both of which are thought to require larger vessels. These can often be borrowed from friends or family members. However, owning such objects speaks to the individual's frequent need to prepare and serve food for large groups of people – to, in fact, have the sort of social network that requires someone to possess cookware and serving bowls the size of a wash basin. The act of loaning such objects to others is a public statement about the lender's social networks. For women in their twenties whose enamels are no longer on display and who have no immediate need to host large social gatherings (e.g., C25, C80), the desire to possess an enamel wash basin may be a form of "inconspicuous consumption" in which the self is the primary audience (after Sullivan and Gershuny 2004). Rather than a statement about existing social networks, in this case the desire for an enamel wash tub is a personal statement about anticipated potential – about an imagined and desired future in which such objects become necessary. Another woman noted that she would like a "*Super*" wash basin because she felt it would be the most expensive (C37). Her suggestion is remarkable because at the time no such items were

present in the Djenné market. Indeed, while large stainless steel bowls are frequently visible, I did not encounter any even in Bamako that reached the size of the average wash basin. This may be an imagined item – a form that represents the combined ideals of the largest size with the brilliance, stylishness and durability of stainless steel.

Plastic Vessels

Plastics are available throughout the region in Djenné, in local rural markets and occasionally from traveling venders. They also are relatively inexpensive and most women are able to afford to purchase plastics as they need them. Yet, plastics only make up 17.9% of all objects in the census. In contrast to enamels and aluminum items, plastics tend to be less durable and break more frequently. This combination has an effect both on their desirability and on their movement into consumer households. When asked what vessels individuals would most like to purchase, only two respondents mentioned a desire to buy plastic items, in both cases a plastic bucket with which to haul water. Several women noted that owning plastics, especially plastic forms that have durable equivalents made out of tin and enamel, was considered a sign of poverty (e.g., C55, C69), and some even imagined that rich individuals would not have a single plastic item in their entire household (e.g., C73). The undesirability of plastics results in some purchasing behavior that is markedly different from enamels and aluminum. Rather than making special trips, women are quite willing to simply send money with someone going to the market when they need a new plastic bowl or bucket (e.g., C7), which suggests that

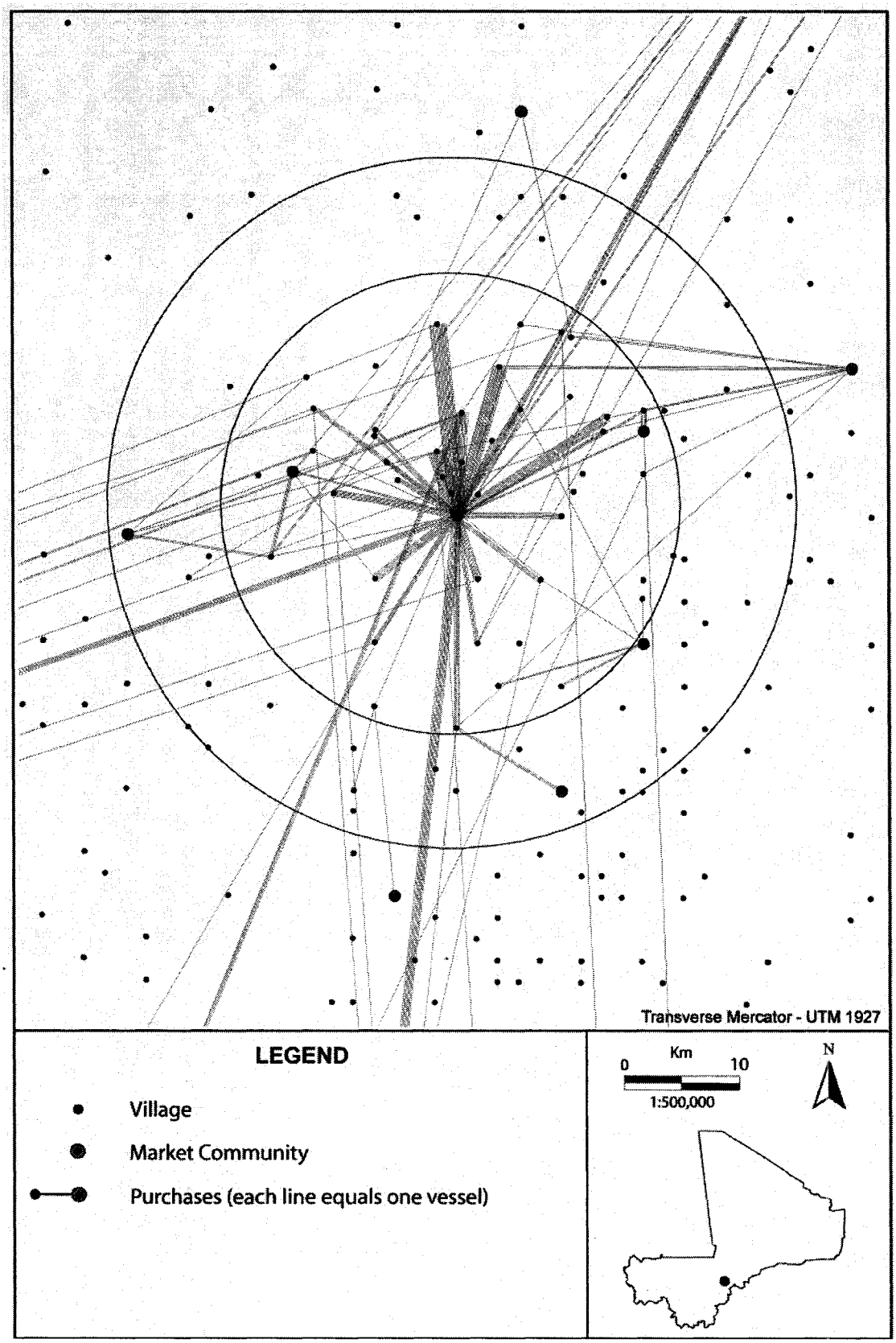


Figure 5.9: Plastic purchases by consumers.



Figure 5.10: Travelling plastics vender selling in Soa.

the specifics of the item (colour, make) are not very significant. They would also indicate that they would often just "impulse buy" plastic items in local markets. In some cases, these buys would be tied to other economic activities. For example, women who were at the market to sell cereals or other products mentioned using the proceeds of that sale to buy plastic vessels. In a more modest way than seen with enamels and aluminums, plastics function as a way of making use of found wealth before it is appropriated.

Not surprisingly, the low status of plastics translates into relatively low distances from the point of purchase to the household when compared to other types of imported materials. Most consumers noted that they would buy plastic items locally, often from their primary market. Indeed, Djenné is suggested as the preferred location to buy

plastics by 82.7% of consumers, with the regional markets of Madiama (3.6%), Sofara (2.7%) and Yébé (2.7%) also identified. The average distance to these locations is 8.1 km, which is just slightly more than the average distance to primary markets (6.7 km). A test of association between a consumer's primary market and where they would go to buy plastics shows a strong relationship (Cramer's V of 0.792; sig. 0.000) and a lambda score of .421 (sig. 0.003).

Yet, once again, the census data show that plastics do travel more than would be expected based simply on availability. Plastics travel on average 96.4 km. Djenné accounts for 60.2 % of all plastic purchases in the region, with Bamako (6.0%), Mopti (5.1%), Yamoussoukro (5.1%) Sofara (3.6%) and Taga (3.3%) rounding out the top six. While a map of all plastic purchases clearly shows Djenné's importance in plastic distribution, a sizeable number still seem to be purchased from outside the immediate region (Figure 5.9)

Plastics are thus unique. They represent a widely available "imported" material that is inexpensive and thus accessible to most individuals. The most important plastic objects in the household for women's work, namely buckets and wash tubs, also have more expensive and durable tin and enamel equivalents. The tendency for plastics to have a reputation of breaking frequently (and to do so in actual fact: the mean age of plastics in the census is only 2.5 years) suggest that they are poor objects in which to store wealth over a long term. Although they are also routinely bought as part of a trousseau, their short use-lives suggest that the large distances they travel cannot be attributed to women moving away from home to work in the city before marriage. Most

women in the census long since would have broken and replaced the plastics they purchased for their marriage.

Instead, the distance traveled by plastics before entering the household is related to several factors that are intrinsic to the objects themselves. These include performance characteristics such as their lightness and shock resistance, as well as their relatively low cost. Plastics frequently are purchased as mementoes or gifts by members of the household who went "*en voyage*" to a major center (e.g., C43, C45) or as gifts by people visiting the household. Women who go "*en voyage*" to visit friends and family will often take the opportunity to replace broken items in the home. Plastics do not necessarily require an extensive amount of saving (unlike caldrons and enamel serving platters), so they may be purchased on a regular basis as they are needed. Their low cost, resistance to breakage during transport, and lightness make them easily transportable. Indeed, buckets and wash basins may also be used to hold other items during the trip, so they do not necessarily incur extra transport costs. Moreover, while only 12.3% of plastics in the sample were given as gifts, the large distances they travel – an average of 142.9 km – is well above the average for all plastics. The vast majority of these are made up of three different items: buckets (39.6%), plastic "kettles" (39.5%) and wash basins (16.3%).

It is important to note that these plastic items are not necessarily as strictly "gendered" as other types of household vessels. While only 10 items in the census were stated as belonging to the interviewee's husband, 7 of these items were made of plastic (6 kettles and 1 pail). The other three items include two tin pails and a terracotta wash pot. Men use plastic pails and even the occasional wash basin to feed and water livestock. As a result, they occasionally buy these items for their own use. These objects are also

brought back as gifts from a husband to his wife after a period of working away. For example, a number of men in the region move to Abidjan during part of the year to take part in the ocean fishery. On their return, they will bring back pails, buckets and wash basins as gifts, as well as occasionally more expensive aluminum items. Some 41.9% of gifted plastics are from husbands, with 20.9% of gifted vessels purchased by the interviewee's mother, 18.6% by other family members and 11.6% by friends. Kettles represent a particularly interesting case. Plastic kettles look exactly like a standard tea kettle, but are made entirely of plastic. These are used by both Muslim men and women for ritual washing before prayer. Their small size and low cost has made them a typical gift. Kettles travel the highest mean distance of all plastic items that were given as gifts (262.5 km). Notably, in one case, two kettles were brought into the household as gifts for the interviewee's husband from male friends visiting from out of town (C91).

Pottery

Pottery finds itself in an ambiguous position as well. At an average of 5.9 km, pottery travels the lowest mean distance of any object in the sample, but it remains the most numerous type of household vessel, making up 35% of the items identified by the census. Moreover, while pottery is generally considered of low desirability, it was nonetheless thought to be a necessary component of a household regardless of wealth. The possession of ceramic items was not thought to indicate poverty in the same way that plastics do, in part because everyone would need to own at least a water jar (C55). Yet, it was considered abnormal for people to use pottery in everyday cooking. As one individual exclaimed, "it would be crazy for someone to cook with pottery, you have to

use aluminum, its normal!" (C2). Another individual suggested that only old people "work" with pots. Because young women are responsible for preparing meals and tend to use aluminum caldrons, almost no one uses pots anymore (C1).

Pottery has been affected by the presence of new materials in the economy. Cook pots perhaps represent the most overt change. Traditionally, households would be expected to possess *at least* two terracotta cook pots, one for cooking rice and a second for preparing sauce. However, just 27 large cook pots were identified in the sample (compared to 358 caldrons; see Table III.4). Likewise, traditional wash pots are also being replaced by plastic items. Four types of wash pots exist in the region. One pot is large basin with a dedicated foot ring. It normally is used both for bathing and for washing after using the toilet, and thus is typically found in the toilet enclosure. A second type is a smaller vessel with an expanding lip that is used for washing the hands within the house compound, often just prior to eating. Two other forms are used for ablutions. The first is a low, lipped bowl with a small knob in the center that forms an "island" when the vessel is filled with water. The heel of the foot will be rested on the island as it washed. The second is a tall, almost parallel sided pot similar to the pot used for washing hands; however, it has a straight rather than an expanding lip. This vessel is considered to be a "portable" wash pot, because the straight lip makes it easier to carry by the rim with one hand. This vessel is normally used for washing the hands and face during ablutions. All four types of wash pots (n = 63) are being abandoned for plastic tea kettles (which can be held in one hand while the other is used to scrub; n = 90) wash basins (n = 26) and even plastic buckets (n=162).

Other items have shown some resistance to the encroachment of new materials. Large plastic thermoses are present in the region. However, they remain quite rare and are only used by people (like the staff of the local museum) who have enough cash to purchase ice on a regular basis. Hence, water jars remain a staple of any household. When the frequencies of specific vessel types are considered, water jars make up 15.5% of all household vessels and are second only to aluminum caldrons (16.8%) in the sample. Water jars make up 44.5% of all the pottery recorded. Although far less numerous, large, open mouthed pots that are used both for soaking rice prior to decortification and for watering animals are also found in many rural households and make up 10.0% of the pottery. Medicine jars, which are in some cases indistinguishable from traditional terracotta sauce pots,[19] are also standard elements of most households. In prescribing traditional medicines, marabouts will often note that these medicines must be cooked and stored in "traditional" terracotta pots for them to be effective. As a result, sauce pots/medicine jars together make up 9.9% of the total.

The persistence of pottery in the economy can be attributed to a number of factors. First, pottery is readily available in almost all the villages in the region. Some 49.6% of consumers stated that they usually bought pottery either from producers in their village or from potters who made sales trips to their village (See Table III.2). An additional 28.6%, the majority of whom were from Djenné, noted buying pottery in local markets, while only 21.9% stated that they normally left their village to buy pots. This corresponds to the findings of the census, which show that 68.9 % of pots were bought in

[19] Potters noted that the widespread use of caldrons to prepare sauces had significantly affected their production of a distinct class of sauce pots. Many reported that they now made a single pot type that they described as a medicine pot, but that could also be sold as a "sauce pot" depending on which a buyer requested.

the village where the household was located (also see Figure 5.11, Figure III.1). Second, pottery is also the only household vessel that routinely can be exchanged through barter. Seventeen percent of pottery in the census entered households through barter, almost all of it in exchange for cereals (Table III.5). Almost all vessels acquired through barter were ceramics. As a result, individuals within villages can often purchase ceramic objects directly, without needing to first convert their cereals to cash. Finally, pottery is considerably less expensive than functionally equivalent imported items. For example, clay wash pots cost less than 300 CFA, whereas the average cost for a kettle will normally be double that amount. A plastic wash basin on average exceeds 1500 CFA. The combination of rural availability, the willingness of potters to barter their pots for grain and relatively low cost makes pottery a standard element of most rural households.

The tendency for pottery to be bought from local potters often means that social relations are a key element in the exchange. While there was almost never any prior relationship between consumers and the venders of new materials, over one third of all the transactions involving pottery that were identified by the census were between acquaintances, friends or family members (Table III.6). Delayed forms of reciprocity traditionally can occur in these situations. Potters noted that before and during the harvest, they would often be approached by friends and acquaintances who needed a pot. Potters would gift these objects to them with the (often unstated) understanding that they would be re-gifted cereals after the harvest. Potters were quite eager to make these transactions. Cereal prices dip immediately after the harvest. Therefore, if the person who received the pots has a particularly good harvest, the potter might receive more grain

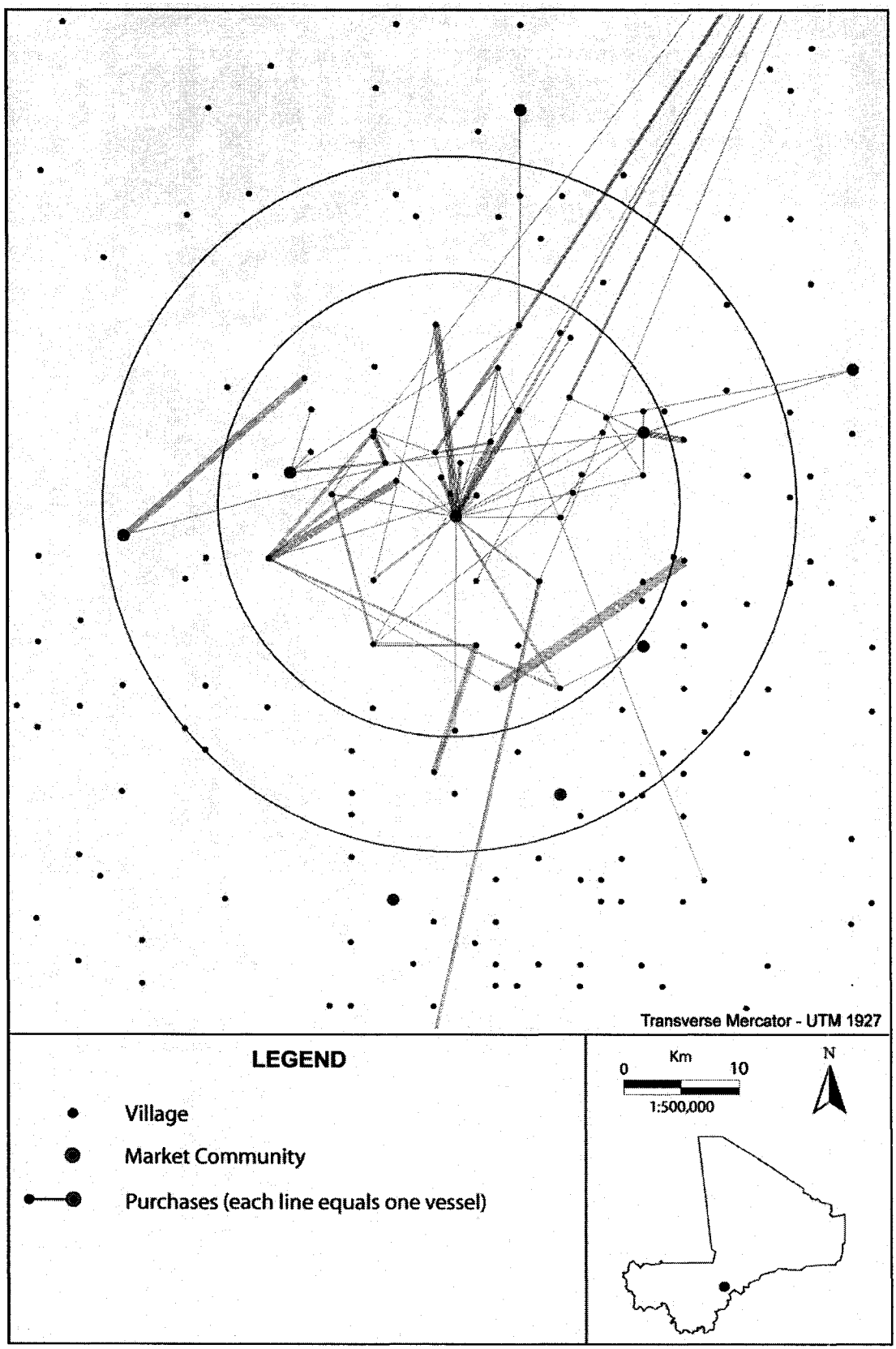


Figure 5.11: Actual ceramic purchases by consumers

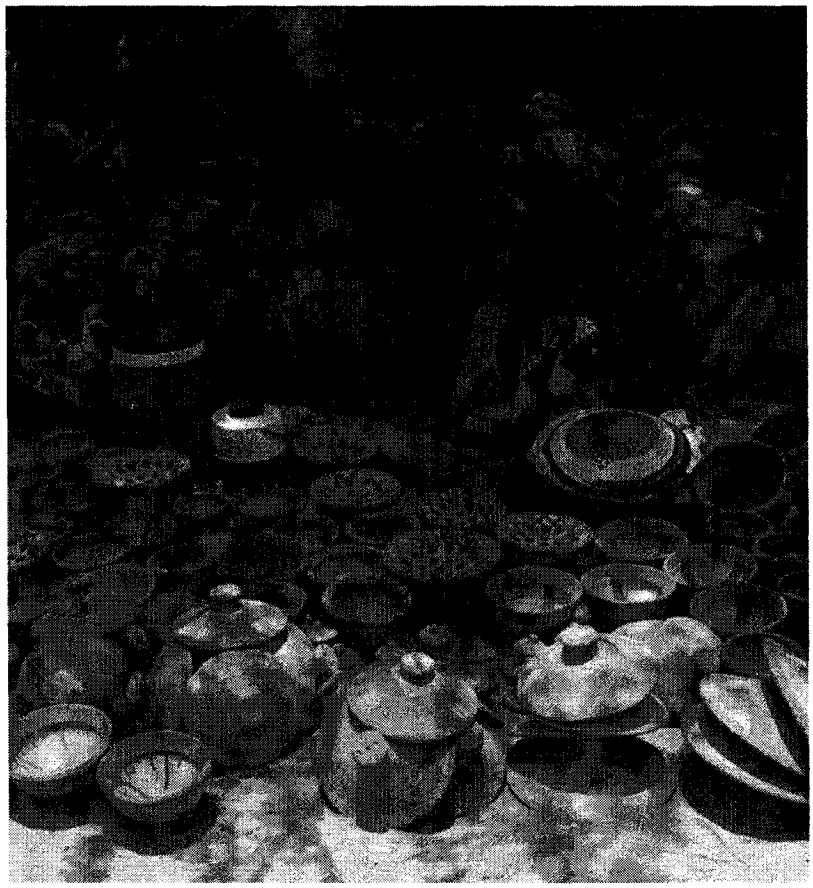


Figure 5.12: Forgeron potters selling in the Djenné market.

in the form of a gift than she would have got if the "transaction" had been completed immediately. Now that cash prices are increasingly used as a measure of worth, potters note that most casual consumers are no longer willing to partake in delayed reciprocity. Although this form of exchange may also include some of the 190 vessels described as gifts or that had been bartered for, only seven vessels were identified in the census as having been exchanged in this manner, all of them between individuals who considered their relation to be a friendship (Table III.5).

Water Jars

Water jars are unique in the census because of their frequencies. They also represent another class of vessel whose movement from the point of purchase to the household is due to its symbolic role. Two basic classes of water jars exist in the region. Water jars for the courtyard (*jar d'eau de court*) tend to be large and wide mouthed, often without any decorative treatment. The water they hold is used for cooking and washing. Within the house compound, these jars are often placed in the shade against a wall in the courtyard or in the cook house. Water jars that are used for drinking water (*jar d'eau de chambre)* tend to be smaller and are often elaborately decorated. They are placed in a very prominent location in the household, normally in the corner of the ante-chamber within the house or in the covered patio. While both water jars may be included in a trousseau (with a number of other pots), the water jar used for drinking is the most important piece of pottery a woman will own.

In many ways, water jars used for drinking are terracotta parallels to enamels. A water jar is almost always given as a gift from the mother to her daughter for her wedding. These jars may be gifts from a potter friend within the mother's social network, they may be purchased in the market or they may be specifically ordered from a potter for the occasion. Jars that are specially ordered may display elaborate decorative treatments. Twenty years ago, jars were high necked and decorated with elaborately designed tool impressions, while newer styles are often burnished and elaborately painted, occasionally even with the name of the bride placed on the pot in relief.[20] As one woman noted:

[20] See chapter 6 for an explanation of this change in decorative variability.

> ". . .water pots are special. You couldn't have a marriage without one of these. If your mother bought one for your home, you didn't have the right to replace it. Even if your mother put in an order with a potter and it took them two years [into the marriage] for it to be filled, you couldn't place another pot [in your house]!" (C82).

Beautiful pots are important because they encourage a husband "to drink" the water a wife has brought into her household. As we found out on a regular basis, offering water to visitors is a standard element of hospitality. When entering a household in which we hoped to conduct interviews, we were routinely offered a stool or chair on which to sit and a container (plastic or stainless steel goblet, tin can) of water drawn from the *jar d'eau de chambre*. Only after we had been refreshed were we allowed to explain the purpose for the visit and ask permission to conduct our interviews. Moreover, our presence in a village would normally result in a train of children following us from house to house. The proprietor would typically restrict access of these children to the patio or the front room where we would conduct the interviews, but they would almost always be allowed to get water from the water jar – even when it was located within the house. Children, especially, seemed to be aware that they could use this aspect of hospitality to circumvent their exclusion.

While water jars were available throughout the region, those bought from Mopti were considered to have a special importance for marriage. Pots from Mopti normally are rounded vessels without a neck that from the mouth to the midline are painted with a red slip that is burnished to a bright sheen. The pots often also have the phrase "*Souvenir de Mopti*" or the name of the bride placed on the pot in relief. Throughout the region, these were through to be the best marriage pots available and were normally considered to be the pinnacle of a great water jar. The reason may be tied to the use of plastic

goblets. One woman noted that she had replaced the high neck water jar from her marriage (bought some 15 years before) with a "Mopti-style" because she could not get a plastic goblet down the long neck to retrieve the water (C38). Shorter necked jars accommodated the goblets and made it easier for her children to get water without her assistance. The desire for Mopti pots was so pervasive that potters in Djenné had begun to make their pottery in the Mopti style (see chapter 6).

Water jars bought for marriage tend to travel a longer distance than would normally be expected based simply on availability. Water jars for the chamber bought by a woman's mother make up 23% of the water jars identified in the sample. Of those for which a purchase location could be given, some 27% were purchased in Djenné (and traveled an average of 8.1 km), while 19% came from Mopti (and traveled an average of 30.3 km). Combined, water jars bought by a mother for her daughter's wedding traveled an average distance of 17 km before entering the household – roughly three times the average for pottery. Water jars are also frequently bought after marriage; however, these do not have the same significance and are typically purchased from local or visiting potters like any other form of vessel.

The importance of water jars seems to result in a degree of curation of some older vessels. Several women noted that they inherited their mother in law's pottery, including water jars, when they moved into the *grande famille* household (e.g., C3, C22, C32, C89). These vessels may significantly predate the presence of the current owner (e.g., C54), who in some cases was unable to identify the original buyer because it was considered old even by her mother in law (C60). Others noted inheriting water jars from their mother (C19, C77) or grandmother (C35, C40), which often results in these vessels

being passed down through several generations on the maternal side. In some cases, inherited vessels actually moved between villages.

Pottery, Identity & Consumption

One of the more prevalent assumptions in archaeological approaches to ceramics is that decorative variation is a measure of ethnicity. It is believed that not only do potters explicitly symbolize their ethnicity through their potting, but consumers will in turn tend to purchase pottery made by those individuals with ethnic backgrounds that are similar to their own. As noted at the start of the chapter, production techniques are quite different for Griot and Forgeron potters and for some pots these alternative techniques produce appreciable differences in the resulting pottery. Griot potters are affiliated with Peul (or Fulani) ethnicity while Forgeron potters may belong to the Somono, Bozo or Bambara ethnic groups.

Yet, even the most noticeable differences in ceramic morphology, such as that produced by Griot and Forgeron potters, seem to have almost no effect on ceramic consumption. As the MAESAO projects have identified in their study of potting in the entire Delta, the strong ceramic traditions that are created through potting are largely wiped out through consumption, a fact they attribute to both the effect of local markets and the tendency for consumers not to be directly concerned with the ethnicity of the pottery when they select a vessel (de Ceuninck and Mayor 1994; de Ceuninck 2000; Gallay 1992, 2000). Consumption in the upper Delta is consistent with this pattern and it seems to relate more to availability than to specific consumer choices based on ethnic symbolism. Vessels such as Peul water jars are relatively easy to identify. In the census,



Figure 5.13: Paired Forgeron (left) and Griot (right) water jars in the ante-chamber of a household.

they were found north of Djenné in an area that has a larger Peul population and a healthy contingent of Griot potters (See chapter 6). Yet, consumers who purchased iconic "Peul" water pots were not exclusively Peul, but include a fairly equal representation of the major ethnic groups living in that area (Peul, Somono, Bozo, & Bambara). Similarly, the Peul in the region do not show a tendency to buy Griot pottery exclusively, but instead frequently purchase from Forgeron potters (Table III.16). In part, this seems to be a function of the wider range of vessels made by Forgeron potters. However, it is also related to current stylistic preferences: Mopti marriage jars are desired equally by Peul women. The distribution of Peul jars in this region seems to relate far more to the fact that Peul potters are local potters rather than from any explicit desire to display a Peul jar.

A common pattern in the area north of Djenné was to find Griot and Forgeron water pots set side by side (Figure 5.13). Sometimes they would be located together in

the front room of the house, while at other times they would be present on the patio. The reasons offered for this configuration tended to vary. One woman noted that Griot water pots tend to make the water very cold (as one would expect from a paddle and anvil technique). She bought the jar especially for Ramadan. People visit frequently during the month, but they can't be fed during the day. The interviewee wanted to have very cold water on hand to offer to her guests during that time as a part of her hospitality (C69). Another individual with the same configuration of pots suggested that the smaller Griot water jar was for her children. She observed that children often drink and then drop the water left in the cup back into the jar. This contaminates the water and makes it unsuitable for ablutions. As a result, she has the Griot jar that her children drink from and a larger Forgeron pot that adults drink from and that could also be tapped for the water needed to wash before prayer (C82). When I posed the same question at another house with paired Griot-Forgeron water jars, I was told that they were that way for no specific reason – she neither bought it for her children nor for Ramadan (C81).

More direct queries also indicated that consumers were unconcerned with the identity of the potter. During interviews, consumers had a noticeable tendency to describe all potters as *forgerons* (including Peul Griot potters) or to make a base-level distinction between Griots and Forgerons. In a number of other cases, questions about the identity of the potters from whom consumers bought would result in a spatial delineation (i.e., "potters from the Pondori") rather than an ethnic label. Specific ethnicities were rarely, if ever, known. When asked whether she would prefer to buy from a Forgeron or Griot potter, one woman noted that it didn't matter – their pottery costs the same so there was no real difference (C32). Almost half the consumers stated

that they bought pottery randomly in the market without any consideration of ethnicity and another dozen noted that they would just go to the edge of town (where pots are fired and visiting potters display their wares) and buy whatever they need from whoever had pots available. In thirty separate interviews, women stated that their most important consideration in choosing a pot was the sound it made when it tapped by a knuckle (e.g., C5, C10, C83). Pots that made a loud noise when tapped were considered "well cooked" and these were the best ones to purchase. Eight women even noted that they would normally let the potter choose vessels for them.

Ethnicity seems to have very little effect on ceramic distributions. This could be a consequence of the exceptionally congenial interethnic relations that occur in the region. Despite significant differences in occupation, language and even dress – which ensure that ethnicity is always a tangible component of social interaction – the lack of conflicts renders ethnicity immaterial in economic transactions. McIntosh (1998; also see 1989) attributes good interethnic relations to the use of a common symbolic reservoir which preserves a heterarchical system of authority and allows for the integration of occupational specialists. He even sees this reservoir extending all the way back into the Neolithic period. My impression, however, is that friendly interethnic relations owe a great deal to the overarching presence of Islam. Both potters and consumers noted that members of other ethnic groups were "brothers and sisters" under Islam. This makes it possible for potters to sell throughout the region and expect to find not only buyers, but also certain protections and a degree of hospitality. In contrast, several people confessed deep apprehensions related to Bobo "animistes" to the southeast of the research area. Potters in Bougoula, for example, were fearful of selling in "Pays Bobo" because, as non-

Muslims, members of the Bobo ethnic group were thought evil and unpredictable (P45). Yet, despite these sentiments, other potters seem to have routinely made sales trips where they encountered Bobo consumers (Table III.16).

Vessel Locations in the Household

The above information shows a persistent pattern in which more elaborate forms of consumption tend to be expressed through larger distances between the household and the point of purchase. The complex role enamels play storing wealth and demonstrating a woman's industry and social capital is translated into higher distances. In contrast, pottery is largely a local item in part because, aside from water jars, it has no such overt value.

The distribution of objects within the household also relates to consumption practices. As part of the census, vessels' locations were mapped and the vessels were identified according to whether or not they were found in public, private or semi-private locations of the household. Public spaces are those that surround the actual room block. They are often separated from freely accessible public spaces like streets, fields, and village squares by a fence, a wall, or in settlements with higher densities, a foyer room (Figure 3.3). In larger households, such as some *grande famille*'s, these public spaces may be shared by several wives, each of whom has her own block of rooms that opens onto this space. Access to these areas normally is not restricted while occupants are at home. Visitors freely enter the compound, occasionally passing through a foyer structure, and call for the person they hope to see once they have entered the courtyard.

In seeking to conduct interviews, our Malian friends had little apprehension about entering these spaces and almost all of our initial contacts were done once we were well within the house compounds. Semi-private spaces typically are front rooms or ante-chambers in room blocks. Recall that houses tend to be made of two separate rooms, a front room that opens to the outside and chamber that is only accessible off the ante-chamber. While the space around a house may be shared, the house structure itself belongs to a particular wife. Front rooms are semi-private spaces that are not entered without an explicit invitation from the owner. In many cases, this space seems to be the point where public and private meet, and where explicit displays of objects constitute a reflection of the individual. Front rooms are the only locations that belong unquestioningly to specific women that are at the same time accessible to visitors. Private space is located within the back room. We were almost never granted permission to see vessels in these rooms. Most women preferred to bring any vessels they had in back rooms out into the front room rather than allowing us to see the vessels in the back. Besides standard issues of privacy, there are other reasons why we were never granted access to the back rooms of most households. Households in the Delta are thought to belong to an important cosmological system related to a form of spiritual power known as *nyama* (McIntosh 1998; McNaughton 1988). McNaughton (1988: 16) notes that

> *Nyama* . . . is a little like electricity unconstrained by insulating wires but rather set neatly in a vast matrix of deeply interfaced social and natural laws. But it is more than energy. When the Mande tell folk stories . . . it becomes clear that they view *nyama* as a rationale for their most fundamental behavior patterns and as an explanation for the organization of their world.

Malian houses are embedded in a power-landscape replete with *nyama*. The bush contains dangerous and chaotic amounts of *nyama* that are uncontrollable except by experienced hunters, which makes it a location that most individuals avoid. In contrast, the sleeping quarters within a household are the safest locations individuals can be in (McNaughton 1988: 17; McIntosh 1998: 27-29). Sleeping chambers are sanctuaries where we, as outsiders, were not to intrude. This phenomenon creates a systematic under representation of the objects in private space (Table 5.10). Most of the following discussion thus focuses on the differences between public and semi-private space that we were able to view.

Table 5.10: The location of vessels within the household.

	Location							
	Public		Semi-private		Private		Total	
Material	N	%	N	%	N	%	N	%
Pottery	661	88.6	80	10.7	3	.4	746	100.0
Plastic	301	77.8	83	21.4	3	.8	387	100.0
Enamels	162	34.4	294	62.4	11	2.3	471	100.0
Aluminum	456	86.5	59	11.2	4	.8	527	100.0
Total	1580	74.1	516	24.2	21	1.0	2131	100.0
*Location unknown for 14 vessels; Cases are weighted								

The vast majority of the vessels identified within the household were found in their use contexts in the public spaces in front of households. An overwhelming 88.6% of pottery was found in public spaces, while only 10% was identified in the semi-private front room. Well over 80% of the ceramic vessels identified in front rooms were water jars, with the rest made up of a smattering of smaller pottery forms such as lids, wash pots and sauce jars that could be easily moved in and out of the house. No single pot form was found more frequently in the household than outside. Even those water jars

that make up the bulk of the semi-private pottery pieces represented only 20% of all the water jars within the household, the rest of which were located in public spaces like the courtyard and the patio spaces in front of the house. Plastics and aluminum demonstrate a similar tendency. Plastic vessels were identified in the public spaces surrounding the house 77.8% of the time. The majority of these were plastic bowls, buckets, and kettles. Aluminums were located outside 86.6% of the time, with the most numerous aluminum items, caldrons, located outside the house 95.3% of the time.

The tendency for most objects to be outside relates to their practical uses in daily life. Caldrons, for example, are used, washed and stored in the courtyard. Cooking is usually done over pot stands or outside in the courtyard or in a dedicated cookhouse within the household wall. Once washed, caldrons are often placed next to the hearth, ready for the next meal. Likewise, most plastic and terracotta vessels are left in the courtyard where they were last used and where they are ready for their next use. These items often shift their location throughout the day according to shade. Some larger pieces of pottery, like rice soakers and water jars, will have a dedicated area within the household, often in a shady location so the water will not heat in the sun. Normally, caldrons and other household vessels are only removed from the courtyard and placed in the house when women go "*en voyage*" and are worried about theft.

Table 5.11: The location of enamels in the household by family type.

	Location									
	Public		Semi-private		Private		Unknown		Total	
Family Type	N	%	N	%	N	%	N	%	N	%
Petite Famille	94	46.5	101	50.0	7	3.5			202	100.0
Petite Famille (ext.)	12	63.2	3	15.8			4	21.1	19	100.0
Grande Famille	54	21.8	190	76.6	4	1.6			248	100.0
Boy's house	2	100.0							2	100.0
Total	162	34.4	294	62.4	11	2.3	4	.8	471	100.0

Enamels are the only material type in the census that has higher frequencies in the household than outside of it. Some 62.4% of enamels are located in the semi-private space created by the front rooms. This finding is consistent with the important and overlapping roles that enamels are thought to play as symbols of a woman's industry and social networks. Their position in the household – in a room that definitively belongs to an identifiable individual yet simultaneously is a location that others may enter – reinforces their importance as symbolic items. The display of enamels in semi-private spaces seems to be enhanced by the sorts of family situations in which women live (Table 5.11). While enamels are distributed equally between public and private spaces in *petite famille* households, in *grande famille* households – where women are under the watchful eye and supervision of their mother in law and other senior women – the number of enamels found in the front room jumps to almost 77%. This suggests that when women are most in need of their symbolic qualities, enamels are placed within the semi-private locations of the household.

However, caution is required. Cases with large enamel displays are relatively rare, yet they have a significant effect on measures of central tendency. A few wealthy individuals (e.g., C100) may own as many vessels as twenty more impoverished rural women. Overall, women own an average of 8 pieces of enamel with one standard deviation equaling 22.11 vessels. When outliers that are beyond one standard deviation are excluded (i.e., cases where the number of enamels exceeds 30 vessels; specifically cases C85, C96, C100), the pattern identified above reverses itself. With exceptionally large collections of enamels excluded, 63.3% of enamels are found in *public* locations in the household. Even more surprisingly, when broken down according to family structure,

the percentage of enamel vessels in public locations within *grande famille* households actually *increases* to 83.4% (n = 61).[21]

The reversal of the public to private pattern when exceptional cases are removed demonstrates the complexity that underlies vessel location in the household. Wealthy women have a disproportionate ability to symbolize wealth and status in ways that can significantly skew an overview of consumption trends. However, it must be underscored that even with the exceptional cases removed, the number of enamels in the semi-private spaces is still larger than for plastics, aluminums or pottery. This is probably due to the symbolic role that enamels play. As mentioned earlier, women who are recently married quite overtly display enamels in their front rooms. It was quite apparent that enamel vessels in good condition were also stored in the front room even after the normal post-marriage display periods (Figure 5.14), especially later acquisitions of which women were quite proud, such as a wash basin or a new "*Super*". However, some of the placement of enamels in front rooms may be less esoteric. Semi-private locations are also used to store prepared food. "Leftovers", whether rice and sauce, *riz au gras* or various *crème* dishes are typically stored in serving dishes placed in the household to keep them both out of the sun and safe from domestic animals. Despite the strong trend for plastic vessels to be located in public spaces, plastic serving dishes are present in the semi-private spaces approximately 37% of the time, a frequency that is close to the numbers for enamels. Their common role in storing prepared foods is probably the reason. It must also be noted that after the standard display period for enamels, those that

[21] Note that this tendency does not affect distances traveled by vessels. The average distance traveled by those enamels owned by poorer women (at 242.34 km) is comparable to the average for the entire census. Thus, regardless of wealth, women tend to purchase their enamels from similar locations.



Figure 5.14: Enamel vessels in their daily use context within the ante-chamber of a household.

are left in the house compound are either in storage in the sleeping chamber (which could not be easily measured) or are actively being used in daily food service, which pushes them to public locations. The high number of enamels found in public locations in "average" *grande famille* households probably results from the rotational use of several women's serving platters. Those women who have serving platters in the household but live elsewhere would need to leave their enamels in public locations like the courtyard or cookhouse.

The private spaces within the households were more difficult to assess. Those vessels listed as being in private spaces in Table 5.10 and Table 5.11 were almost always brought into the front room for us to view. In most of these cases, interviewees were

reluctant to show us items they had placed in storage. Based on conversations with friends and other informants, I expect that this tendency results in systematic under-representation not only of stored enamels, but also of some pieces of pottery. For example, traditional medicines taken by men are normally stored in special three-footed medicine jars that are placed in the back room of a house, either in the *grande famille* or in the house of one of their wives. Potters noted making these vessels and they were even occasionally visible in the market. However, only two were identified in the census, one of which was left sitting unused against a cook house in a newlywed's courtyard (C62). Traditional medicine also may be prescribed to the male blood-kin in an entire family. These medicines are usually placed in a large water jar which is located in the sleeping chamber of the *grande famille* household. The same jar may be reused for several generations – especially ones that seem to work, and thus some of these jars could be quite old. The back room is chosen as the place to store and administer these medicines because it offers the best protection from the dangerous effects of *nyama.*

Discussion

The above analysis shows that specific vessel types may be expected to move longer distances according to certain key processes. Most items that are central to the household are acquired as part of the marriage trousseau. Caldrons are purchased outside the local area because of their expense and expected durability. As with enamels, purchasing caldrons while away at work gives young women a way of insulating the wealth they have acquired from appropriation by their friends and families. Enamels

seem to be primarily acquired because they offer a way of storing wealth for women as well as because they act as a material symbol of her economic independence, industry and social networks. For these reasons, caldrons and enamels travel further than expected distances before entering the household. Plastics also travel longer than expected distances, but here it is primarily because they are portable and inexpensive. Plastics need to be replaced frequently and they are often bought during trips as mementoes or gifts. In contrast, pottery is both inexpensive and readily available. Its circulation throughout the research area is primarily a factor of availability and the ease with which rural people can acquire it through barter. The one exception is water jars, which are considered a key element in establishing a happy marriage and running a hospitable household.

We should note, however, that these processes do not operate on every vessel in a given material class. Indeed, specific vessels may enter the economy through a number of different processes. After the normal post-marriage display period, for example, enamel serving dishes may be bought simply when they are easily available, as during an ordinary trip to the market. Specific vessels thus may mimic the consumption pattern outlined for pottery. Others may be bought as gifts, similar to the norm for plastics. Hence, the descriptions above are at best an outline of the factors that result in higher than average mean distances. Djenne still exerts a significant influence on all material classes. It accounts for over 60% of plastic purchases and around 45% of both enamel and aluminum purchases. Thus, its role as the primary economic center in the southern Delta cannot be disputed.

The complexity of individual vessel procurement is perhaps best illustrated through two short case studies. Rather than focusing on regional trends in material classes, in these two examples I outline individual procurement strategies. The first case study revisits Kotimé, the young rural wife whose enamel display is photographed in Figure 5.7. The second looks at Iseta, an older woman whose first husband died and who now has remarried.

Case 1: Kotimé's Consumption

Kotimé is in her early 20s and lives in Siratinti, just north of Djenne (C70). She is her husband's second wife. As is tradition, his first wife was chosen by his parents. Once he gained some economic independence, he was able to take Kotimé as his second wife. They were married four years ago and he works at farming while Kotimé cares for the house. She and her husband share a new style, two-room house that he purchased for her in Siratinti, which is a short distance from the *grande famille*'s house compound. Kotimé and her co-wife, who lives in the *grande famille*, split the work in their husband's family's household. Kotimé cooks and hauls water for two days in a row and then her co-wife will cook and haul water. Because she and the first wife do not get along, she tends to eat each evening in her own *petite famille* household rather than in the *grande famille*. On the days when she is required to prepare the meals, she transports her cooking and serving vessels to and from the *grande famille.*

Kotimé moved away to work for her trousseau before she knew who her future husband would be. Before puberty, she left her village of Gania and moved to Bamako and stayed with her aunt. There, she worked as a domestic servant, making between

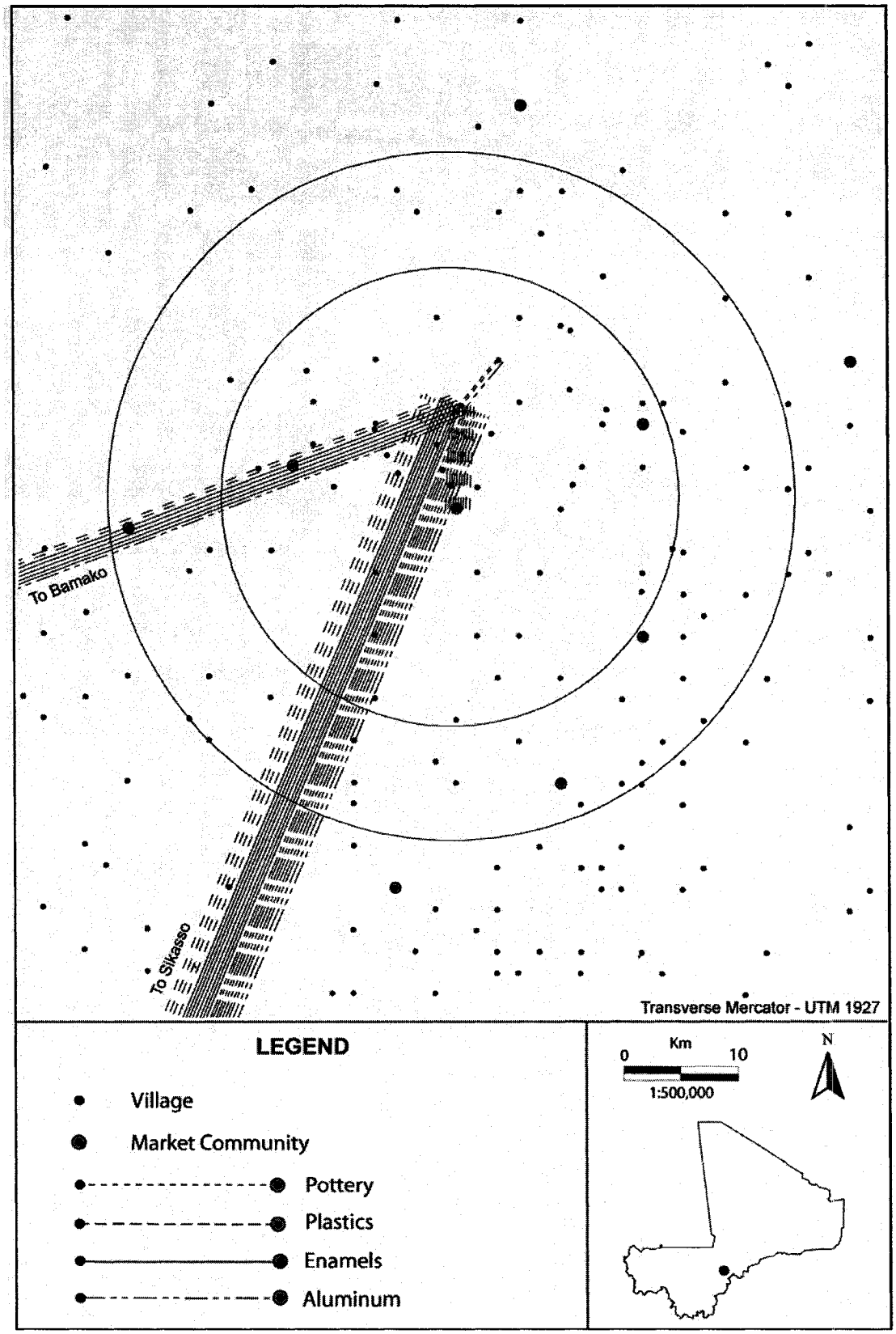


Figure 5.15: Kotimé's vessel purchases.

5000 and 6500 CFA per month. While she was in Bamako, she was able to buy several items. She picked up a European-styled aluminum cook pot and six enamel serving dishes, one of which she later gave to her mother as a present. Once she was engaged, Kotimé knew she would need more vessels for her trousseau. She decided to go to Sikasso to work washing clothes. Instead of going directly to Sikasso, she first went to Bamako to visit her aunt and then bought an aluminum wash basin she could use in her work.

Rather than a set salary, Kotimé was paid for each object she washed. She received 50 CFA for each pair of jeans and 100 CFA for each pair of linen shirts and pants. After a year of work, she was able to buy 2 more plastic wash basins, 4 caldrons, 4 plastic serving dishes, 3 tin bowls, a tin pail, and 8 enamel serving dishes. When she returned home for her marriage, her mother bought her two water jars from a potter she knew casually in Gania. The potter had spent some time working in Mopti before returning to Gania, a point Kotimé is quick to emphasize when describing her water jars. Since then she purchased several other items. She bought a plastic serving bowl and 9 plastic cups in the Djenné market and found a beautiful aluminum tea pot and matching tray from a small merchant in Gania for which she paid 1000 CFA. In addition, she has a terracotta wash pot in the toilet enclosure that she found in the house when she moved in. She also turned an old wash pot she found by the house into a pivot support for the door to the compound. On the day of the interview, she had borrowed a medicine jar from a neighbor so she could cook medicines to treat her husband's sore tooth.

As a relative newlywed, Kotimé's assemblage of household vessels tends to emphasize the role played by marriage and its associated trousseau. The vast majority of

her objects were purchased outside of the local region while she was away working (Figure 5.15). However, we can begin to see that more recent acquisitions have generally been made through local markets. Except for her water jars, which were bought by her mother, she seems generally uninterested in buying pottery and she is happy to use what ever is readily available.

Case 2: Iseta's Consumption

Iseta is in her mid to late 50s and lives north east of Djenné in the town of Soumatogo (C69). Her first husband, who was a fisherman, died and she has now married a marabout who runs a small Koranic school. Through this second marriage, Iseta has become part of a large *grande famille* household in town. She continues to live in the house she shared with her first husband, but she now takes her meals with her new *grande famille*. At her age, Iseta is not required to do any of the cooking, and thus all of the vessels she owns are in her household. Iseta's collection of household vessels spans some over 35 years and dates back to her first marriage (Figure 5.16). She still has two old enamel serving dishes that can no longer be used, a single caldron and a tin basin that were bought by her mother for her first marriage. Twenty years ago, she bartered rice for a rice soaker and a portable wash pot from potters from the Pondori village of Soa who were in Soumatogo to sell a pirogue full of pottery. She purchased the wash pot by filling it with rice, but only had to fill the rice soaker to the mid-line. From the same era, she has a plastic tea kettle and a plastic bucket (now broken) that she bought in the

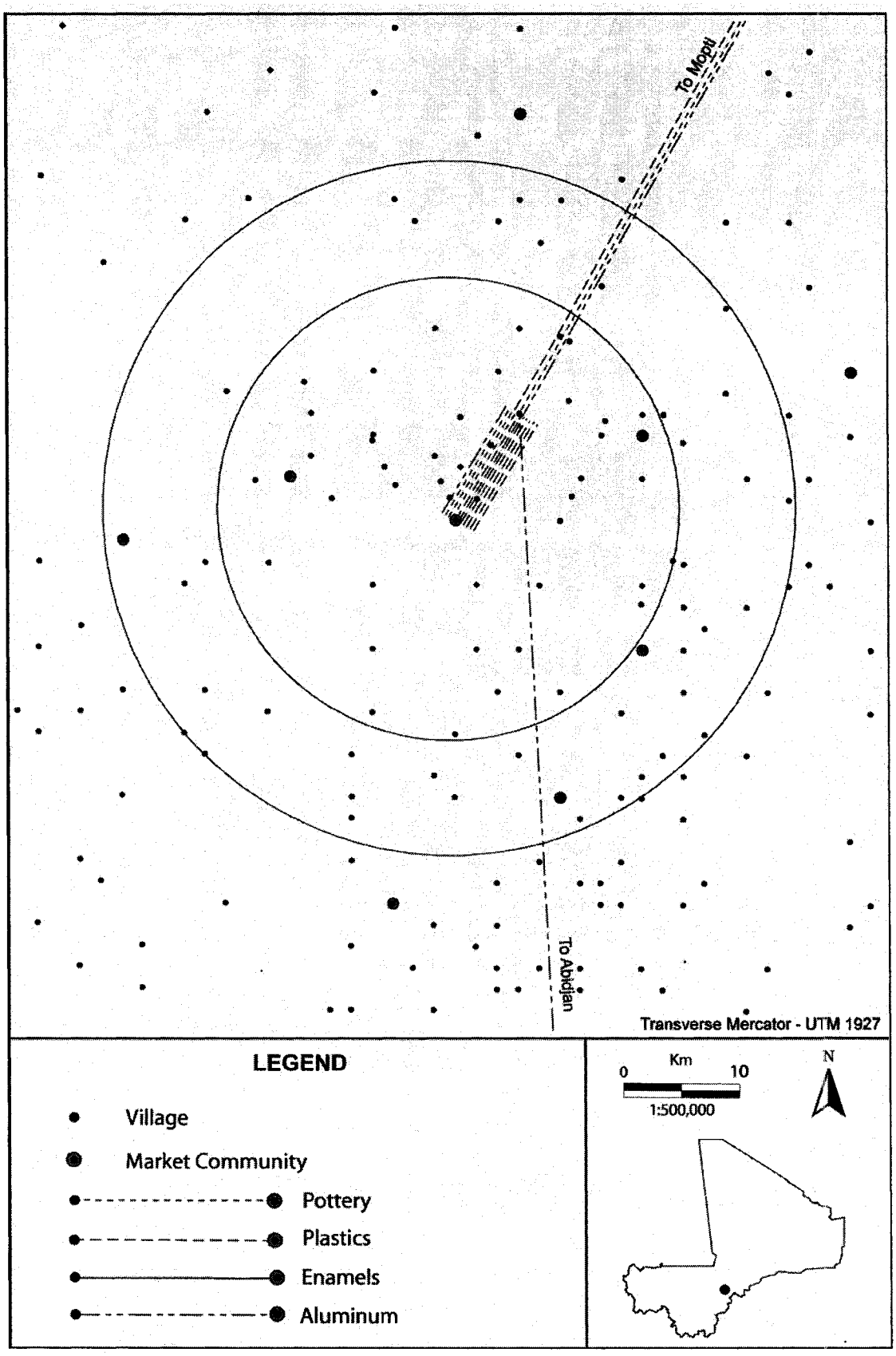


Figure 5.16: Iseta's vessel purchases.

Djenné market, and a water jar from Mopti that she bought to replace the one she received for her marriage. She also picked up a medicine jar from the Griot potters who sell in the Djenné market. Her first husband, who was still alive at the time, also brought her a new caldron as a gift from Abidjan when he returned from working in the fishery. The caldron is different from the local style of caldrons because it is elaborately decorated with aluminum relief.

In the last 10 years, she has continued to purchase a number of items both locally and from distant markets. She purchased two new caldrons, one at Mopti and a second at Djenné, and bartered rice for a water jar to replace the Mopti pot she picked up 10 years earlier. Her new jar, which was purchased from Soa potters who were once again visiting by pirogue, was moved into her front room and her once proud Mopti jar was moved to a new location in the shade in front of her cookhouse. Soa potters returned by pirogue later during a year with high water (probably in 1994 – see chapter 6), and she bartered cereal for another rice soaker. Because of low floods, they returned the following year by wagon, and this time she bartered her rice for a water jar that she placed in her cookhouse.

In the last 5 years, Iseta has bought a number of plastic and ceramic items. She purchased another medicine jar and a small water jar from the Griot potters in Djenné. The water jar now sits next to her Mopti pot in front of her cookhouse. In the last three years, she has purchased 3 plastic buckets, all from Djenné, and picked another one up while in Mopti on a trip. Three months ago, she bought a plastic basin that discouragingly already shows signs of wear. She has had to get it repaired once already.

Two items in Iseta's household are not hers. She has one caldron that belongs to her sister. Her sister needed a larger caldron to feed her family, so Iseta gave her sister her large caldrons in exchange for her sister's smaller caldron. She also borrowed a rice soaker from a friend because she wanted to prepare an entire bag of rice for decortification at the same time and thus needed a third rice soaker.

Enamels are conspicuously absent in Iseta's collection. While she probably did possess a number of enamels at one time (the remnants of which are present), these have now been either worn out and discarded or given away. Because she normally eats in the *grande famille* household, where younger women prepare and serve the meals, she has little need of her own serving vessels. Iseta's procurement seems to be primarily based on her immediate needs and what she is able to find readily available. She buys plastics and occasionally pots in the Djenné market, picks up plastics while traveling to Mopti, and gets most of her pottery from the potters who come to Soumatogo to sell their wares.

Discussion

The differences between Iseta and Kotimé underscore the changes that impact procurement strategies throughout a women's life. They also show the complexity that underlies regional trends. While certain standard economic factors like availability and price play a key role, individual consumption patterns also draw from shared systems of desirability and obligation. Perhaps the more notable of these structuring elements comes from the shared symbolic importance of some vessel types. In contrast to many perspectives that link consumption to either availability or ethnically-driven tastes, women's consumption seems to be part of a complex way of addressing their positions

within patrilineal households. Women not lucky enough to be born into a well-off family will leave home years before marriage and work in order to get the resources to assemble an enamel display because it constitutes something "needed". Mothers will take the extra care and expense to ensure that their daughters have a suitable water jar – including making special trips or placing special orders with Mopti potters. The expectations that go into a trousseau have a profound effect on human behavior, vessel procurement and the movements of material culture.

It should be noted those household vessels with the most symbolic importance are those used specifically to transfer the products of women's labor to husbands and their kin. Caldrons, tin buckets and wash basins are expensive components of a trousseau. They no less are an essential element of a women's daily work. Yet, it is specifically serving dishes and water jars that have deep symbolic meanings. Women may prepare food in a caldron, but it is through the enamel serving dish that her husband's family receives it. Water may be brought into the house with the aid of a bucket or pail, but it is from her water jar that her husband and his guests will drink. These are also the items that tend to travel above average distances before entering the household. Thus, it would appear that it is not just the monetary value that impacts the distance an object travels, but also the symbolic values that are ascribed to those objects.

Few ethnographic researchers would risk falling into a duality that sees symbolic wares being as entirely distinct from those with utilitarian functions. It must be stressed that even vessels with overt symbolic roles are inherently "useful" objects and that utility is part of what contributes to the ways in which they are consumed. With the possible exception of casserole dishes, women show a substantial concern with "performance

characteristics" (after Schiffer and Skibo 1997), such as durability in enamels which, in the early years of marriage, are almost exclusively used in a symbolic/display context. The converse is also true. Objects that appear fundamentally "practical" are an integral component of the materiality of a lived environment, creating a "structure of intelligibility" into which people are socialized and through which they carry out action (J. Thomas 1996; Ashmore, et al. 1994). Pottery and plastics may not function in the same overt way that enamels do, yet their presence in a household is a measure of the life in that household. The processes acting on vessel movement thus are not singular – not "symbolic" or "utilitarian" – but a complex product of the operation of both types of processes. Availability is a key element of vessel procurement, but the factors that affect what a consumer will buy, and where and with whom she will deal, require broader focus.

Conclusions

Household vessels cannot be decontextualized easily from the positions women have within the African economy and the patrilineal power structures in which they live. Women buy plastics and pottery because women are relatively poor. Pottery especially seems to remain a fundamental component of the economy because women often do not have regular access to the cash needed to purchase the more expensive items they prefer. Because of the paired functions they have – and despite their expense – enamels are an essential part of any modern marriage trousseau. They continue to display the social capital once seen with calabashes, but they now also are a significant way of storing

wealth for women. Such a change is not surprising, given the embeddedness of even the most rural Malian in a post-colonial monied economy where displays of wealth are a legitimate measure of social status. The possession of a collection of enamels shields women from overt exploitation within the patrilineal households they join at marriage by showing not just the bride's worth through the "traditional" measure of social capital, but also her financial potential and (should it be necessary) financial independence. This is one reason why ethnoarchaeological research cannot abstract "traditional technologies" such as pottery from broader economic systems that create desires for specific vessels and produce the financial limitations that often restrict the fulfillment of those desires. As we will see in the next chapter, potters are directly impacted by this system. Not only do they address the impact such consumption choices have on their craft production, but they also are "consumers" within this context, possessing many of the same desires and challenges as the women who buy their wares.

CHAPTER 6
THE POLITICAL ECONOMY OF CERAMIC MARKETING

As we saw in the last chapter, the consumption of household vessels is determined by a number of different factors, many of which depend on the roles specific vessels play within both the symbolic and economic spheres of women's lives. In general, enamel and aluminum vessels travel long distances because women need to move into the city and work as domestics in order to get the symbolic capital and economic cushion they require just after their marriage. Likewise plastics move long distances because they often are bought as gifts or souvenirs by people "*en voyage*". Pottery, in contrast, is often bought locally because it has neither a deep symbolic relevance nor even a modest value in the eyes of many consumers. This relative lack of importance of pottery in modern domestic contexts means that potters are primarily responsible for the movement

of ceramics in the region. Recall that pots travel less than the distance to the nearest market. Most pots are bought right in the consumer's home village.

The somewhat sullied opinion of ceramics has a direct impact on potters' marketing practices. Potters produce and sell their wares in order to meet many of the same obligations that consumers face and they are subject to the same labor requirements, changing ecological contexts, and economic forces as are the consumers to whom they sell their pots. Potters must find the resources to meet their obligations within their patrilineal households, which may include finding sufficient money and cereal for their own *petite famille*, providing cash gifts, condiments, and labor for their husband's *grande famille*, and developing an adequate trousseau for their daughters' marriages. Their potting is the way they meet these obligations.

I begin this chapter by briefly overviewing ceramic production in the region; however, this is not my focus. Previous studies by Swiss and American researchers have documented extensively ceramic production techniques and their ties to ethnicity throughout the IND. My primary focus is thus on the marketing strategies that potters use to distribute their wares throughout the region. Following my brief introduction of production and ethnicity, I examine marketing strategies and the marketing systems that potters create from these strategies. I conclude the chapter by looking at the factors that seem to affect which strategies potters choose to employ.

Ceramic Production and Ethnicity

One advantage of conducting an intensive region study is the ability to identify and attempt to explain regional variability in some detail. Previous studies in the region have either been focused studies of a single location (LaViolette 1987, 2000) or have conducted broader surveys of potting across wider culture areas, such as the entire IND (Frank 1998; Gallay, et al. 1996; Gallay, et al. 1998; Huysecom 1994a; Gallay and Huysecom 1989). These studies have tended to identify inter-regional potting techniques and their relations to ethnicity, including interesting cases where ethnically defined production sequences are modified, causing potters to adopt "alien" production techniques or to create hybrid pottery traditions (LaViolette 1987: 255-256; de Ceuninck and Mayor 1994; Gallay 2000). Because the French literature on ceramic production for the region of my study is incredibly rich, and my focus is specifically on exchange and consumption, I restrict myself here to a cursory overview.

All potters in the region collect clay from deposits found near their villages. Potters echoed LaViolette's (1987: 234-236) observations that deposits are quite easy to find, yet they tend to reuse the same deposits year after year. While they may frequently check their clay sources, Djenné potters normally pay someone else from town to dig the clay and haul it to their compound, either in a wagon or in baskets carried on the laborer's head (P1). In Djenné, the costs for this service range between 750-1500 CFA depending on the quantity of clay they order. Rural potters will often transport clay to their compounds themselves, but many potters similarly find hired transportation. In Pondori villages like Soa, a pirogue may be used (e.g., P9), while donkey carts or wagons are

frequently employed in upland areas (e.g., P19). Once in the house compound, clay is prepared for use by soaking it overnight in a water jar located near the work area. The moist clay is then formed into workable lumps and mixed with grog temper on a large straw mat. The temper is worked into the clay with the help of a foot and the clay is worked until the proper mixture of clay and temper is achieved.

Despite the ability of potters to find some form of serviceable clay throughout the region, a few potters noted difficulties in finding "adequate" sources of clay when they relocated either for marriage or for itinerant production. Two potters noted that they tended to pot only when they were staying for extended periods with their mothers because the clay in their husbands' village was too hard to work. In the first case, a potter from Diablo noted she would have to go all the way to Djenné (some 6 km away) to find decent clay (P19), while in the second, a newly wedded potter noted she that only potted while visiting her mother in Soa because she had too much housework in her new village of Torou and the local clay was too difficult to work (P86). At the time she was interviewed, she was busily making pottery to be transported by wagon back to Torou for sale.[22] An older Griot potter in Djenné who was trained in the village of Tomina, noted

[22] While phrased in terms of "finding clay", at least part of the reason for why the potter is only active in her maternal village seems to relate to both labor obligations she has as a junior member of her husband's household and potentially a lack of local exchange networks. Her mother's household contains 3 active potters, with an additional 6 potters related to the family living in Mopti. These other potters also produce ceramics when they are back in Soa. Household labor is rotated among these women (including the other 6 when they are in town) allowing each of them to dedicate most of their time to potting. The women also have acquaintances in rural market towns (Yébé & Mounia) and existing "franchises" (see below) in other villages (in Tie & Kandara) where they can sell their wares. Thus, coming home allows these potters to gain some freedom from their domestic work loads and simultaneously reinserts them into a familiar marketing system with well established social contacts. In this case, young potters return to their mother's households and take up the marketing strategies they used as apprentices.

that she had quit decorating her pots with a white pigment – like she did as an apprentice – because she did not know where she could find white clay around Djenné (P30).[23]

As I briefly outlined in chapter 5, a number of different production techniques are used across the Delta (Mayor 2003; Gallay, et al. 1998; Gallay, et al. 1996); three of which are used in the research area but only two are well represented (LaViolette 2000; Huysecom 1994a). The bulk of the ceramics is made by Somono Forgeron potters who use concave molds and a coiling technique. They produce the widest variety of pot types and their pottery tends to show more morphological and decorative variability. Somono Forgerons employ a slow wheel that is placed either in the foyer or, in rural areas, on the covered patio in front of the house. Slow wheels are conical terracotta vessels that pivot on an oiled doughnut shaped indentation placed on the living floor. The wheel is filled with grog that helps it support different sizes and shapes of concave molds as the wheel pivots. Pottery is formed by slowly turning the wheel with one hand while the other hand forms the clay into a pot.

Potters form a vessel by placing a mold of the appropriate size in the center of the slow wheel. A lump of the prepared clay is placed on the mold and the clay is pressed with the hands to fill the mold. Forgeron potters build up the sides of vessels above the mold by adding wet coils of clay to the edge of forming vessels. Oval pieces of calabash are used to smooth out the sides and, when the vessel is spun quickly, it adds regularity to the vessel's form. Small vessels may be built up quite quickly in this way, while the

[23] Somono potters in Djenné do use a white clay pigment that they find locally. The Griot potter was well aware of this fact, but didn't ask Djenné potters about their source. Instead, she lamented the fact that she didn't have a daughter to look after housework so she could take the time to search the countryside to find the source that the Forgerons used.

bases of large vessels may be constructed and then left to dry before the upper portion of the vessel is finished.

In contrast, Peul potters tend to use a hammer and anvil technique without the benefit of a slow wheel (LaViolette 1987: 238-242). Small pottery is formed by clay being placed into wooden molds that rest on a board in the courtyard. Clay is pressed into the mold and then the sides are drawn up with the use of a paddle and anvil. Larger vessels are formed by making a large flat disk or "pie" of clay on a mat. The clay is draped over a convex mold – typically a broken piece of pottery similar to that which the potter is making – and pounded onto the mold with a paddle. Once the base is formed, potters will place the vessel in the courtyard to dry. Then the clay is removed from its mold, trimmed and the remainder of the vessel is formed by adding coils of clay to the pot and using a paddle and anvil to produce the desired shape and thickness.

Forgeron potters related to Bambara groups are also found in the area, although they seem to be a relatively minor contingent. Bambara potters make extensive use of convex molds. Clay is formed into a flat "pie" and draped over an overturned pot that acts as a mold. The clay is pressed onto the mold and left to dry. Once removed from the mold, the vessel is placed on a board or piece of pottery and the remainder of the vessel is formed by adding coils. Unlike the Peul's production of large vessels, the upper sections of Bambara Forgeron pots are not finished with the use of a paddle and anvil.

Although the differences in the forming techniques can be identified macroscopically (Huysecom 1994b), Bambara and Somono Forgeron pottery shares many stylistic similarities and they make many of the same vessel forms. Indeed, many



Figure 6.1: Forgeron and Peul pottery. Forgeron water jars (top left) and small pottery (right); Peul pottery (bottom left).

of their pots are indistinguishable from one another. Griot pots, in contrast, tend to be unique both in terms of morphological variation and decoration, although there are similarities (Figure 6.1). For example, Forgerons are unique in producing structural pottery such tile bricks, decorative windows and rain spouts; as well other pot types such as net sinkers, incense burners and cake pans. Only one Peul potter stated that in the past she had made toilet jars (P22), which otherwise are produced by Forgerons. In contrast, Peul potters are unique in producing small, thin walled water jars.[24] Except for these differences, both groups produce pots designed to meet the same functional requirements. They each make water jars, drinking jars, charcoal and wood braziers, lids, cooking and

[24] Note that these jars are often referred to as "drinking jars", but are missing the elaborate spouts and vents typical of garboulettes. Bambara potters also make small-sized water jars, but their walls tend to be thicker.

medicine preparation jars, steamers, and an assortment of wash pots (for ablutions and washing hands). A cursory overview suggests that many of these pot types, especially medicine jars, braziers and lids, are identical. However, there are some small stylistic differences. In general, the paddle and anvil technique makes all Peul pottery thinner walled and lighter than Forgeron pots. Peul potters also tend to decorate their pottery with bands of triangular designs and occasionally with bosses, while Forgeron potters may employ incising and alphabetic or naturalistic elements. Small differences occasionally appear in lid handle morphology and in the bases of some charcoal braziers. In water jars, differences are more pronounced. Forgeron jars are large and thickly walled, often possessing small handles on the sides, a foot ring and (in older styles) tall necks. Peul water jars are thin walled, smaller, and normally have rounded bottoms. While Peul jars tend to sweat a great deal of water – which makes them undesirable as storage containers – they are renowned for making drinking water ice-cold.

Potter Demographics and Distribution.

One hundred and ten potters were interviewed, with marketing information collected for an additional 55 potters who worked with the interviewees (Figure 6.2). While production generally falls into two broad categories (Griot & Forgeron), the 110 potters who were interviewed identified themselves emically as belonging to 13 distinct categories that can be arranged into five groups (Table 6.1). While ethnographic research has generally agreed that most identity constitutes a matrix of caste and ethnicity, the potters show a much more complicated scenario. Combined, Griot potters make up

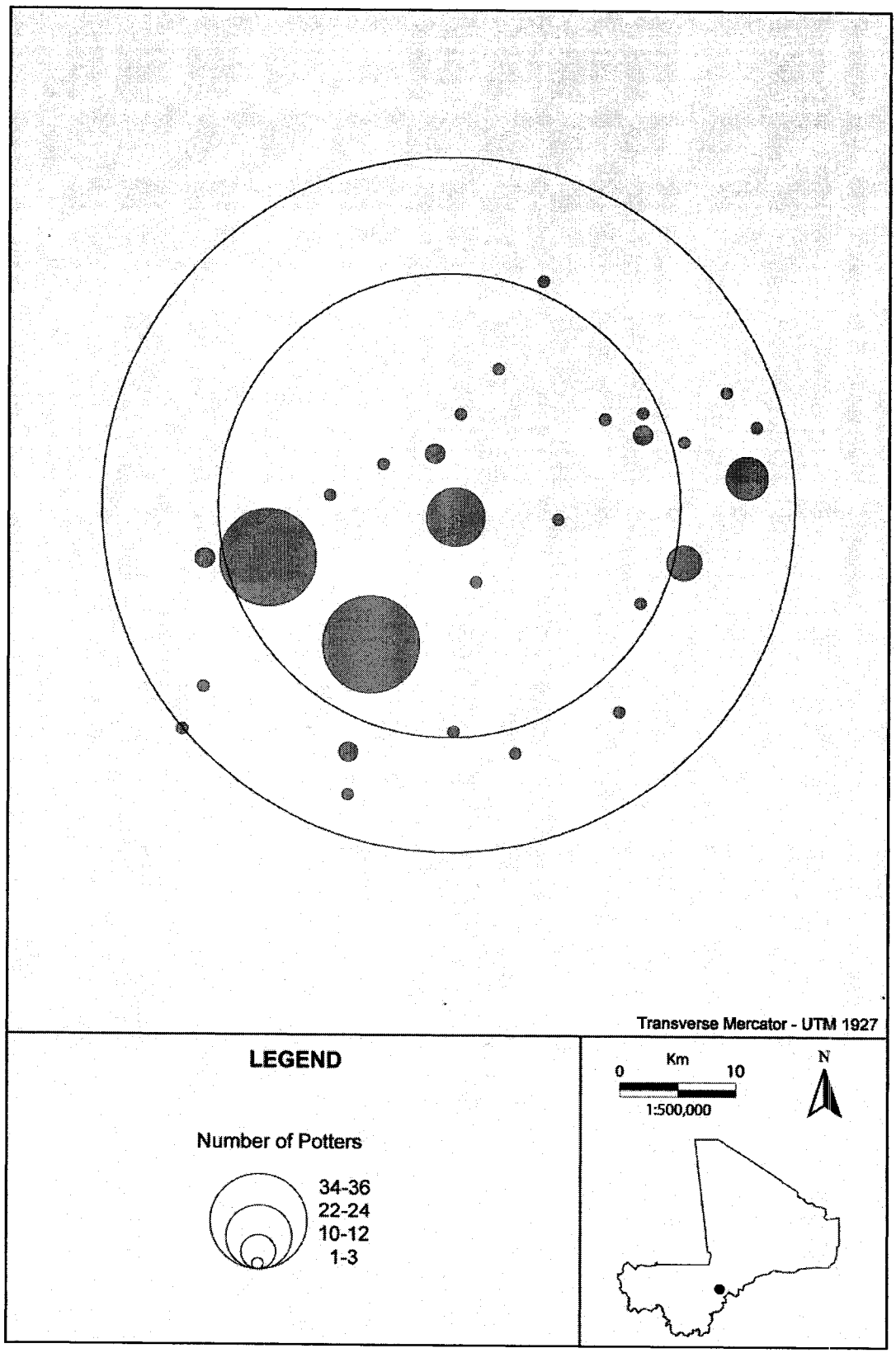


Figure 6.2: Distribution of potters in the research area.

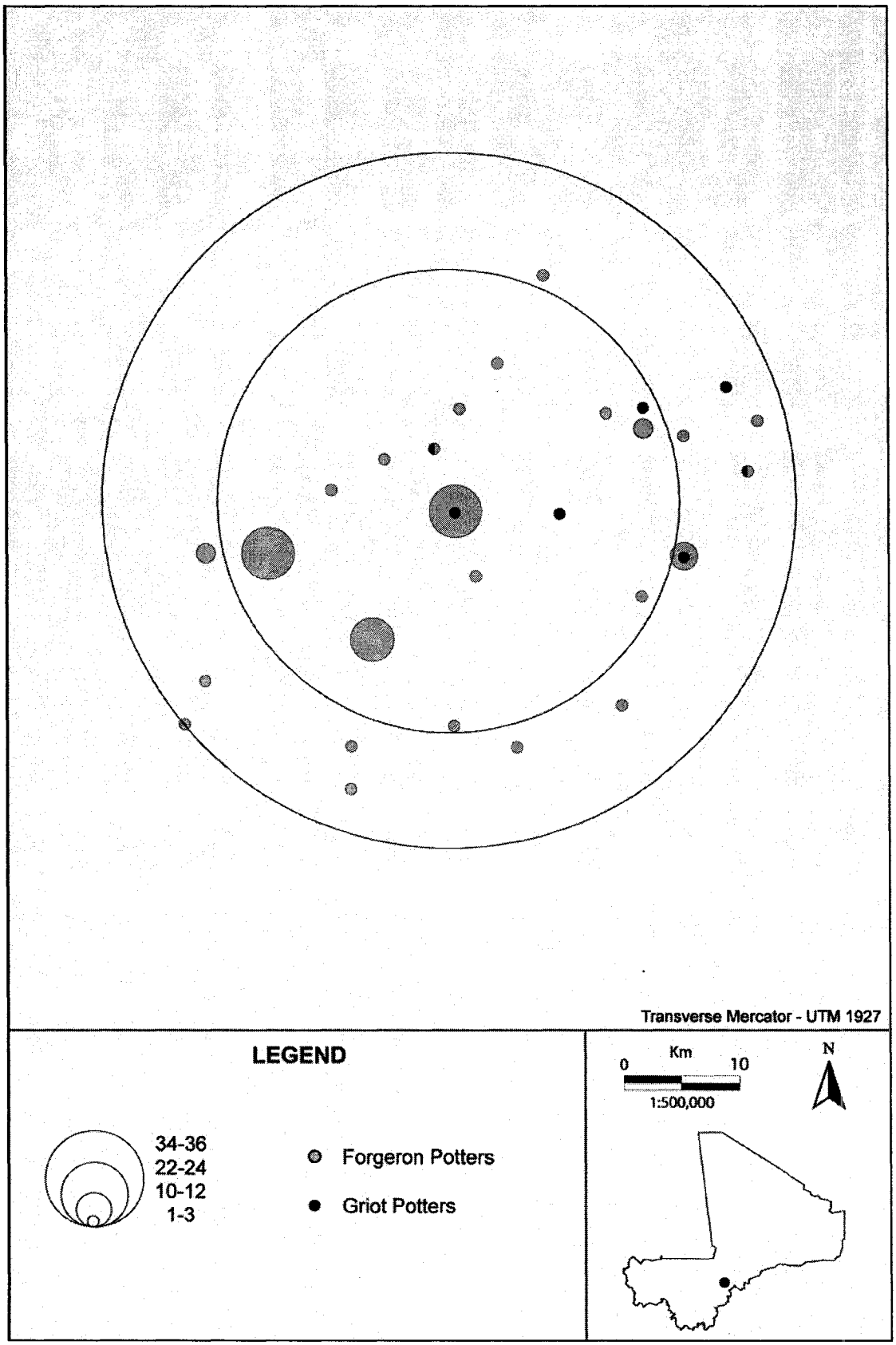


Figure 6.3: Distributions of Forgeron and Griot potters who were interviewed.

Table 6.1: The ethnicity of interviewed potters.

Ethnicity		Number of Potters	%	Average Marketing Range (km)
Griot	Labo	3	2.7	3.3
	Mabo	4	3.6	6.7
	Saké	1	.9	5.9
	Peul Griot	5	4.5	3.4
	Total	*13*	*11.7*	*5.5*
Bambara	Forgeron (Bambara)	2	1.8	5.3
	Bambara (Forgeron)	3	2.7	3.2
	Total	*5*	*4.5*	*4.1*
Bozo	Forgeron (Bozo)	1	.9	5.8
	Bozo (Forgeron)	2	1.8	3.9
	Total	*3*	*2.7*	*4.5*
Somono	Somono	10	9.1	13.4
	Forgeron (Somono)	1	.9	22.4
	Somono (Forgeron)	23	20.9	11.7
	Total	*34*	*30.9*	*12.5*
Forgeron	Forgeron	51	46.4	11.2
	Forgeron (True)	3	2.7	40.3
	Total	*54*	*49.1*	*12.4*
	Total	**110**	**100.0**	

11.7% of the potters interviewed, while the hyphenated Bambara and Bozo groups make up 4.5% and 2.7% respectively of interviewed potters. The hyphenated categories originated from individuals noting directly that either they were "Bambara Forgerons" or, alternately, they were "Forgerons", followed by a short pause, and then the modifier that they were also "Bambara". Somono potters, on the other hand, often did not mention "Forgeron" as part of their identities. In contrast, the term "Forgeron" seems to have been a catch-all phrase, making up some 46% of interviewed potters, with no additional ethnic modifier offered. In three cases, potters were quite adamant that they were "True Forgerons", to be contrasted with those Forgerons who were married to cultivators.

There seems little doubt that ethnicity is a fundamental category of all social action in the region. Yet, rather than being either eternal or purely instrumental, ethnicity seems to be something created out of the complicated interplay of daily practice against idealized social categories. Ethnicity is tied to a structure of occupational specialization in the Inland Niger Delta, something that has inspired McIntosh (1998) to suggest that current occupation-ethnicity groups may extend back to the Neolithic. In contrast, Amselle (1998) has noted that West African ethnicities have a large amount of flexibility. Potters' descriptions of themselves as "True Forgerons" bring to mind Mandé *Nyamakalaw* and the rigid expression of casted specialists. Yet, at least five Bambara-related craft producers defined themselves in a hyphenated ethnic-caste fashion, suggesting that there are underlying complexities at work. Based on the potters' locations and patronyms, the generic term "Forgeron" also seems to include at least some members of both Bambara and Somono identity groups.[25] The ties between what people do and who they are means that changing economic contexts may have some influence on identity. When I asked friends about ethnic change, they noted that it was quite possible and even well known for someone to change their ethnicity. If a Bozo fisherman married a Bambara wife and wanted to become "Bambara", he would have to fully adopt a Bambara lifestyle. He would have to stop speaking Bozo and only speak Bambara, and he would have to quit fishing entirely and only cultivate millet. The paired requirements of language and occupational change have to be maintained through the birth of children, who must be raised "Bambara". Once his children give birth to their own ("Bambara")

[25] Some patronyms tend to cluster within certain ethnic groups and researchers have often used them as an organizing principle (e.g., Huysecom 1994a; LaViolette 2000). For example, Konaté and Kombaré are often associated with the Bambara, Niafou is often associated with the Somono and Jiga with the Peul. However, crossovers and ambiguities do frequently occur, making them no more (or less) useful than ethnicity (Gallay 2000).

children, he is considered to be Bambara. The ties between ethnicity and occupational specialization mean that identity is as much about what one does as into which family one is born. The variation, ambiguity and complexity now seen in potters' identity categories may be part of the shifting economic circumstances in which potters currently exist. As we will see below, potters are struggling to remain "potters" in the face of severe drought and a shift from dedicated craft specializations to a combination of both cultivation and intermittent craft specialization. "True Forgerons" were quick to distance themselves during interviews from other potters whose families were actively engaged in agriculture, suggesting that their claims to authenticity reflected their abilities to remain dedicated craft specialists. Indeed, the large sales ranges these potters have suggest (at least superficially) that they are potters *par excellence* (see Table 6.1). Yet, some of the Djenné potters who identified themselves as "Somono Forgerons" also relied entirely on the income generated by craft production (e.g., P1). Despite suggestions in the literature that Bozo do not have craft specialists (e.g., Gallay, et al. 1996: 47), three potters also identified themselves as belonging to the Bozo ethnic group, reflecting perhaps a recent shift in either endogamy rules or prescriptions regarding who can be a potter.[26] Thus, rather than a simple matter of some "essential heritage", the identities individuals adopt seem to be an ambiguous mixture of caste/ethnic heritage and the occupations that current economic and social situations demand. Because of such complexities, throughout the remainder of this chapter I treat potters as a single group and avoid framing my analyses in terms of ethnicity or caste. Where absolutely necessary, I restrict

[26] In the case of one of the Djenné potters (P96), her identity comes from a Bozo father and a Forgeron mother.

myself to making only the most overt ethnic/caste distinctions, specifically that between Peul Griots and Forgerons (e.g., Figure 6.1 and Figure 6.3).

The potters interviewed had a mean age of 46.5 years. Sixty percent of the potters stated that they were trained by their mother, 10% were taught by their mother in law, 8.2% by their aunt (usually their father's sister or the wife of their father's brother), 5.5% by both their mother and grandmother, 4.5% by their grandmother alone, and 4.5% by their sister in law (either a co-wife, husband's brother's wife or brother's wife; see Table III.9). Three potters were taught by men, one by her brother, one by her father and a third by her grandfather; 2.7% total) and an additional 2 women were taught by a neighbor who had no familial relation (1.8%; see below). Some 37% of women noted that they worked alone in their potting, 20.4% worked with their sister(s)-in-law (co-wives and husband's brother's wives), 13% with their daughter(s), and 6.5% with large *grand famille* work groups made up of 3 generations of potters.

When the most general ethnic categories are used to plot interviewed potters on a map (Figure 6.3), it becomes possible to see that the aggregated Forgeron potters are found throughout the region, while Peul potters primarily are restricted to a series of ancient dunes north and east of Djenné. Forgerons identifying themselves with Bozo ethnicity were interviewed in Djenné (P96), Gomitogo (P60) and Taga (P94), while Forgerons using Bambara ethnic modifiers were interviewed in Sirabougou (P37), Ngola (P44, P56), Perta (P16), and Taga (P51). Forgerons potters make up 88% (n=97) of the potters interviewed, while Griots (n=13) make up the remaining 12%. In actual fact, Griots are perhaps over represented in the sample of interviewed potters because only half of the 30 plus potters present in each of the towns of Soa and Kobassa could be

interviewed. In contrast, almost all the Griot potters identified were interviewed. Forgerons are incredibly numerous not only in Djenné, but also in the Pondori villages of Soa, and Kobassa. In contrast, Peul potters are less concentrated; they rarely exceed 5 potters in either Djenné or in any of the rural villages where they live, such as Senoussa, Bangassi, or Tomina.

Influences on Ceramic Production

Despite differences in distributions, all potters in the area face some common restrictions on their production. These influences are of two sorts, ecological degradation and economic change. As noted in Chapter 3, the rise and fall of the Bani and Niger Rivers and the oscillation of wet and dry seasons has a significant effect on the local environment and on agriculture (McIntosh 1998; Gallais 1967, 1984). Like potters in other areas of the world (Arnold 1985; Graves 1991; Hagstrum 1999), potters in the IND operate according to a definite seasonal schedule that articulates quite closely with the agricultural cycle.

Potters actively engage in production only during the drier parts of the year, specifically from December through August. During this time, the raw materials needed for production are readily available. In addition to clay deposits, potters require access to two types of fuel sources: dung (and more rarely wood) and straw. Pottery is fired by placing a circular layer of dung or wood on the ground. Larger pieces of pottery, such as water jars and rice soakers, are placed in the center of this layer, with smaller pottery set toward the edges. The pottery is then covered with smaller pieces such as lids and tiles to form a rough enclosure that acts to trap the heat. The lower 2/3s of this pile then is

covered in dung and the entire pile is covered over with a thick layer of straw. Potters fire their pottery in an area sheltered from the wind and normally light the fire at dusk when winds are light.

While clay sources in some areas may be accessed year-round regardless of flood levels (P87), dung and straw are only seasonally available. Both rice and millet harvests occur at the end of the flood (January-February), at which point, dry straw becomes readily available. Moreover, throughout the dry season (beginning in February), Fulani herders enter the Delta from the rapidly drying Sahel in order to find the water and grazing. These herds provide most of the dung on which the potters depend for fuel. Indeed, those few potters who stated that they routinely fired their pottery year-round attributed it to an ability both to store firing materials collected at this time and to fire in a location (like an abandoned room) that was unaffected by sudden summer downpours (e.g., P73, P77, P80). Historically, potters would make a large amount of pottery during the dry season and sell it during the floods through pirogue-based itinerant marketing. The severe drought that has affected the Delta since the 1970s has changed this system, forcing potters to rely on land transport and to restrict the majority of their sales to the dry season (see below).

Pottery production is also directed at specific periods of high demand and consumer solvency. Potters are intimately aware of these changing periods, and adjust their production and marketing strategies to take account of these changes. During a harvest, farmers know if and how much of a surplus they will have. They will often barter their surpluses for other products at that time. In areas with good harvests and significant surpluses, grain prices tend to drop. In contrast, grain often becomes short

during the rainy period and the flood, when grain stocks may be used up either through planting, barter or personal consumption. Potters actively try to sell their pots during the harvest period because farmers are more willing to buy pottery and the lower grain prices enable potters to get up to twice as much grain as they would during other times of the year. Potters thus often time the start of their production to take advantage of the end of the harvest. Certain types of pottery also tend to sell better at specific times of the year. Braziers used to heat houses are needed during the winter (P4, P104), medicine jars are used during the flood by fishermen to hold the medicines that protect them while they work on the water (P2, P69, P94) and by other individuals to protect them from illness during the winter (P101), lids are required during the harvest to protect cereals from the wind and animals during transport and storage (P2, P104, P106) and to cover the food that men take to the fields while they work (P49). Rain spouts are needed just before the rainy season by individuals repairing their houses (P43, P97, P108), and rice soakers are needed during the spring by venders who must soak their rice for decortification before it can be sold in the market. Several potters noted, however, that farmers will often purchase most of the vessels they need for the upcoming year during the harvest (P4, P31, P60). In part, this appears to relate to the problem identified in the previous chapter of storing wealth. Grain stored as cash may be slowly lost throughout the year, while the grain itself may be eaten by the time someone needs a new vessel. Consumers tend to purchase vessels when they have surplus cereals on hand. While there is a changing rhythm according to demand throughout the year – which creates some seasonal variations in what vessels potters produce and market – there is a corresponding pull for potters to ensure that they have a large variety of pottery available during the harvest.

The one exception lies in the marriage period. The "marriage period" begins as early as May and runs until the first week of August (P5, P75), reaching its peak around the *Fête de Tabaski*. A bride's mother will often purchase all the vessels needed for her daughter's household just prior to the wedding. Potters get special orders from acquaintances who know their work, but they also tend to emphasize in their production during this period those vessels typically included in the trousseau, including water jars, wash pots, incense burners, and bed legs (P55, P94). Because these vessels are bought together during the hot season, when cash is used more than grains, potters can gain a significant influx of cash from one or two marriage purchases – far more than they could make through several weeks of market sales.

In addition to the cyclical and seasonal influences, potters also face significant changes in the economic context of their production. Similar to what we will see below for marketing, potters are being directly affected by a shift from barter and delayed reciprocity exchange systems to a cash-for-service mentality. A potter in Djenné noted that previously, when potters needed help collecting straw, dung or clay, they would spread the word and people would assist them. Later on, the potters would give these individuals gifts of vessels. She lamented the fact that now potters cannot give away pots to people who need them, and in turn they cannot get help from people when they need it (P109). Potters in general were now getting more money in exchange for their pots than previously – the value of their pots had increased – but they also were quick to point out that transportation costs associated with production had also increased (P31, P62, P73, P75, P94, P105). Inflation not only has affected production, but also is a serious problem for potters who wish to exchange the proceeds of their potting for other commodities.

Simply put, they are now unable to buy as much as they used to with the money they have left over after production costs are factored in (P49, P55, P64, P79). As one potter stated, she may receive more money now than in the past, but when she takes that money to the market, she buys less with it than before (P51).

Regardless of ethnicity or location, potters in the region are subject to the ecological and agricultural rhythms and an increasingly commoditized economy. There are two examples, however, of some unique elements of production that are not widespread, both of them related to the town of Bangassi. Both Griot potters and "Forgeron" potters who have Bambara-like names (Konaté, Kombaré, Daou) live in Bangassi. Several Forgeron potters employ a mixture of manufacturing sequences. They use typical (Somono) Forgeron slow-wheel and coiling methods to make "Forgeron pottery" and use paddle and anvil techniques to make "Griot pottery" such as small, thin walled water jars (P20, P42, P46, P48, P53). The overlap seems to relate to horizontal transmission of potting knowledge to one potter some time in the past (P46). Fatumata was born "a Forgeron" in Bangassi and wanted to learn how to make pottery but could not because none of the Forgerons in town knew how. She approached a friend and neighbor who was a Griot potter and asked to be taught. Fatumata suggested that this was possible because there is a relationship ("*coussinage*") between Forgerons and Griots (likely because of their similar caste status). Her neighbor began teaching her to pot, and then once Fatumata was partially trained, Forgeron potters from Kobassa (likely Somono) arrived in Bangassi to work itinerantly. She watched these potters work and stated that she "picked up" their use of a slow wheel.[27] She now uses the paddle and anvil technique

[27] Potters in the region have shown a disconcerting tendency to make pottery production look far less complicated than most archaeologists tend to assume. Fatumata indicated that her adoption of the slow

employed by Griots to make water jars and toilet wash pots and uses a wheel to make rain spouts, small wash pots, lids and rice soakers. The other potters in town seem to have learned how to do this from her, and now most Forgeron potters in town use paddle and anvil techniques to make Peul water jars and some other shared types, but use Forgeron production methods to create Forgeron pot types. This overlap has even been exported to other villages. A potter in Diablo who grew up in Bangassi also uses both techniques in her potting (P19).

The overlap of techniques in Bangassi seems to be reinforced by the presence of a potter from outside the region. Halimata was trained to pot in the town of Yébé near the Malian border with Burkina Faso (P47). Halimata identifies herself as "Forgeron" (with no ethnic modifier) and she does not use a slow wheel. Instead, she follows what are often described as "typical" Bambara production techniques that employ convex and concave ceramic molds placed on a wooden board. However, like other potters in the region, vessels are built up toward the lip with the use of a paddle and anvil. Thus, Bangassi reflects a unique zone of overlap between what appears elsewhere in the region as unique potting traditions. The fact that blurring between distinct potting traditions seems to be far from anomalous (LaViolette 1987: 255-256; de Ceuninck 1993; de

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wheel was straightforward and uncomplicated – a simple case of observation and then mimicry. Other women in the Pondori region noted that they interchanged wood, and sometimes even bark, for dung in their firings without having to make any other special adjustments in their potting (P16, P37, P61, P73, P87). (A colleague who is a specialist in petrography informed me at the 2004 SAA meetings in Montreal that this categorically was "impossible".) Two other potters noted that they picked up potting without any significant apprenticeship. Simba was initially trained to pot when she was a girl but when she entered her teens she instead began braiding hair for the Peul in order to make money (P54). When she was 38 years old, she found that she was not making enough money as a hair dresser and returned to potting – going entirely on her 20 year old memories. In another case, a potter named Kotimé was taught how to pot by her older brother (P37). Kotimé's mother died when she was young and before she could receive any training. Her brother, Soumana, however, used to help their mother pot (probably to haul clay and grind grog) and thus saw the basic techniques and passed them on to Kotimé. Unfortunately, Kotimé never learned how to make larger pots like water jars, so her repertoire is restricted to cook pots, medicine jars, wash pots, and bed legs. Nevertheless, these examples suggest that the margin of error in ceramic production – from paste recipes to firing temperatures – is much larger than technologists tend to assume.

Ceuninck and Mayor 1994; Gallay 2000) suggests that the rigidity of potting traditions should not be overemphasized .

The villages of Kobassa, Ngola, Yumi and Bangassi also share a set of traditions related to the production of drain spouts. Drain spouts or gutters (*gouttières*) are tubular pots that can exceed 1.5 m in length. They are placed through the curtain walls on the roofs of buildings to drain rain water. Potters in all three villages noted that drain spouts could not be made by women who were currently married to their first husband or he would die (P33, P34, P46, P48, P52, P53, P89, P110). Potters could make drain spouts up until their marriage, but after that point, they were not allowed to make them again until they were widowed (P20, P89). Production of drain spouts could continue if they remarried. It may be that the tradition was transmitted through Kobassa potters working itinerantly in Bangassi at some point in the past. Current Forgeron potters in town describe learning about the tradition from a senior Peul potter (the same one who taught Fatumata the paddle and anvil technique), who probably had some contact with itinerant Kobassa potters. The tradition seems to be at least 50 years old in Kobassa (P110) and perhaps in Ngola as well. Not all potters in these villages, however, followed the tradition. One potter in Bangassi made drain spouts but was still married to her first husband. She stated that she did not know about the tradition at all (P20). Halimata (the potter from the Burkina Faso border; P47) stated that she had heard the rule when she arrived and asked an aunt who lived in a neighboring village about it. Her aunt told her it was a myth from the olden days that now is abandoned. As a result, Halimata does not worry about the restriction and includes drain spouts in her repertoire.

The origin of the tradition remains clouded in mystery. Potters do not know exactly why the tradition is followed. To an outsider's eye, drain spouts are undeniably the most phallic of the pottery made in the region, and this could possibly be a factor. More likely is the relationship between drain spouts and cemeteries. Drain spouts are occasionally used as grave markers in cemeteries. Although the potter did not know the reason for this tradition, she did note that drain spouts are dug vertically into the soil over top of a burial and that women are restricted from entering these cemeteries (P46). However, nowhere else in the research area is the production restriction related to drain spouts known or followed. Potters outside Kobassa and Bangassi were surprised to hear that such a tradition existed.

Ceramic Marketing

Previous ethnoarchaeological research in the IND has resulted in several different models of pottery marketing. LaViolette (1987; 2000) noted during her studies in 1983 that Djenné potters were actively engaged in rural marketing. She identifies three strategies (in addition to selling in Djenné's market) that Djenné potters used to circulate their wares (LaViolette 2000: 66-68): potters would produce extra pottery during the dry season that they would sell in rural villages through pirogue-based itinerant marketing; potters would relocate themselves to the countryside and stay for a short time (1-2 weeks) to make and sell pottery locally; and potters and their ironworker husbands would establish themselves seasonally in a village and produce their wares. This first technique

– using pirogues to transport pottery into the hinterland – is reported by LaViolette to also characterize the primary marketing strategy of the rural village of Soa in the Pondori.

Some 10 years later, the MESAO project conducted its own ethnoarchaeological study of ceramic marketing in the Inland Niger Delta. When he considered the Delta in its entirety, de Ceuninck (1993; 2000; also see Burri 2003) identified two factors that affected pottery movements and thus the creation of regional stylistic traditions: the movement of potters for marriage within endogamous groups and the distribution of pottery through markets. He noted that in 85% of the cases he studied, potters moved less than 39 km for their marriage. In his study of consumption, de Ceuninick noted that 85% of the pottery likewise came from within 17.4 km of any one household through regional markets.

The findings of the present study vary in some significant ways from both LaViolette's and de Ceuninck's models. None of the potters interviewed in Djenné regularly sold in the surrounding villages using any of the three strategies LaViolette identified. Rural potters, in contrast, do employ some techniques similar to those found previously among Djenné potters, but ecological degradation has meant that few now rely on pirogues with any regularity. Instead, many of the techniques have shifted to the dry period and now use donkey carts and horse or ox driven wagons. Also, in contrast to de Ceuninick's model pottery moves into households on average only 5.6 km from the point of purchase – some 1.1 km less than the average distance to the nearest and most frequently visited market. In my census, 69% of ceramic vessels were bought in the same village as the household and those remaining vessels purchased in the market were overwhelmingly bought in Djenné by local townspersons. Moreover, in the current

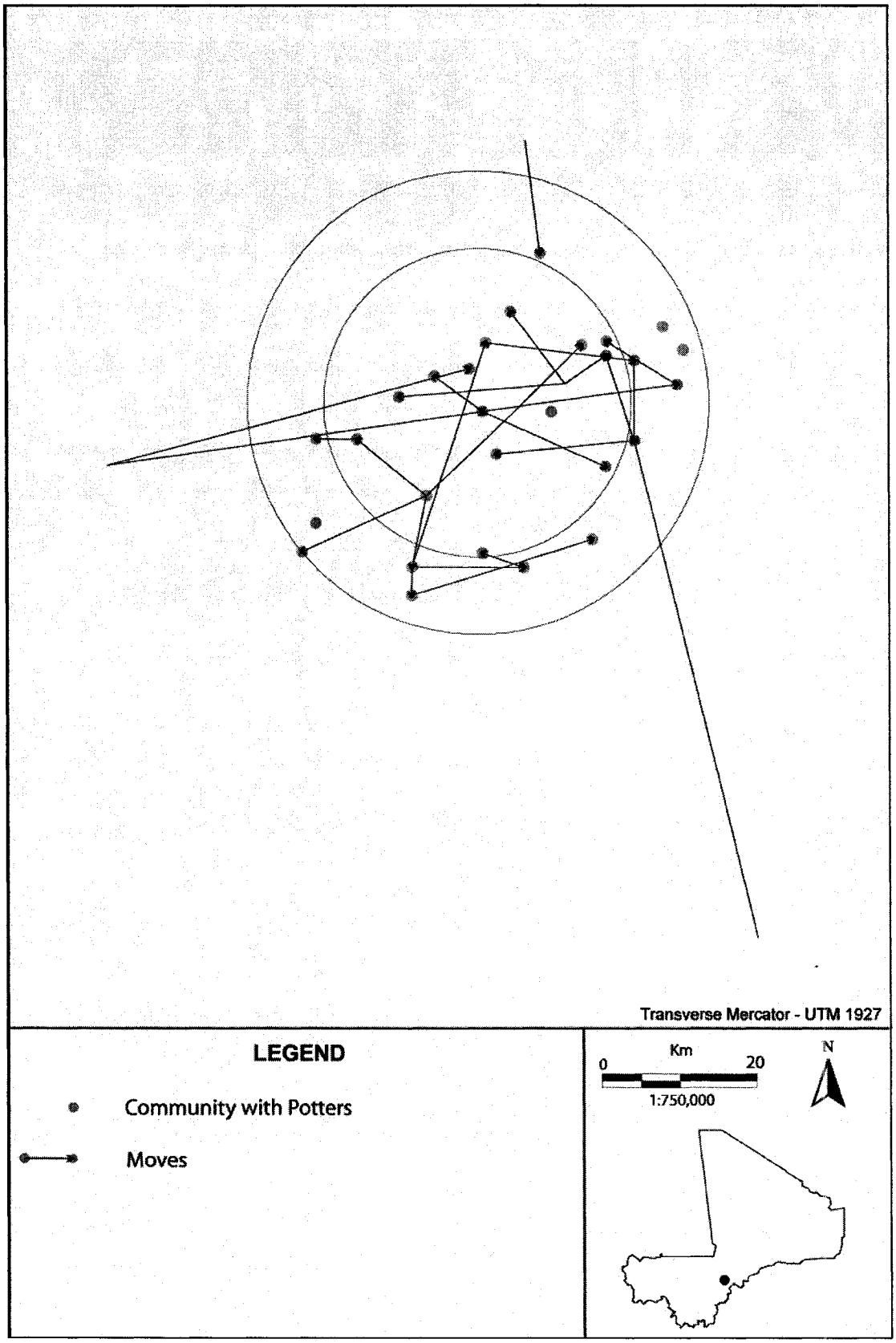


Figure 6.4: Potter movements from apprenticeship locations.

Table 6.2: Summary of potter marketing strategies.

Marketing Strategy	N of Cases[a]	%	Currency[b]			% of all Current Strategies	Average Distance
			Current	Used in last 5 yrs	Abandoned		
itinerant marketing	28	3.8%	7.1%	0%	92.9%	.3%	38.3 km
itinerant production	23	3.2%	9.1%	9.1%	81.8%	.3%	33.2 km
franchise	364	49.9%	88.5%	3.8%	7.7%	54.3%	14.4 km
market	113	15.5%	90.3%	2.7%	7.1%	17.2%	8.2 km
neighboring village	54	7.4%	55.6%	22.2%	22.2%	5.1%	7.1 km
reseller	6	.8%	100%	0%	0%	1.0%	5.5 km
local sales	141	19.3%	94.9%	4.4%	0.7%	21.8%	0.2 km
Total	729	100.0%	82%	5.1%	12.9%	100.0%	11.6 km

[a] Cases are occurrences of a marketing strategy used by a single potter to sell to a specific location. A potter may use several different marketing strategies to sell to the same village or may use the same marketing strategy to sell to several different locations. Each is an example of a "case".

[b] Currency reflects the age of specific cases measured at its most recent occurrence. For example, 92.9% or 26 of the 28 cases of itinerant marketing occurred prior to 5 years ago and thus have been abandoned while 2 cases (7.1%) are still being actively used to sell pottery.

study, 71.7% of potters remarried into their maternal village and the average distance moved when all interviewed potters were considered was only 5.6 km. The average distance traveled for the small fraction of potters who did leave the villages where they were apprentices was 19.8 km (Figure 6.4) – half of the 39 km de Ceuninick proposes. Thus, rather than pottery distributions being a result of potter movements at marriage and sales through rural and regional markets, it appears that most pottery is distributed by potter marketing strategies. These strategies are designed to bring relatively low value pottery (both economically and in terms of "taste") right to the doorstep of most consumer compounds. These differences were not unexpected. The 10 years since de Ceuninick's study – and the 20 since LaViolette's – have been times of significant change in West Africa.

Potters now sell through a number of distinct techniques, each requiring specific investments and offering different returns (Table 6.2). Potters were asked during interviews to identify all the locations where they currently and previously sold their pottery. For each location where potters sold their wares, a number of subsequent pieces

of information would be recorded. For example, information was gathered about the context of sale (whether in a market, rural village or by a reseller), the type of transportation used, the frequency of the trips (e.g., biannually, yearly, weekly), whether cash or cereals were received for pots, the typical ethnic identity of buyers at those locations, whether potters had contacts in these villages and the role that these contacts played in ceramic marketing (providing accommodation for the potter, storing unsold pottery, etc.). The information was analyzed using the Nudist qualitative data analysis software to identify configurations of these variables and the resulting types were combined with information on potter demographics in SPSS tables that allowed for statistical manipulation. The strategies that were identified were also converted into an ArcView 3.2 in order to assess geographical patterning and calculate distances.

The different marketing strategies that were identified represent a set of widely known options for ceramic marketing. Potters chose from among these different strategies to create a marketing system that fits their particular circumstances. In the following section, I look first at the marketing strategies that are used by potters in the Djenné region. I then look at how these different strategies articulate to form overall marketing systems. I conclude the chapter by examining some of the factors that have caused changes in the way potters market their pottery.

Itinerant Marketing

Potters in the Inland Niger Delta are perhaps best known for their itinerant marketing and production practices. In an *Itinerant Production* strategy, potters relocate during part of the year to a different village and make pottery for local sale. As noted

above, LaViolette found that some Djenné potters would only stay for a week or two in a given town, while in other cases, potters might stay for an extended period. By contrast, *Itinerant Marketing* is when potters produce a huge surplus during the dry season and then use pirogues to circulate large "floating warehouses" full of pottery to villages in the inundation zone (LaViolette and Frank 1997).

The interviews with potters showed that itinerant marketing has been all but abandoned throughout the research area. Itinerant marketing was only practiced by potters living in or adjacent to the flood area, such as in the Pondori and along a deep *marigot*, or seasonal river channel, that runs from Djenne through Soa and then westwards to the Niger River. Of the 28 cases of itinerant marketing reported in the interviews, only two (or 7%) were currently used; both by one young woman who employed a donkey cart instead of a pirogue.[28] Most potters who recalled using pirogues stated that water levels had been too low in recent years for them to undertake itinerant marketing. The last time most had used pirogues was some 20 years ago (e.g., P34, P73) – at approximately the time LaViolette conducted her study. Water levels did reach suitable heights in 1994 (P34, P73, P110), but most potters who were aware of pirogue-based marketing were caught unprepared and did not have enough surplus pottery on hand to make any trips. Potters noted that the location where they and their mothers would sell their pottery depended on water levels. Potters would make two specific trips, the first beginning at the height of the flood and targeting distant villages at the edge of the inundation zone. The second would occur somewhat later. Potters would return home to reload the pirogue and to supplement their existing inventory with an additional

[28] This case (P86) is unique because the potter makes and sells pottery when she is back visiting her mother. She normally would be considered to be running "a franchise" if she was still living in her mother's village (see text).

firing and then make a second trip. Because water levels had dropped, the second trip tended to visit villages closer to home. Potters would sell by staying in a single village for a day or two (P80) and then move on to another village. A single circuit would hit several villages along the edge of inundation zone until all the pottery was sold. The entire sales trip rarely exceeded 10 days in length (P71). In the majority of cases, potters did not know individuals in these villages before they arrived to sell.

Itinerant marketing is thus intimately tied to flood waters (Figure 6.5). Some 96.4% of the itinerant marketing trips reported originated in the three Pondori villages of Soa (53.6%), Kobassa (32.1%) and Pana (10.7%) that would become islands at normal pre-1980 flood levels. The only other potter who described using itinerant marketing was from the town of Sirmou, which is located along a dependably flooded *marigot*. Sales, in turn, were narrowly restricted to the edges of inundation zones, particularly those south of the research area along the Bani River in the area of San and in villages east of the Bani located in low lying areas. One Soa potter (P71), however, reported traveling through *marigots* to the Niger River and then moving south to sell along the river and its tributaries.

One of the benefits of itinerant marketing is the added distance potters are able to go (Table 6.2). On average, the distance to the places where potters remembered selling their pottery itinerantly by pirogue was 38.3 km (this increases to 40.2 km when the two current itinerant marketing cases using donkey carts are removed) – twice the distance of any currently employed marketing practice. With the use of pirogues, potters were able to distribute large amounts of pottery over great distances, often for relatively low costs. Pirogues were often owned by the family and water transport offered little risk of

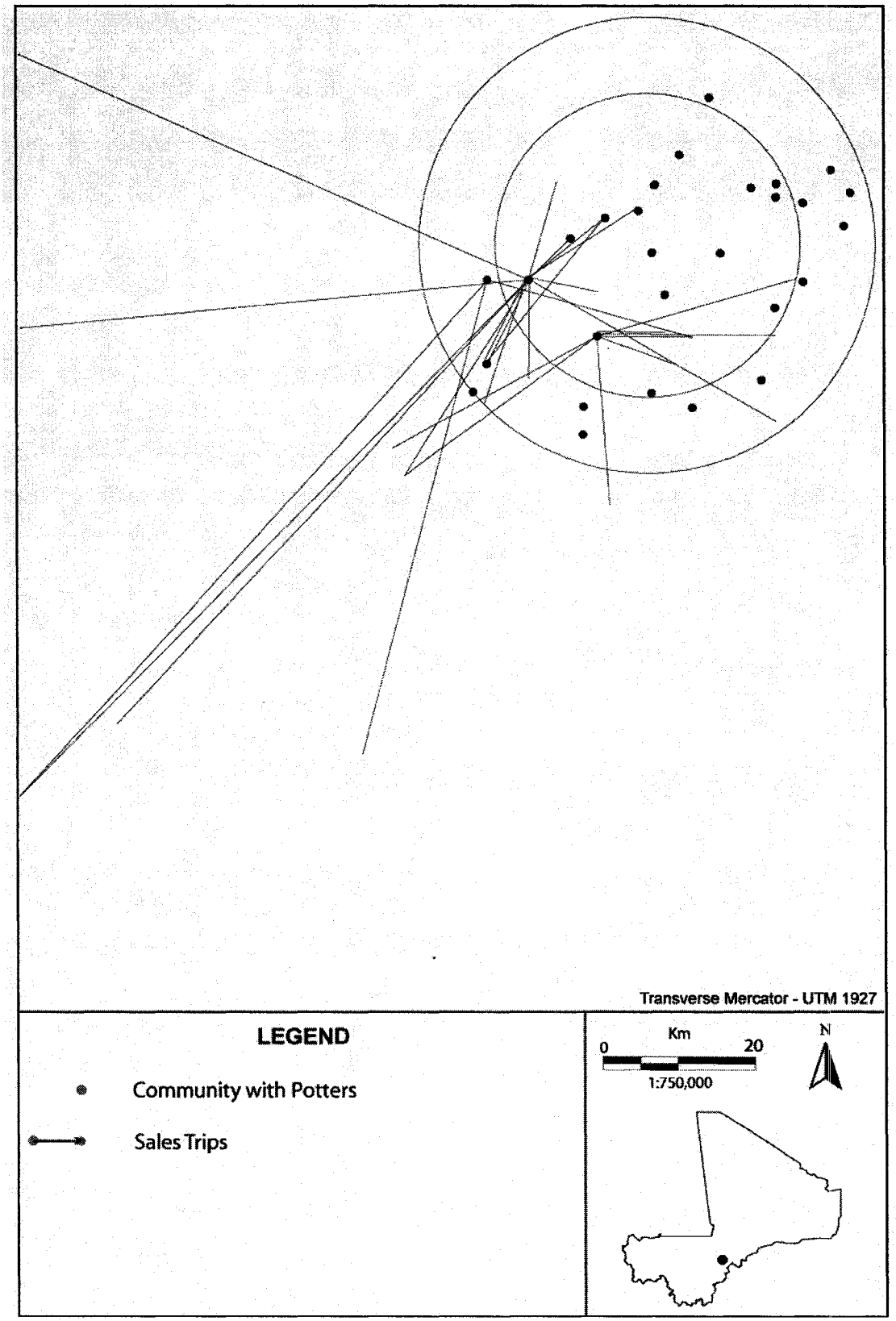


Figure 6.5: Itinerant marketing sales trips.

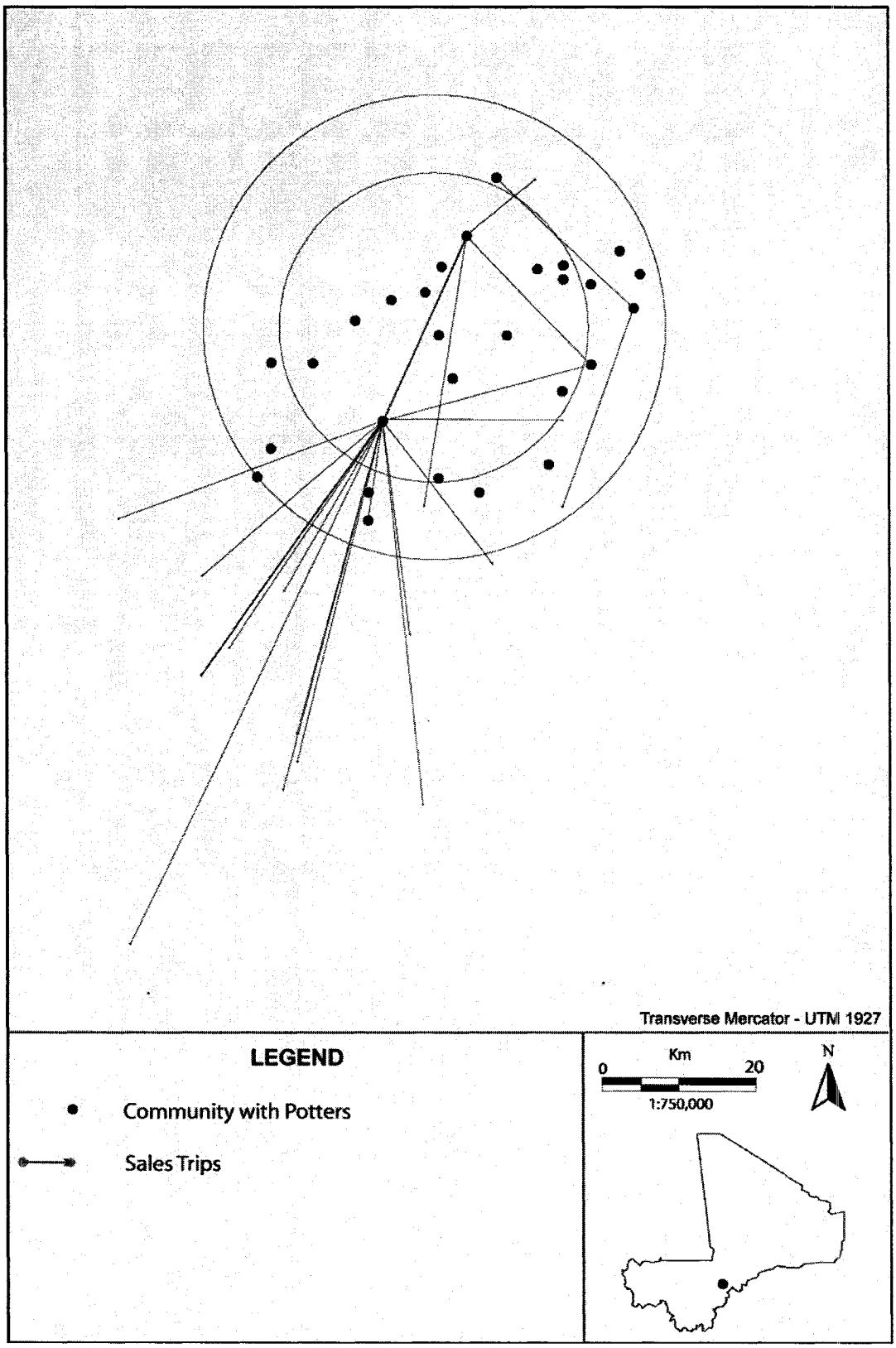


Figure 6.6: Itinerant production sales trips.

breakage. The principal aim of itinerant marketing was to get cereals during the harvest (P34, P57). As we will see below, the change in water levels has had a significant effect on marketing in the last 20 years, especially for potters in the inundation zone. To most of the potters, the difference is understood in terms of epochs: before was the "time of the pirogue" (*temps du pirogue*) whereas now (with low water levels) it is the "time of the cart" (*temps du charrette*).

Itinerant Production

Despite the fact that itinerant production is not subject to the same transportation challenges that ended itinerant marketing, it too now has been abandoned by potters in the region. Itinerant production now makes up less than 1% of all current marketing practices (Table 6.2). Yet, it remains a strategy of which most potters are aware. Indeed, itinerant production seems largely to be a technique used in emergency situations, such as when there is a significant local drought or crop failure (P14, P15, P39). Women also recognize that itinerant production is a way they can quickly make above-average returns; which are needed, for example, when they prepare a trousseau in advance of their daughter's wedding or when they wish to purchase an expensive item (P22, P35).

Itinerant production has a number of interesting characteristics. Like pirogue-based itinerant marketing, itinerant production allows potters to expand the region in which they sell and thus access consumers at larger distances. The villages to which potters relocated are on average 33.2 km from their home village, and potters reported selling to neighboring villages from that location (possibly expanding their range on average an additional 7 km). In years with poor local harvests, this distance is usually

sufficient for women to find a region experiencing a relatively good harvest. Itinerant potting is also quite intensive. Potters rarely take their children or husband with them when they work itinerantly. Thus, they are able to focus their labor almost exclusively on potting and marketing. Several potters noted that their production rates and associated returns are likely to be quite significant, especially if the village they chose was blessed with bumper crops (P79). In 95% of the cases, women had some social contact where they relocated. These social contacts may be a passing acquaintance (like a friend of a friend; P79), a friend of the family (e.g., P14), their own friends, or even family members who had moved away (P15; see Table III.13). When potters knew they would have to work itinerantly, they would work their social contacts to identify villages in the region that were having good harvests and that needed pottery. In some cases, the villages potters considered visiting seemed to be places where their itinerant ironworker-potter parents had spent some time in the past (P39). An itinerant production trip would typically last 3 months. As with itinerant marketing, the majority of itinerant production cases originated in the Pondori (Kobassa = 78.3%), although the remaining examples are scattered in more "upland" villages like Gania (8.7%), Tomina (8.7%) and Bangassi (4.3%). Thus, itinerant production is not something entirely restricted to the flood zones (See Figure 6.6).

As Table 6.2 indicates, 81.8% of itinerant production practices have now been entirely abandoned. Only one widow from Tomina continues annually to produce pottery in other villages (P14). The shift away from itinerant production seems somewhat anomalous, given the returns potters can expect to receive. The reason for this change primarily is a shift in the lifeways of potters' craft producer husbands. Historically,

potters and their husbands seem to have been relatively intensive craft specialists who received the bulk of their grain only by exchanging their products for it. One potter, formally from Djenné but now living in Tomina, noted that she and her husband would move from Djenné to Tomina for 3 months during the flood and harvest (P55). She would sell her pottery and he would repair farmer's tools. In exchange, the local farmers would plant and harvest a field for them. Rather than a fee-for-service system, they received a field's worth of rice in exchange for 3 months of craft production. A potter from the Bangassi region (P46) stated that historically local Forgerons did not cultivate and they did not need to move to other villages to sell. A potter family could survive by exchanging their products for grain just with local people and with those individuals from neighboring towns who would come to them to buy their vessels.

For at least the last 50 years, potters and their iron-worker husbands have faced competition from imported goods. Scrap iron, such as leaf springs from the suspension systems of cars and trucks, has replaced large scale indigenous smelting. Ceramic items similarly have been slowly replaced with new materials such as plastics and aluminum cook pots. The 1970s drought created a significant problem for local potters. Low flood levels resulted in comparably low harvests, which meant farmers ate most of the cereal crops that they grew. Little grain was available to be exchanged for the already devalued ceramic and iron objects potter families had to offer. Consequentially, many remaining craft specialists began to intensify their reliance on their own crops. Only 17.5% of the husbands of the interviewed potters remain dedicated craft specialists who are not engaged part-time in some other primary industry (Table III.7).[29] Only 11.1% of potters'

[29] Of the 108 potters for whom I have information, 28.7% were wives, 50.0% were cowives, 19.4% were widowed. One other potter was unmarried and another had recently divorced her husband.

husbands are now exclusively ironworkers, with most of their husbands (37.1%) reported to combine iron workering with agriculture. The trend has affected Griot and Forgeron potters at comparable levels. Potters were quick to de-emphasize cultivation (e.g., P6, P10), often giving the impression during interviews that it was a minor setback or a temporary situation that should not affect our understanding of their "true work". Yet, a some reliance on cultivation appears not to be a wholly recent phenomenon. Somono Forgerons are not as endogamous as potters in other "Mandé" areas (described by Frank 1998) and it is not infrequent for potters to choose to marry Somono fishermen or cultivators rather than ironworkers (LaViolette 2000; Conrad 2002). As McNaughton (1988: 3) notes, endogamy roles associated with caste specialists are more about restricting who can become a specialist than whether or not someone can leave the craft to pursue other life-ways. The drought and associated difficulties ironworkers have encountered in plying their trade seem to have relaxed endogamy and pushed the remaining ironworkers toward agricultural work. A Forgeron potter (P64) noted that cultivation started with her husband's father. He originally was an ironworker, but found that he could not get enough to feed his family. He began working as a wage laborer for other cultivators, and then later began to farm his own fields. He would work at the forge during the dry season and plant and harvest his own crops during the flood. Her husband now follows the same practice.

A consequence of this shift is that now only under exceptional circumstances can potters undertake itinerant production during the main period of the harvest. Husbands refuse to allow their wives to go away to sell their wares because they need help with the planting, weeding and harvesting. Potters with cultivator husbands only pot itinerantly

when it becomes obvious that the local harvest will be quite poor. At this time, women are encouraged to go away to areas with good harvests in order to sell their pots. One potter (P66) from Soa noted that her family had been able to remain ironworkers until a series of poor local harvests 7 or 8 years ago. They approached the village chief to get access to some land and began farming. The potters in the family then began to help with the crops and, because the majority of the family's food was gained through their husbands' fields, farming labor became their priority. As she put it, any potting had to be slotted into the free time available after cultivation-related work was done. In most traditional African agricultural systems, however, this free time could be quite difficult to find (Guyer 1995: 25-27). Gebre Egziabheur (et al.1993: 225) has indicated that women's labor investment in traditional African agricultural systems in Ethiopia during busy periods (planting, weeding, harvesting, etc.) is approximately nine hours a day. When other household work, such as hauling water, gathering firewood and cooking, is considered, women may expect to work up to 19 hours a day. Polygamous, extended families may alleviate this work load, but even in these cases it is not hard to see that the restrictions agricultural labor imposes could severely restrict pottery marketing and production during this period.

Neighboring Village and Franchise-Based Selling

The almost total abandonment of wide-ranging itinerant practices has resulted in a more intensive use of what may be a relatively new form of marketing in the region: franchise-based selling. Franchises made up half of all the sales trips reported in the study and represent 54.3% of all marketing trips currently in use (Table 6.2). Franchises

are in many ways an intensification of trips to sell pots in neighboring villages. Historically, women walked to neighboring villages to sell a basket load of medium and small-sized pottery and returned home with their earnings on the same day. Five percent of current marketing strategies are these sorts of visits to neighboring villages; however, now potters can sell larger amounts of pottery because they use donkey carts to transport their wares. Typically, potters will be dropped off by a donkey cart with their pottery, sell throughout the day and then return home, either in the same wagon (if it belongs to the family and is available) or by walking back with the cereals they receive balanced in a sack on their head.

In contrast, *franchises* make extensive use of contacts in surrounding villages to expand the range of sales. In established franchise relationships, potters will often transport a large wagon load of pottery to a neighboring village. In 31.3% of these franchises, potters stay with their contact one to two days until all the pottery has been sold and then they will return home. In the vast majority of the cases (66.5%), however, potters use their contacts to both store and sell their pottery on their behalf (Figure 6.7 & Figure 6.8). Potters will either drop off a load of pottery at the edge of town or in their contact's house compound. They may stay for the day or even overnight to sell some of their wares, visit with their contact, and collect special orders, and then will return home and leave the remaining pieces to be sold by their contact. It is not abnormal for potters to simply drop of a load of pottery at the edge of town, inform her contact that she has delivered another load, and return to her home the same morning. Locals desiring pottery will then select a pot and then drop off money or a quantity of grain for the potter with the contact. The contact will hold onto the proceeds until the potter returns with another

load or, once the pottery is completely sold, she will send the proceeds with someone passing by the potter's village (e.g., P35, P89).

This form of marketing depends quite heavily on the use of reliable local contacts. Yet, only 10.7% of the contacts were friends or family who were known before the franchise was first initiated (Table III.13). Some 88% of the contacts are simply "acquaintances". Upon arrival at a new village where the potter hopes to sell, she approaches the village chief and asks if he knows someone willing to be her local contact. The chief normally selects someone and an "acquaintance" relationship is founded. Although relations ultimately are forged with economic motives in mind (potters are explicitly seeking a new contact in a particular village), they can turn into deep and long term friendships. Young potters sometimes inherit their mother's or mother in law's contacts or maintain parallel relationships with the children of their mother's original acquaintance (e.g., P12, P36, P64).

Such acquaintances, at least initially, can seem far too tenuous to embody the sort of trust and responsibilities required by a potter. Potters may leave the products of several months' work with an individual they have just met in a town they may have visited rarely if ever in the past. Such abiding trust seems to be possible because of the overarching values that Islam provides. Two potters who sold to the Bobo through a local contact inherited from their mother in law quit returning to that village when the contact died because they felt that the Bobo's propensity to animism made any new contact they found unreliable (P45, P107). Over most of the region, however, Islam allows potters to create a network of contacts even if they have no prior personal knowledge of the individuals who become their contacts. Village chiefs act as guarantors

of those values, and the village as a whole gains because they now have a steady supply of pottery. In most cases, the potter's local contact can freely choose pots she needs from the potters inventory in exchange for keeping an eye on the vessels and collecting the proceeds.

Franchises have a number of very interesting characteristics. First, they allow potters to expand greatly the distance they travel to sell their wares. Village daytrips rarely employ contacts because potters go and return in the same day, either selling all their pottery in the time period or bringing it back home with them. Potters doing daytrips noted a number of subsidiary techniques they would use to ensure that all their pottery was sold during that day (e.g., P56). Normally the potters would sell in the village's daily market, but if all the pottery had not been sold by the end of the day, they would take some pottery on their head and circulate through the village streets. This technique – literally bring the pottery to the very doors of consumers – is usually enough to sell any remaining pots. The need for potters to return home in the same day restricts

Table 6.3: Overview of currently used franchises.

	N	Min.	Max.	Mean	Standard Deviation
Number of currently franchised villages per potter	86	1	12	3.74	2.255
Visits per year to each currently franchised village	73	.25	4.00	1.31	.888
Distance traveled to currently franchised villages (km)	86	3.35	99.10	14.68	10.966
* N equals number of potters with current franchises for whom statistics could be generated.					



Figure 6.7: Example of a franchise for Soa potters in Mounia.



Figure 6.8: Pottery dropped off by a Kobassa potter at her franchise in Gomitogo.

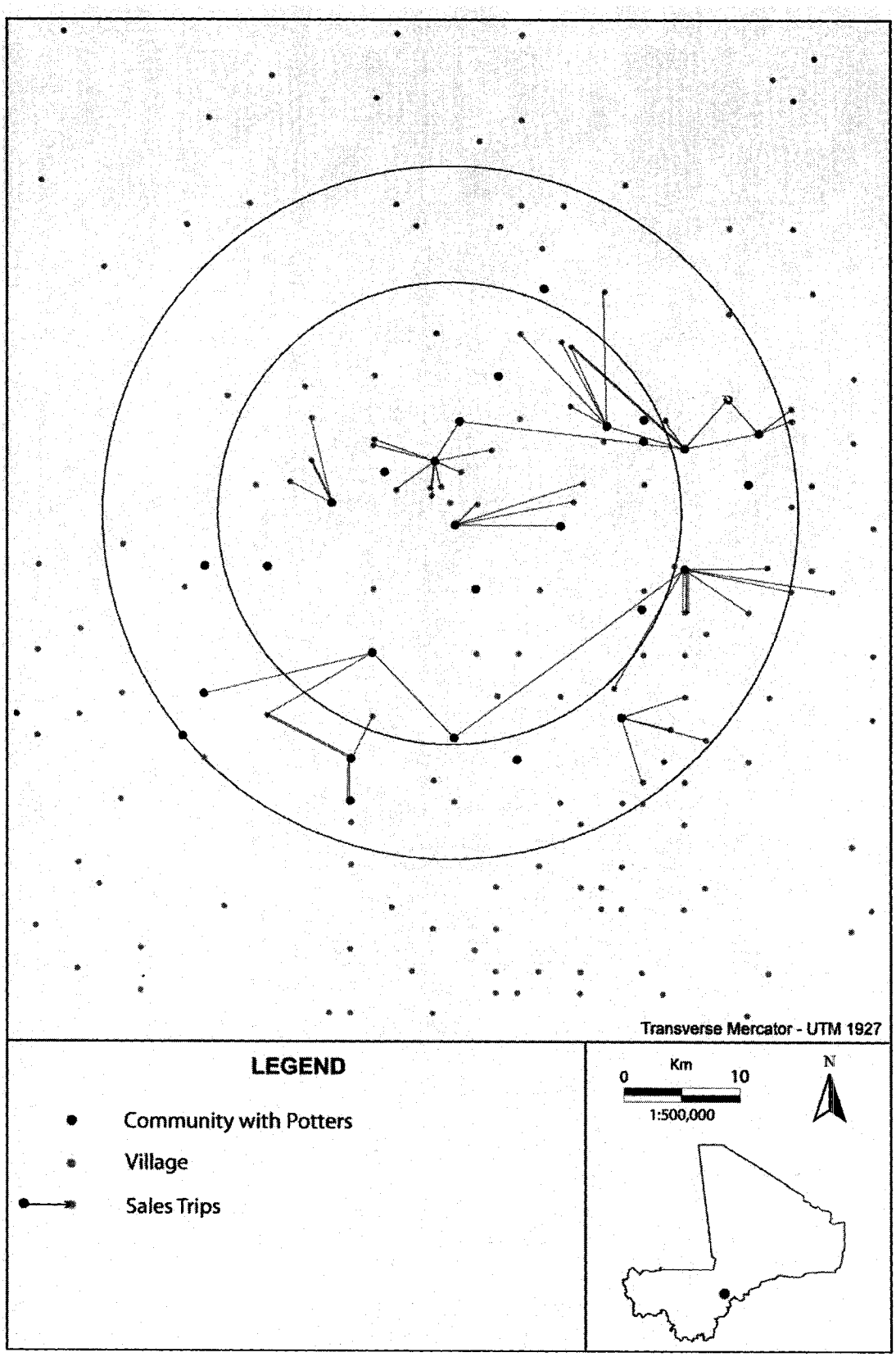


Figure 6.9: Neighboring village sales.

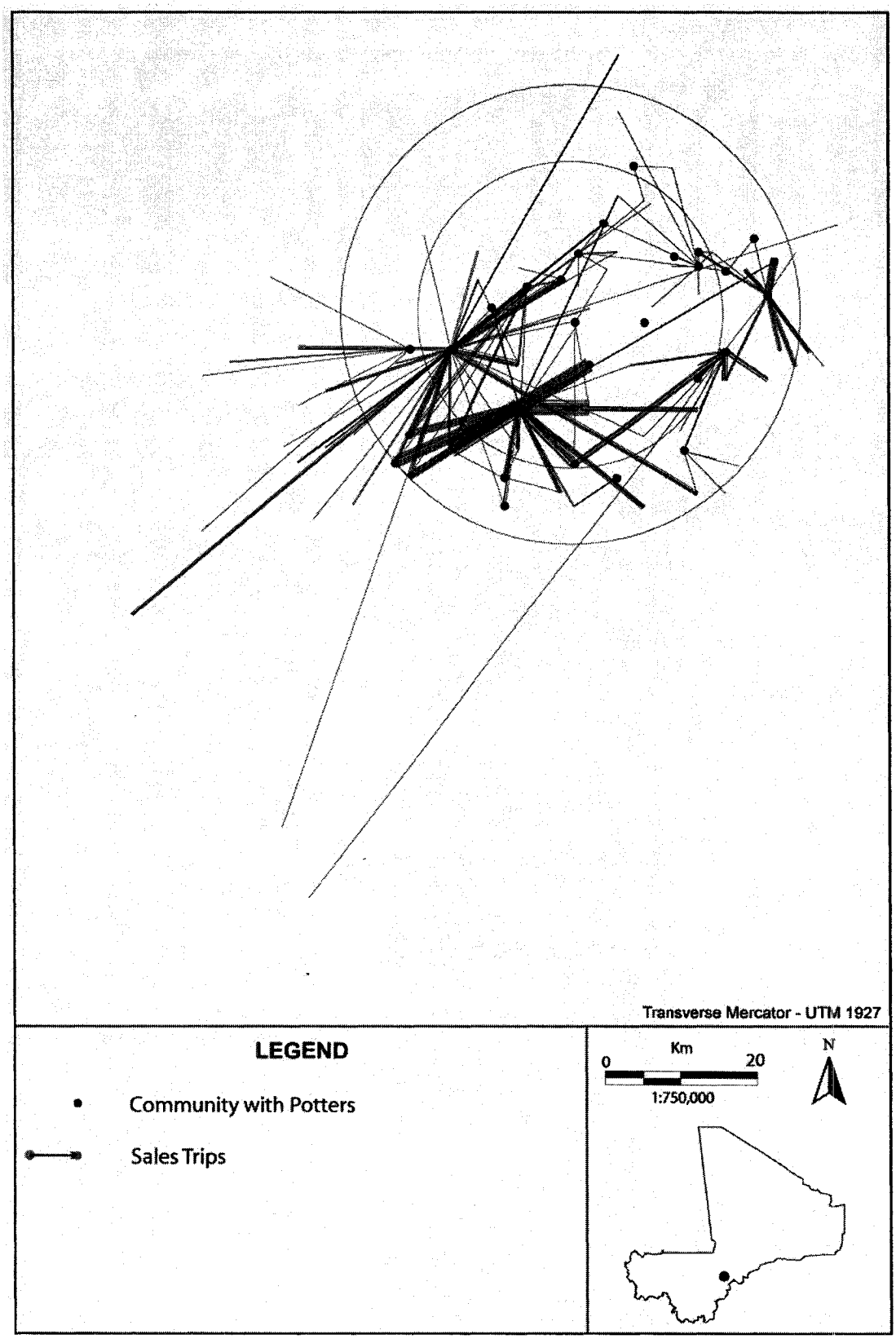


Figure 6.10: Franchise sales trips.

neighboring village sales (including for those who used wagons and donkey carts) to an average of 7.1 km (Figure 6.9). In contrast, in franchise situations, the ability of potters to either stay with contacts, or simply drop off their pottery and return home, allows them to travel an average of 14.4 km (Figure 6.10). When potters explicitly used franchises for accommodation, the average distance increases to 17.6 km, while simply going and dropping off pottery which a contact would store and sell on the potter's behalf results in an average distance of 11.0 km. This latter distance may be most typical of potters who are restricted by the need to perform household labor and rely quite heavily on their contacts to sell for them. Second, by having local brokers, potters are able to sell their wares simultaneously in a number of villages regardless of their rate of sale. Potters generally visit a single village after each firing and do 2 or 3 large firings in a single year. In slow years, potters may still have stock awaiting sale in one village even after they have done a second firing and delivered it to another village. Thus, potters can leave their pottery distributed throughout the region for long periods, because the actual job of selling is handled by someone else. Third, local contacts reduce a potter's transportation costs. Potters who sell the pottery themselves at local villages often take smaller amounts of pottery geared to a day's worth of sales. It thus may require a considerable number of trips to sell the pottery produced during a single large firing. In franchises, potters transport as much pottery as possible during a single trip, and use larger transportation options like ox carts and horse drawn wagons, because they are not forced to sell it all during a single day. All of these characteristics are a consequence of potters being able to enlist other individuals to sell on their behalf. Franchises reduce significantly the labor and expense needed for marketing.

The ease with which potters can recruit local contacts allows for much flexibility in the locations where potters sell. Rather than restricted to villages with firm family ties, potters can branch out through a network of more casual relations to a wider number of villages. When current franchises are considered as a group (those actively being used), potters have an average of 3.7 franchised villages through which they sell their pots. They visit a franchise an average of 1.3 times per year, traveling an average distance of 14.7 km (See Table 6.3). We should note, however, that 29.3% of franchises are visited once or even less than once every two years ($\geq$ 0.5 times per year); 26.4% of locations are visited annually, while an additional 27.7% of villages are visited more than once a year. In some cases, potters seem to choose different villages each year (P17, P29, P50, P92) depending on reports of good or bad harvests. When potters hear of a good harvest in a region, they develop new contacts on their first trip. They may not return to that village again until it experiences another good year. In other cases, potters will have a number of potential franchises in a region and select a subset that they will visit. For example, Namisa (P10) normally does four large firings in a year, the first three of which are sold in her franchises, while the fourth is sold from home in Sirmou. Each year, Namisa selects three of the five villages where she has established contacts. She has noted that she has had good luck selling in the village of Tie, so she will often go there first and, if the pottery sells quickly, she will return again to sell a second load. If the pottery is selling slowly, she will choose two of the other four villages and take her pottery there to sell. Other potters also noted that they would return to the same village if their first load of pottery sold quickly (P10, P68, P74, P91). They would also return if they received a number of special orders during their first trip. Typically, potters return home after the

first trip, make up any orders, then top up the wagon with some additional pottery, and then return to the village a second time (P60, P74, P84, P93). By returning to the village, potters can also pick up any grain or cash that might have been dropped off with their contact. In other cases, potters will use franchises to focus quite intensively on a local group of villages. A patrilineal work group in Kobassa contains five potters who work together in their selling and firing, producing a large amount of pottery. These potters have focused on a local group of villages surrounding Kobassa, visiting each more than three times per year (P83). In a given trip, up to three of the five potters may take a donkey cart loaded with pottery to a given town. Each potter deposits her pottery in a different section of town, notifies her contact, and then they promptly return home to continue making more pots. Figure 6.8 is a photograph of one of these drop offs and illustrates the way franchises reduce labor investments in marketing. The pottery had been dropped off in Gomitogo before we arrived in town to conduct interviews at 7:30 in the morning. Prior to this time, the potter had arrived, dropped off her pots and was on her way back to Kobassa, some 13km away, to start the rest of her daily chores.

Rural and Regional Market Sales.

While Djenné potters sell almost exclusively in the Djenné regional market, most rural potters integrate their market sales with franchises and trips to neighboring villages. Sales in villages tend to return cereals like rice and millet, with some cash occasionally received in exchange for larger pots. In contrast, sales in both rural and regional markets almost exclusively result in cash. Market sales make up 17.2% of current marketing strategies, with the average distance traveled equaling 8.2 km. Djenné potters reported

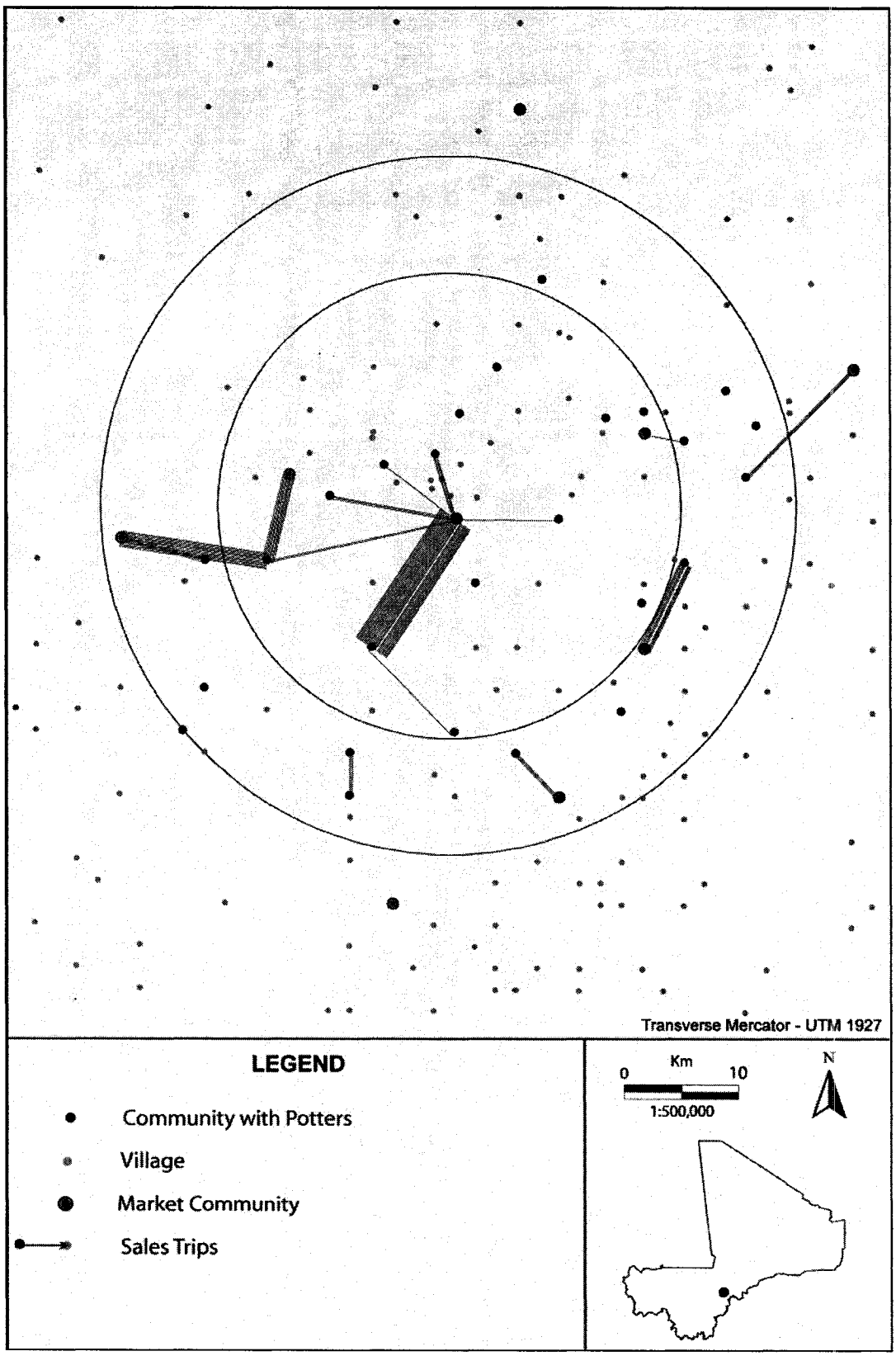


Figure 6.11: Sales trips to markets.

visiting the Djenné market (to sell pots) 39.8 times a year. In contrast, rural potters tend to visit local markets 30.1 times in a year, but unlike Djenné potters, they have to transport their vessels an average distance of 9.9 km (Figure 6.11).

Although potters may visit the market to sell some 30 times a year, they do not transport a wagon load of pottery each time. Djenné's local Forgeron potters sold together in a large stall on the NW side of the market. Their pottery is spread out before them, with little attempt to segregate each person's pottery. They would often transport pots on their head or by rented hand cart (normally 100 CFA/trip) to the stall from their households or a recent firing location. After the market, potters would move their unsold pots to a store room they had in a house on the NE corner of the market. This space allowed the potters to bring out and display on a weekly basis a large variety of pots without them being required to carry each pot from their households (usually a 15 minute walk from the stall). Rural potters would often employ a similar strategy, despite the obvious differences in distance. Some 73.3% of rural potters reported having an acquaintance in rural market towns where they could leave their pottery between market days. Some 26.7% of these acquaintances stored pots between markets for the potters, but the larger proportion (71.7%) would both store pottery and sell it for potters throughout the week (see Table III.13 and Table III.14). Indeed, for rural potters, market selling reverts to being just another franchise during the week, with the added benefit of being able to sell pots for cash on the market day. For example, Kobassa potters who regularly sold in Djenné relied on an acquaintance (an "old Dogon") who owned a store on the street next to where the potters displayed their wares. During the week, he would keep an eye on their pottery and sell on their behalf. Kobassa potters would make only

the occasional trip to Djenné with a wagon load of pottery. On other market days, they would take one of the "community charrettes" that run from Kobassa to Djenné each Monday. These horse drawn wagons operate much like a rural bus service, or "bush taxi" that transports people and small luggage between villages and markets. The cost of taking a community charette is often a tenth of the cost of hauling a full wagon load of pottery, even if the trip includes a basket full of small pottery or a jar to top up inventories (Table III.17). Potters without local contacts rely exclusively on the community charrettes to transport themselves and their pottery to the market on market day. Much like neighboring village sales, potters restrict themselves to what they feel can be sold in a single day and thus they normally take only a small amount of pottery. Such market selling often had an effect on ceramic production. Several potters noted that they would fire a small amount of pottery weekly – usually just enough to go in a pannier in the community charette – instead of (or in addition to) the 2 or 3 large firings per year typical of franchise sales (e.g., P15, P38). These additional firings were done because potters needed to have a constant supply of pottery on hand to sell (P61).

Market selling has a number of interesting benefits for many rural potters. The most obvious is that potters are able to combine selling and purchasing trips. As noted in chapter 3, women are usually required to supply condiments to the *grande famille* households. By going to rural markets, potters can purchase these goods at lower rates than it would normally cost to buy them in their villages at the same time that they can sell their pots. Several women noted that they would often take a small amount of pottery to the market only when they needed cash to meet some small household need. Going to purchase these items was often more important than the actual vending of the

pottery (P32, P71). An interesting consequence of selling in the market is that any money gained through pot sales can be quickly converted back into other goods, such as clothing or even other types of household vessels. In doing so, a potter selling in a market can insulate her earnings from appropriation by her husband or his family.

Markets also tend to act as central places in a given region. Some potters noted that they identified where they would sell based on the word they received in the market. A potter from Taga, for example, would set up a stall in Taga's weekly market after she had done a large firing (P94). Her contacts from the surrounding villages who were in town for the market would be consulted to see which towns were either in need of pottery or were enjoying an especially good harvest. She chose which of her franchises to visit based on this information. Bangassi potters used the Madiama market in a similar way. They would sell in the market regularly and occasionally they would receive special orders from villagers visiting the market (P3). The potters would return home, make up the order, and then top up the wagon with additional pots and make a trip to the village where the order originated. In this way, they would know in advance that there was a market for some of their pottery and use this as an indicator of a village's need for pots.

Of all the marketing strategies practiced, market sales rely most extensively on the use of a potter's children. Young potters were reported to favor selling in the markets because pots were paid for with cash rather than grain. Young rural potters who are expected to give some of their proceeds to their mothers in law or husbands may use markets as a way of converting some of the cash they earn into household objects before they return home. While there are exceptions (P103), Djenné potters tend to send their teen age daughters (all of whom were apprentices) to the market to sell for them (e.g., P1,

P2, P40, P62). The daughters are all close friends, and selling their mother's pottery from the same stall gives them a central location in the market where they can socialize and see and be seen in their finery. Rural potters often do the same (e.g., P27, P34, P38, P68, P71), sending their daughters to the market in a community charrette to sell either the pottery already in storage with a local contact or with a small basket of pottery. The tendency for daughters to sell in the market created an interesting situation during a few of the interviews. Some potters did not know the current cash prices of their pottery and had to ask their daughters (P38, P40).

In a few cases, potters seemed to have sold in the market because it allowed them to share transportation costs with daughters who were involved in other forms of trade. A Kobassa potter, for example, would send pottery in a rented wagon to Djenné with her 20 year old daughter (P82). Her daughter had a business buying flour and small household items at the Djenné market and reselling them during the rest of the week in Kobassa. By ensuring that the wagon was loaded going each way, both women were able to benefit.

Home Based Sales

Home based sales are the easiest form of selling to carry out and also require the least investment by the potter. Indeed, almost all of the potters reported selling some of their wares either from their home and/or from their firing locations. In most villages – and especially those with high potter concentrations such as Soa and Kobassa – there is not enough of a market left for potters to sell everything they produce in these contexts. Indeed, while local sales make up 19.3% of all reported sales strategies (21.8% of current sales strategies), only 10 of the potters interviewed (9.2% of the sample) relied

exclusively on local sales. One potter noted that a single firing is usually sufficient for her home village of Koumaga, but if she does a second firing she has to transport it to one of the other villages (P22). A potter living just outside of Djenné in the town of Balé noted that she would first sell at home and if there was any pottery left over, she would take it to Djenné to sell (P25). In villages where potters have a local clientele, they would often dedicate one of their two to three firings exclusively for local exchange. Typically, these firings were either early in the dry season, so they would catch the very end of the local harvest, or late in the year just before the rains.

Late firings for sale primarily in the potter's home village continue a tradition of delayed reciprocity that seems once to have been a central part of ceramic exchange. Potters who dedicated a late firing to their home village usually gave away their pottery during planting and throughout the flood in the hope of receiving a counter gift once cereals had been harvested (e.g., P37, P41, P96). Consumers might need to replace a piece of pottery during cultivation or weeding, but not have had any surplus grain or money to exchange. By giving away pottery during this period on credit, potters shared in both the risk and potential windfalls created by variable flood levels. Exceptionally high or low water levels can be disastrous, drowning some fields or leaving others entirely un-watered. If flood levels are accurately judged, a local village can experience bumper crops. Because a good harvest causes grain prices to drop, potters tended to get a counter gift proportional to the success of the harvest (e.g., P96). In years when local harvests were exceptional, potters could expect to receive far more grain than normal in exchange for their pottery; in years with poor harvests, they might give away a significant amount of pottery and receive little or even nothing after the harvest. However, by

providing pottery for those who needed it, they at least had the potential of making a later exchange whereas if they had demanded immediate payment, the pot would have remained unsold. Rural potters estimated that they gave away between 15 to 20% of their pottery without receiving anything in exchange (P43, P85). Another potter who sold exclusively at home estimated that about 30% of her pottery was bought on credit, with the expectation that grain would be given after the harvest. Sixty percent of her pots were paid for outright with grain or cash and the remaining 10% were given away as gifts (P37).[30]

Table 6.4: Marketing systems.

	Number of Potters	Percent
Franchises	24	22.0
Djenne Market	22	20.2
Rural Market & Franchises	18	16.5
Djenne Market & Franchises	13	11.9
Local Sales	10	9.2
Rural Market	5	4.6
Neighbouring Villages	5	4.6
Djenne Market & Neighbouring Villages	3	2.8
Rural Market & Neighbouring Villages	3	2.8
Djenne & Rural Markets, Franchises	2	1.8
Djenne & Rural Markets, Franchises, Reseller	1	.9
Djenne & Sofara Markets, Franchises	1	.9
Rural Market & Itineracy	1	.9
Reseller	1	.9
Total	109	100.0
*One case unknown; note that "local sales" are ubiquitous and thus have been excluded except for exclusive cases.		

[30] Note however that this potter is atypical. She is the same potter who learned to pot from her brother and was unable to make large pots. On the other hand, a figure of 30% is probably not too far off for most potters who engage in both local and franchise selling, especially for those who dedicate 1 of their 2 to 3 firings to home-based sales.

Marketing Systems

These different marketing strategies are not used in isolation, but represent a series of options that potters use in devising a total marketing system that meets their immediate needs. As illustrated in Table 6.2, the five most frequently used marketing systems account for 79.8% of the potters that were interviewed. In addition to those listed, the marketing system always includes at least some cursory local sales.

Not surprisingly, the marketing systems show some regional variability. Twenty-two percent of potters rely exclusively on the use of franchises to sell their pottery outside their home village. A franchise-based system is not only the most frequently used, but also shows the least tendency to be regionally specific (Figure 6.12). Potters in all locales in the research area employ franchises to sell their pottery and there is no evidence of spatial clustering. The same is also true for those potters who sell their pottery only at home (Figure 6.13). In contrast, the large majority (82%) of potters who sell exclusively in the Djenné market are located in Djenné itself, while the remaining four potters are located no further than 13 km away (Figure 6.14). The use of a marketing system that combines sales in the Djenné market with franchises is primarily used in the town of Soa, although one Djenné and one Senoussa potter also follow the technique (Figure 6.15). The combination of rural market sales with franchises is most often used by potters whose locations are close to rural markets. Bangassi potters, who make up one third of the potters using this system, visit the Madiama market, which is only 8 km away, while Soa and Pana potters visit the two nearby rural markets at Yébé and Mounia (Figure 6.16).

One of the more surprising findings is the continued emphasis on both markets and rural villages. It is tempting to see market versus village-based sales in terms of an opposition between a "modern" cash economy and a more "traditional" barter or gift economy (Gregory 1982; also see Weiner 1992). Yet, the key difference between these two options is primarily the sort of goods received in exchange for pottery. Cash is primarily received in the market while cereals are received in the villages. Rather than opposed facets of a post-colonial economy, the differences between these two marketing systems are somewhat superficial. The use of local contacts in markets and villages renders market-based sales simply a variation of a franchise for most potters. Market sales also do not engender significant differences in either production or marketing techniques. Except for delayed reciprocity exchange within potters' home villages, social relationships seem to have no greater impact on barter-based exchanges than they do in markets. For potters who would attend the market anyway, either to procure condiments and other items or those young women who simply enjoy the market experience, the differences may be more in the atmosphere rather than in underlying economics. Indeed, when considered broadly, there is great continuity across the different forms of ceramic exchange in which potters participate.

On the other hand, there are some significant factors that do impact the potter's marketing systems. Modern potters face two sets of circumstances that are severely challenging their status and role as potters. As we will see, these circumstances affect not just the potters' economic contexts but also their abilities to meet the social obligations Malian society defines for them. I address each of these challenges in turn below,

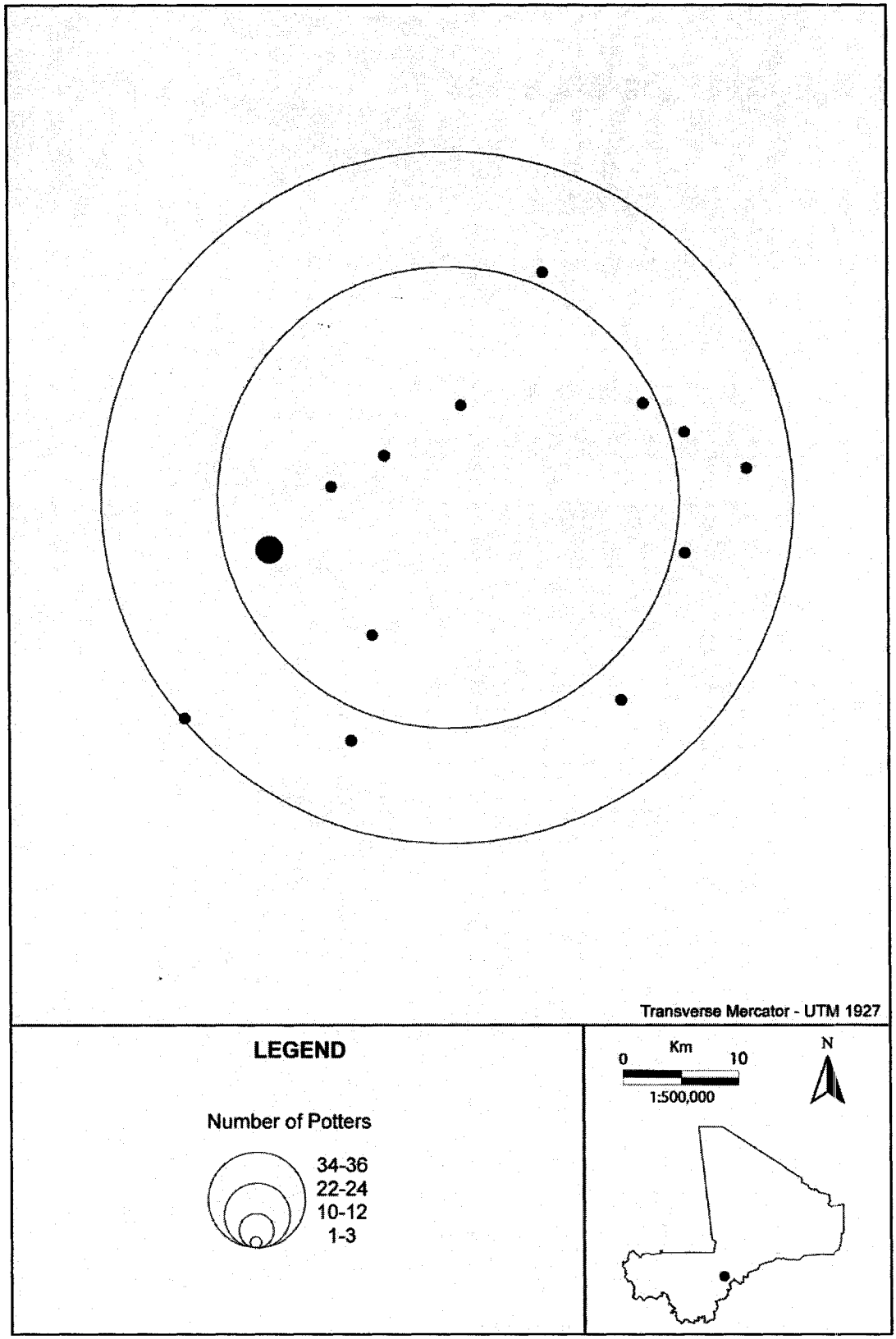


Figure 6.12: Distribution of potters using a franchise marketing system.

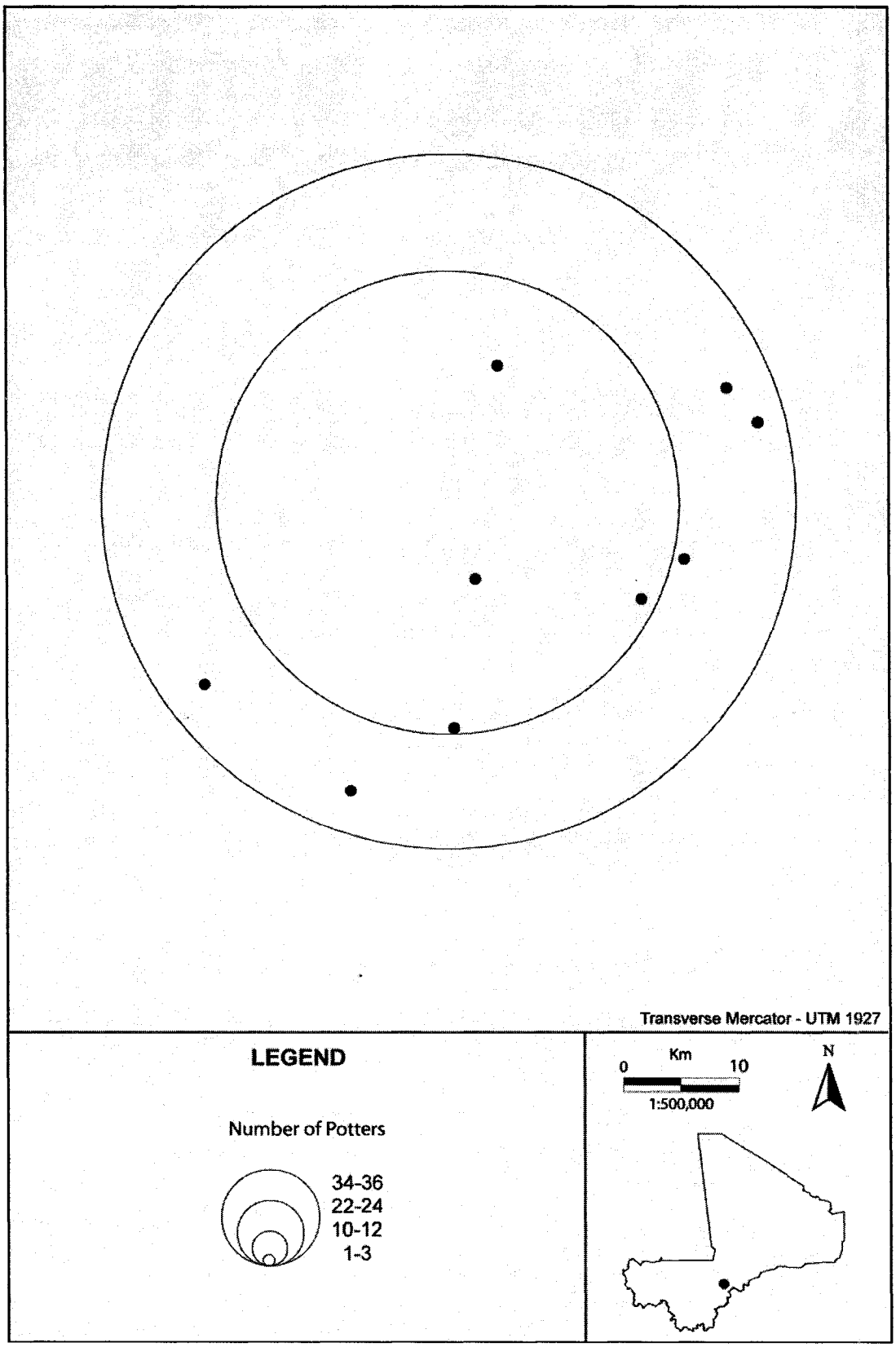


Figure 6.13: Distribution of potters using a local marketing system.

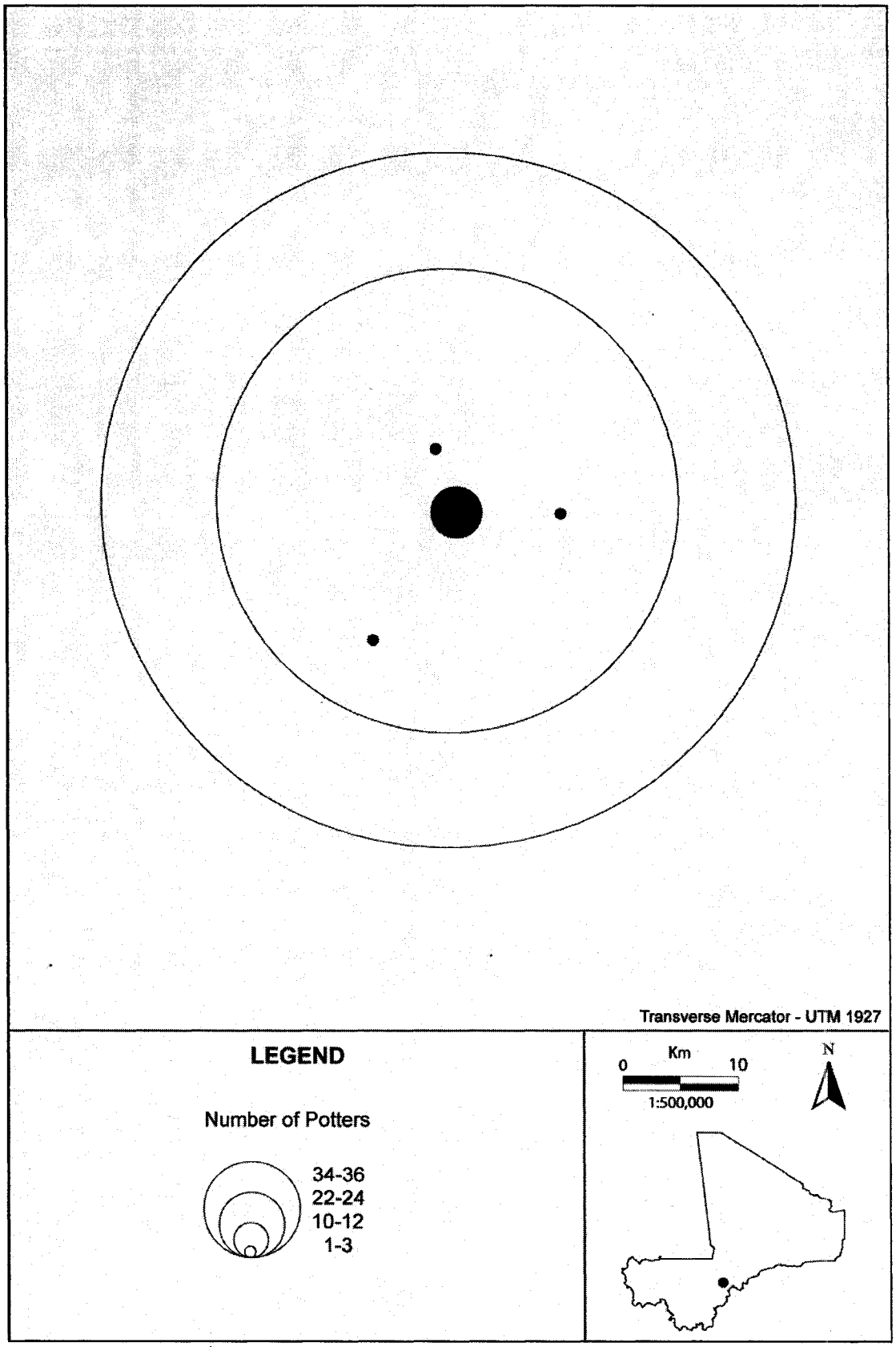


Figure 6.14: Distribution of potters using a Djenné Market marketing system.

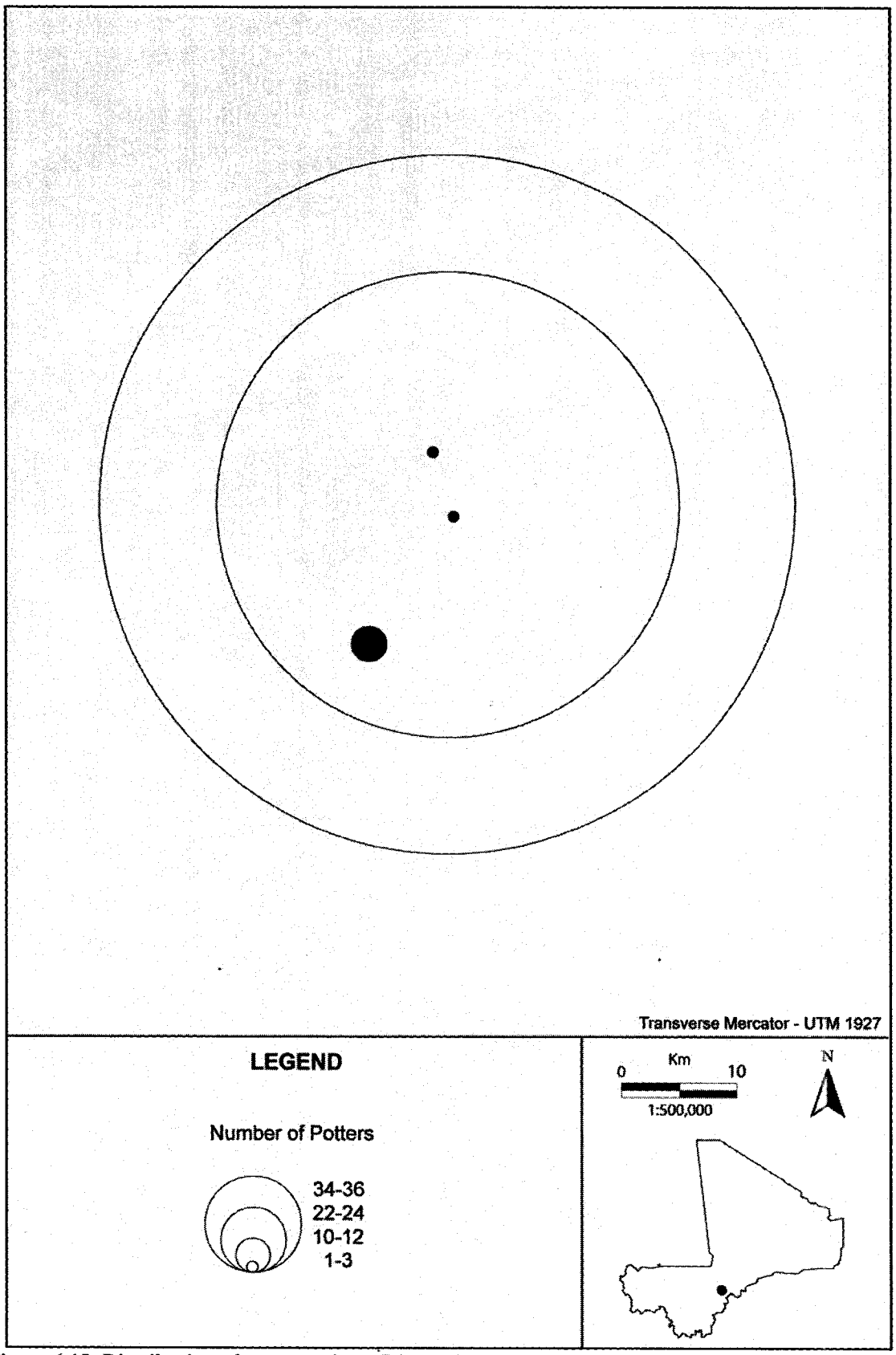


Figure 6.15: Distribution of potters using a Djenné Market and franchise marketing system.

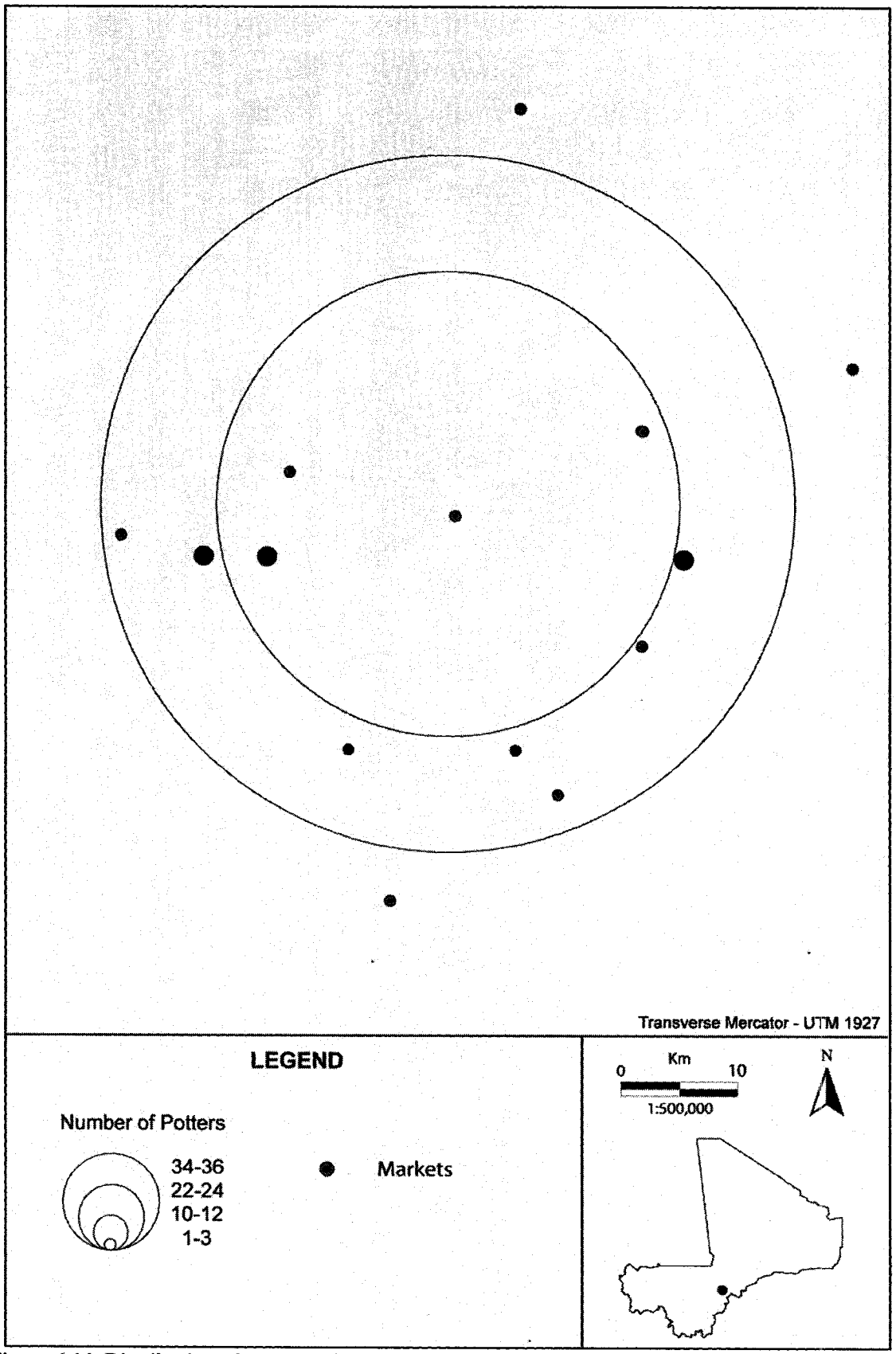


Figure 6.16: Distribution of potters using a rural market and franchise marketing system.

and then examine how these challenges are being addressed by potter communities in Djenné and in the Pondori.

Discussion: Assessing Change.

Economic Impacts

One of the dominant findings of this project is the considerable effect that reduced water levels are having on women potters. As noted above, itinerant marketing and production has been largely abandoned. Rather than remaining full-time craft specialists, potters are slowly being drawn into agricultural activities overseen by their husbands – activities that conflict with and most often win out over their own marketing schedules. Potters are also facing two other key changes in their economic situation. They are starting to witness the impact of new materials in the economy and they are becoming more and more restricted to the use of cash in even rural exchange.

Consumers tend believe that new materials have a higher value than most types of pottery. Ceramic cook pots thus face competition from aluminum caldrons, wash pots from plastic kettles and serving platters from enamel bowls. While water jars and medicine jars do not face direct competition from new materials because of a lack of direct plastic or metal equivalents, they nonetheless are impacted by the general reduction in the worth of all types of pottery. Potters sense that they cannot increase the prices they ask for their pottery because consumers will tend to choose new materials if prices are even roughly comparable. The prices potters ask for their products are a result of both their assessment of the work they must put into making a piece of pottery (e.g., P1, P37)

– often demonstrated through its size (e.g., P2, P25) – and the market forces that affect the negotiation of a potter's asking price in the market (P32, P69). Potters note that they are often unable to increase their current prices in the market to keep up with inflation.

The use of cash likewise affects the economic situation for potters. This impact is felt in two distinct areas. First, potters must pay with cash for many services that formerly they either got for free or could get in exchange for pots. The largest factor here is the emerging need to pay for transportation services tied to production and marketing. As noted above, many potters now pay cash for the transportation of straw, dung and clay. Marketing engenders similar problems. Once highly efficient pirogue-based sales have shifted to the use of donkey carts and wagons during the dry season. The average cost reported to transport a single wagon load of pottery to the sales location is 1,896 CFA, while production costs associated with that load may reach an additional 1,500 CFA (Table III.17 & Figure III.2). Second, the use of cash is starting to fix the once fluctuating returns potters got for their pottery. Delayed reciprocity and targeted harvest-period sales meant that potters could receive a significant amount of cereal in exchange for their pots. Now, consumers are beginning to insist on paying the cash price for pottery even during the harvest season, especially for more expensive larger vessels (see Table III.10). This completely inverts the advantage that potters had in the past. In good years, if their family had a sufficient supply of grain on hand, they would sell the surplus. Because their sales would often take place well after the harvest, when grain prices increased, they would frequently make a substantial profit. With fixed cash prices, potters now are often forced to take the money they receive and use it to buy grain in the market.

When combined, the increased use of cash to pay for transportation and to buy pottery is placing potters in a significant economic "squeeze". One consequence of this squeeze is that potters are making concerted attempts to reduce labor investments in potting. The change is seen most visibly in the amount of time that goes to decoration. Traditionally, Forgeron jars were decorated with tool impressions, incising and even embossed rings. These pots are still venerated in the region, and indeed Sirmou potters (where some forms of traditional pottery can still be specially ordered; P10) are famous for their ability to make such "old pots" (See Figure 6.17). Pensettes and other tools for making impressions are still widely visible in potter's compounds; however, they are rarely, if ever, used. Current Forgeron pottery instead is decorated with painted designs that can be more quickly applied to the surface of the vessel (See Figure 6.1). To paraphrase one senior Djenné potter (P102):

> If you have a beautifully made and decorated pot [with tool impressions] created by an experienced potter for 2000 CFA next to an ugly and poorly decorated pot "made by a child" that costs 1,500 CFA, customers will always buy the cheaper pot. Or, sometimes people pay 2000 CFA for the ugly pot, so why should the potter put the extra time in for the decoration if people aren't going to buy more of those pots?

While water jars retain a symbolic value related to marriage, to many potters consumers seem to have shifted their priorities surrounding these objects. One potter noted that consumers prefer new jars because their smaller mouths allowed them to be closed with a plastic plate (P56). Others mused that people no longer "need" beautifully decorated pottery any more (e.g., P68). The dilemma faced by a young potter from Soa perhaps best illustrates the problem. Fatumata lives in Soa and learned to make pots from

her grandmother who originally was trained at Dia (P61)[31]. While her pots are in a narrow mouthed style, they are incredibly uniform in shape and possess bands of relief. They also have the phrase "Vive L'Armée" embossed on the surface of the pot (Figure 6.17). These vessels are fascinating not just because the young potter is illiterate, but also because she asks a price for these pots that is meant to reflect her time investment during production. In her estimate, it takes up to 3 times as long to make one of these pots as compared to a regular, painted water jar. She asks 2500 CFA for the pots despite the fact that local water jars normally command just 1500 CFA. While she continues to make these pots, Fatumata pointed out that she is having difficulty finding buyers. Most people seem to recognize the beauty of her pots. Potential buyers go directly to them when they are on display with other pots. They ask the price, touch them, and then continue on because they only want to pay the regular price.

Beauty – while certainly recognized – seems no longer to be a primary concern in pot selection. Recall that the most important consideration for most consumers was whether or not the pottery was "well fired" ("*bien cuite*") and rang when tapped with a knuckle. This "utilitarianization" of pottery across the region, perhaps caused by the relative increase in importance of enamels, has resulted in a pervasive shift in decorative variability. Tall necked, tool impressed vessels like the one above have now largely been abandoned in the research area, mimicking the sort of stylistic change usually associated with ethnic migrations in interpretations of the archaeological record. Potters note that their pottery is starting to look all the same – they now must put marks on their pottery to

[31] LaViolette (2000: 69) seems to have interviewed her grandmother and commented on the beauty and uniformity of her pots.



Figure 6.17: Older tool impressed vessel and a new Forgeron pot decorated with text.

tell them apart whereas before it was possible to know who made a pot based on decorative variability alone (e.g., P4, P15, P55).

Social Changes in Women's Lives

The ecological and economic impacts on ceramic marketing are responsible for many of the changes currently affecting potters in the Inland Niger Delta. Yet, they do not tell the whole story. Like other women, potters encounter a set of obligations that change throughout their lives – obligations that create an oscillating need for the income that potting generates. The changes women face affect not only their production rates, but also what forms of marketing they are able to initiate.

A trained potter is expected to contribute to her husband's family. During the early years of marriage, for example, newly wedded women must be deferential, hard working and respectful toward their mothers in law. They also tend to shoulder the bulk of the household labor. In cases where young potters are trained or semi-trained before their marriage (e.g., by their mother), they retain rights to their production, but almost always are expected to contribute both condiments and cereals to the household

economy, to take care of their own personal needs, as well as to give a portion of any cash income to their mother in law as a sign of respect (P39, P48). If her mother in law or other members of her husband's family are potters, a new wife could also find that older women in the family sell her pots and retain the proceeds. This is sometimes justified by the idea that young woman "don't know their pottery" (P32, P80). In apprentice relations within the region, those being trained do not normally have a right to the proceeds of their work. Young women who are apprentices are described as working for their mothers (e.g., P61). Potters who have learned their craft from their mother in laws after marriage likewise are said to work for their mothers in law, transferring all their proceeds to her and having to seek her permission even if they wish to give away a pot to a friend (e.g., P65). Women in this situation normally would return from a sales trip and give all their money to their mother in law, who would then give her back some in a show of generosity. Women also could petition their mother in law for enough money for larger purchases, but they had no explicit right to it and these purchases would need to be justified. This transferring of proceeds continues until a potter is deemed by her mother in law, or her mother in the former situation, to be fully "trained" or "strong" ("*forte*") in her potting. Most women trained by their mothers are considered "*forte*" by the time they marry, while those trained by (or continuing their training under) their mothers in law may be held in an apprenticeship role for some time.

Like other women, however, potters gain a measure of independence after several years of marriage. Independence is usually acknowledged only after women have given birth to several children. This time corresponds to the point in life when women throughout the region begin redistributing or moving into storage their enamel

collections. At this point, potters trained by their mothers in law are deemed "*forte*" (e.g., P45, P48, P53), and are encouraged to keep the proceeds of their potting for their daughters. This change seems to come about as the result of the tacit recognition that a mother must have complete control over her proceeds so she can begin building a trousseau for her daughter (P16).

Table 6.5: Average sales distance compared to domestic work load.

HouseWork (days/week)	N	Mean	Std. Deviation
.0	240	13.017	18.8441
.3	1	.000	n/a
1.0	22	15.155	10.3337
1.2	9	11.011	33.0333
1.4	38	11.489	5.6747
2.3	70	14.177	14.7221
3.5	47	6.045	6.8160
5.0	2	.000	.0000
7.0	15	5.320	6.4486
Total	444	12.048	16.3409

While ideally women during this period gain full control over their potting, they still face obligations that can result in systematic expropriation of their labor and income. First, even once potters are fully trained, they must continue to dedicate labor to the patrilineage, typically through housework obligations in the *grande famille*. Potters who are the only daughter in law in their husband's family may find that they are required to cook every day of the week, a task that takes four or more hours just for the evening meal. In larger families potters may rotate the cooking. Though it happens rarely and normally only to older women, potters may be exempt from household work because other women married into the family have no other trade. A noticeable correlation also

exists between the marketing range that potters have and their domestic work loads (Table 6.5). Potters work on average 1.3 days per week for their husband's extended family. Those who are obligated to work for the *grande famille* for less than half the days per week (<3.5 days/week) tend to sell their pottery in villages close to the average sales trip distance at 13.1 km. In contrast, those who must dedicate half or more of the week to domestic tasks (≥ 3.5 days/week) sell at an average range of only 5.7 km – a greater than 50% reduction in sales range. Those potters who spend only one third of their days working for the *grande famille* (2.3 days/week) have an above-average range of sales because potters in families of this size tend to pot in *grande famille* work groups and often assist one another in marketing and housework (see below).[32]

Labor extraction takes other forms. As described above, the reliance on cultivation by potters' husbands has effectively ended itinerant marketing practices because women must now work on their husbands' crops during the harvest. Additionally, the subordinate position of younger women to other women within the same household can have similar effects on ceramic marketing. For example, Ma, a young potter from Kobassa (P92), noted that she had shifted her focus from selling in the Djenné market to selling through village franchises. When she sold a lot of pottery in Djenné, older potters in her family would ask her to take 1 or 2 pieces of their pottery to the market, sell it, and then buy them soap or some other small item with the proceeds. She found that she did not have time to sell her own pots or to do her own shopping. As a result, she now sells in rural villages and only goes to Djenné when she needs

[32] Indeed, when a potter and her (normally two other) sisters in law split their work so they each contribute an average of 2.3 days/week to the patrilineage, their cooperative selling enables a sales range averaging 20.1 km. Note also that women who divorce their husbands tend to rejoin their family, taking up the labor obligations they had prior to marriage in both the *petite* and *grande famille*.

something specific. To avoid requests from older women to take their pottery, she *walks* the 13 km to the market.

Second, women also lose some of their proceeds through the pooling of cereals for food in the household. While the rules that define what men and women must contribute to the household economy are well known and generally agreed upon both in the IND and – indeed – throughout West Africa, actual economic contributions show just how susceptible such rules are to manipulation and negotiation (Schroeder 2001: 91-97). Normally, men are responsible for all the cereals in the household. However, 35.5% of potters stated that the cereals they got in exchange for their pots were eaten by the *petite famille* and 33.3% stated they also went to help feed the *grande famille* (Table III.11). Only 8.6% of potters reported that they sold the cereals they received to get money. In the current economic climate, especially in times of poor harvests, cereals are pooled in the household. While this form of pooling is somewhat benign – simply a way of ensuring that the entire family has enough staple foods to survive – we should note that the cereals gained in ceramic exchange make up the bulk of a rural potter's income. Only 22.8% of marketing trips were expected by potters to net cash exclusively. The rest of the trips either would garner either a mixture of cash and cereals or just cereals. Thus, the vast majority of a potter's income either goes to her husband's family or is used to balance her husband's unmet obligations to the household.[33]

Third, women also lose a portion of their cash income to their husbands. Some 92.3% of potters identified themselves (rather than their mother or mother in law) as the owner of their pottery. Moreover, 84.1% stated they alone controlled the cash they

[33] Schroeder (2001: 93-97) notes that this is one of the tactics men use in Gambia to gain access to their wives' income. Men spend their own money on non-subsistence related items so that their wives are forced to cover the shortfalls.

earned (Table III.12). This would seem to suggest that, despite labor restrictions and a loss of potential cereal income, potters are managing to hold onto their cash. With some older potters this is certainly the case. But younger potters often give money to their husbands to store on their behalf. Potters reported that, after making a sale, they routinely purchased items such as condiments, soap, lamp oil and small things for their children. Any money left over is then given to their husband. This transferring of extra money was considered – not unlike the situation with mothers in law – to be a sign of respect. While women are supposed to have access to this money at any time, women were quick to note that men have a tendency to "eat the money" ("*mange de l'argent*"). The cash left with their husbands may not be available when women would like to buy something (P16). When I asked, I was told there was no system by which a wife could seek reparations for money spent by her husband.

The tendencies to extract both women's labor and the proceeds of their potting do not go uncontested. The problem is, however, that many potters do not have a system of precedents that they can use to justify what would otherwise be considered their "selfish" behavior. The one situation where women can withhold both labor and monetary "gifts" is when they are preparing a trousseau. At this time, husbands lose some of their ability to unilaterally restrict their wives either from keeping money themselves or from initiating more intensive potting strategies (P39). A potter's mother in law will generally understand this obligation. Iseta, a potter from Koumaga, noted that when her daughter reached the right age, she would start potting itinerantly in order to make enough money for her daughter's trousseau (P22). When I asked if her husband would approve, she

stated unequivocally that he did not have the right to tell her that she could not go because it would be for her daughter. Therefore she will just go!

A friend in Kobassa named Mamouna (P79) went to great lengths to describe the difficulties that can arise for potters who seek to maintain control over their production. Despite the widely recognized obligation women have to prepare a trousseau, some husbands may still actively discourage spending money on their daughter. As a result, in the four to five years leading up to a wedding, potters both increase their production and begin directing money to their daughter by secretly buying and hiding away household items. This strategy gives women a non-deceitful way of avoiding direct conflict. When a husband asks his wife for the money she got from potting, she can hand over all the (remaining) cash she has on hand and state with a clear conscience that "this is all I have left". Mamouna seems to have accomplished this feat for both of her daughters by undertaking itinerant production. Like Iseta, she stated she needed to make more money and decided to move away and work. By working away from home, she not only escaped from household work and thus was able to direct more time to potting, but also escaped the daily surveillance of her husband and his family (after Lovette 2001: 50). As a result, she could divert most of her income to buying trousseau items. Mamouna noted that she would prefer to continue working itinerantly because it is hard to sell pottery in the area around Kobassa (see below), but she cannot do so because she no longer has the trousseau to justify her absence from the household.

While itinerant production may be the best way of earning the income needed for a trousseau, most women are unable to do this because of household labor requirements. Instead, they have found a number of other ways of increasing their income. Some

potters begin emphasizing producing larger-sized pots to bring in more money (P8) or they narrow their production focus to those pots that sell well at certain times of the year – such as water jars during the marriage period (P14). Other potters increase their production by putting more pots in each firing (P16) – a reported increase of 50% (P17) or even double normal rates (P54) – or doubling the number of firings that they do (P68). Shifts in production often result in more trips to existing franchises (P16), the development of new franchises, or even attempts to increase pot prices (P44). These alternate strategies are not always successful. One potter noted that there was no use in augmenting her production, despite her daughter's impending marriage, because the pottery she made did not sell (P60).

Eventually, women move into positions of seniority within the household. Their own daughters in law and the daughters in law of their husband's brothers are handed the bulk of the household and agricultural work, and perhaps even most of the craft production. Potters at this time become the beneficiaries of this labor and income extraction system, gaining control over the collected income of women within the household.

Case Studies: Regional Centers of Pottery Production

The above discussion outlines the forces that affect pottery production across the region. However, we must be careful not to assume that the arbitrary boundaries of this program of research delineate some form of "closed system". While ecological and economic changes affect most potters, there are variations in both production and

marketing across the research area. Below, I examine these in detail, focusing on how specific groups of potters have created marketing systems that meet the obligations they have and challenges they are now facing.

Djenné

As noted above, the marketing system for Djenné potters is dedicated to sales in the Djenné regional market. LaViolette (1987; 2000) studied in detail the Djenné potters during her fieldwork in Mali during the 1980s. She noted that Djenné potters were largely independent craft producers: "Despite their common work and shared cultural, social, and family identities, the women almost unanimously denied that anything bonded them together at all; they saw themselves as independent agents rather coincidentally involved in the same business, taking for granted other bonds" (LaViolette 2000: 66). Potters sold in the same location in the market, but each sold on her own behalf.

LaViolette's description contrasts quite sharply with the situation I found in Djenné in 2002. While the three Griot potters living in the west end of town acted largely as independents (despite being part of the same patrilineal family), Forgeron potters in Djenné had formed into what I often referred to as "The Djenné Coop". Potters still sold in the same area of the market, but instead of acting as independent operators, they now sold each other's pottery and even shared a common warehouse near the market. In some cases, potters or their daughters would go so far as to carry pots belonging to another potter to the market from the warehouse and selling for them on days when that potter was otherwise engaged, usually doing housework.

When I asked about this tendency, I was often told it was because all the potters in town were like a single "family". The impetus for the change from independent agents to collective ("familial") sellers, however, seems to have been primarily economic. Traditionally, Djenné potters fired their wares on a weekly basis, usually on Sunday nights just before the Monday Market, which allowed them to transport pottery directly to their market stalls on Monday morning (LaViolette 2000: 65). Now potters do large firings three or four times a year. Badji (P1), one of the most reputed potters in town, noted that the change was caused by difficulties in obtaining the materials needed to fire pottery close to town. It used to be quite easy to collect the materials and fire a small amount of pottery. Beginning in the early 1980s, potters began putting more pots in each firing because collecting the materials required so much work.[34] The increase in firing sizes meant that potters needed help not just with setting up the firing, but also with hauling pots to and from the firing location before and after they were cooked. Early in the morning of a firing, potters in the "Coop" haul pottery from a potter's compound to the firing site, work together arranging the materials and pottery and watch the start of the firing. They would then return the next morning to haul the pottery either to the warehouse or to the potter's household. Production costs (transport of clay and dung and straw for the firing) were still covered by the potter whose ceramics were to be fired, although, if other women in the Coop needed to, they could put a couple of pots in the firing free of cost. This sharing of labor is what eventually resulted in a "type of association" that now includes cooperative selling out of the same stall.[35]

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[34] LaViolette (2000: 65-66) notes that because of difficulties getting materials, potters were at that time using hired carts to bring firing materials from outlying areas and place them into storage.

[35] Interview with Badji (P1), Field notes, May 13, 2002. On a day when Deanne and I had arranged with potter friends to do some participant observation by actually making pots, we were first taken out to the

One of the more intriguing elements of the Djenné Coop is that it seems systematically to downplay the issue of competition that is so fundamental in formal economic models. When I asked about competition – not just in Djenné but also in the countryside – I was told that the only competition that existed between potters was to see who made the nicest pots. Other than that, there was no competition because potters were all of the "same family" (e.g., P4, P5). Sales were considered to be a matter of chance. Other than making more attractive and hence more desirable pots, potters had no control over which pot a person would choose to buy. When I asked what would happen if one person started selling far more than the others, a rural potter stated that she would first start making similar pottery to the person who was having such good luck, and if that did not work, she would seek a benediction from the marabout to remove the malediction ("curse") that was keeping her from having similar sales (P46). Another potter observed that success in selling is a matter of chance and everyone has an opportunity to make a living. Thus, if competition exists, it is a function of the potter's inability to make nice enough pots. The only recourse to potters who are consistently outsold in a given area is to seek sales locations where other (better) potters do not normally sell (P79, P25).

Perhaps the best example of the sort of cooperative work currently occurring in Djenné comes from the potters' recent involvement in a water infiltration project sponsored by the Dutch Government. The introduction of water spigots in Djenné has created significant problems with standing waste water along the town's narrow alleyways. This water has degraded the foundations of many of Djenné's buildings, including buildings responsible for the town's identification as a World Heritage Site. A

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edge of town to help with a firing. Along with another 6-8 potters, we prepared the materials, arranged the pottery and only after the fire was well under way did we disperse with the rest of the potters to begin forming clay. The message was quite clear – being a potter first required being part of the "family".

series of European technicians and local craftspeople have thus been assembled to devise infiltration pits that channel the water deep into the tell. Potters have been enlisted to create an entirely new form of ceramic gutter, meeting the projects objective's of directing surface water into these pits by using "traditional" technologies (i.e., not PVC tubing) that would detract from Djenné's tourism industry. The construction of these new gutters created an economic windfall for potters in the Djenné Coop. Badji acted as the broker for the project, working with the masons to devise new gutter forms and sedimentation pots. She then taught these pot types to other potters in the Coop by giving them copies of her first attempts. Potters in the Coop were responsible for making a certain number of gutters which were returned to Badji and then delivered to the masons and project director. Badji collected the proceeds (130,000 CFA worth at that time) and gave each of the potters their share according to what they had made. Thus, in the span of 20 years, Djenné potters shifted from being independent operators to becoming part-time members of a collectively organized production system.

Pondori

The Pondori represents a particularly bewildering area in the research zone. The Pondori villages of Kobassa, Soa and Pana have relatively large numbers of potters for such a rural location. Soa especially was noted by LaViolette (2000: 68-70) as a center of mass pottery production, something she attributed to both the faster production rates of Soa potters and their ability to market their pottery during the seasonal flood by pirogues to outlying villages. As we have seen above, the Pondori villages are unique in that they seem to be the point of origin for most of the (now abandoned) itinerant marketing trips.

Indeed, Pana and Soa sit along the principal water route between the Niger River and the Bani River at Djenné, while Kobassa often becomes an island tied to the Bani during years with adequate floods. Between 1955 and 1970, the IND experienced an exceptional period of rainfall and flood levels that were well above average (Rasse 2001: 21). During this time, these villages would have had direct access to both the Bani and Niger drainages and local harvests would have been well above modern outputs. In times when potters and their ironworker husbands were not tied to their own agricultural plots, it would have been possible for potters easily to visit many villages throughout the region and exchange their pots locally against abundant surpluses. The density of potters in Pondori villages would not, therefore, have been detrimental to their sales. Indeed, these conditions may have even encouraged an in-migration of potters to these villages or, more simply, made it unnecessary for many potters' daughters to move away.

That these villages continue to produce such significant amounts of pottery is quite extraordinary. The piles of pots that LaViolette described in her own visit to Soa in 1983 were still visible in 2002 and rows of rice soakers and other large pots at Kobassa were only slightly less impressive. Yet, the loss of high flood levels has resulted in a new emphasis on cultivation and a corresponding end to itinerant marketing. In Soa, only one of the 16 potters who were interviewed had a husband who was a dedicated ironworker. Eleven (73%) of the women had husbands who were directly involved in some form of cultivation. Of the 15 potters interviewed in Kobassa, only one of their husbands was an ironworker and 10 were involved directly in agricultural activities. Thus, women face not only the labor restrictions associated with agricultural production, but also the

problem of a high concentration of potters who now find their sales area significantly diminished. Yet, potters continue to produce a substantial amount of pottery.

To some extent, production seems to be supported (at least in theory) by the use of resellers. A potter in Soa (P99) noted that the potters in Pana would often arrive by boat during the flood to purchase their stockpiled pottery so that they could resell it in Pana when their pottery stocks had run out. She also noted that two other women in Soa who were not potters, would occasionally take orders from friends in outlying villages and then buy pots from local potters and resell them. These pots would be sold to the reseller at half their normal asking price.

More significantly, during the flood, Soa potters may be lucky enough to sell large amounts of pottery to people from along the Niger River. Fisher folk (likely Somono) from Kolenze (40 km north of Soa) often come to Soa by pinasse during the flood to purchase rice soakers which they use to process fish oil (see de Ceuninck 1993: 410). Kolenze fishermen will often buy 10 to 15 of these large pots at one time. Similarly, a merchant named "Boucarie" who trades mutton, cloth and other items up and down the Niger usually arrives in Soa once a year with a large pinasse to buy pots that he resells in markets. One to three potters may sell their entire fall inventories to Bourcarie when he arrives, which produces some incentive to maintain a certain level of production. A few potters noted during an informal focus group that this is one of the reasons why there are such large stockpiles of pottery (P99). They generally assume that during the flood they will be able to sell excess pottery to visiting resellers, so they produce constantly during the dry season. By the time the flood arrives, potters may have 50 water jars in storage, which they stated were often all sold by the time pottery production

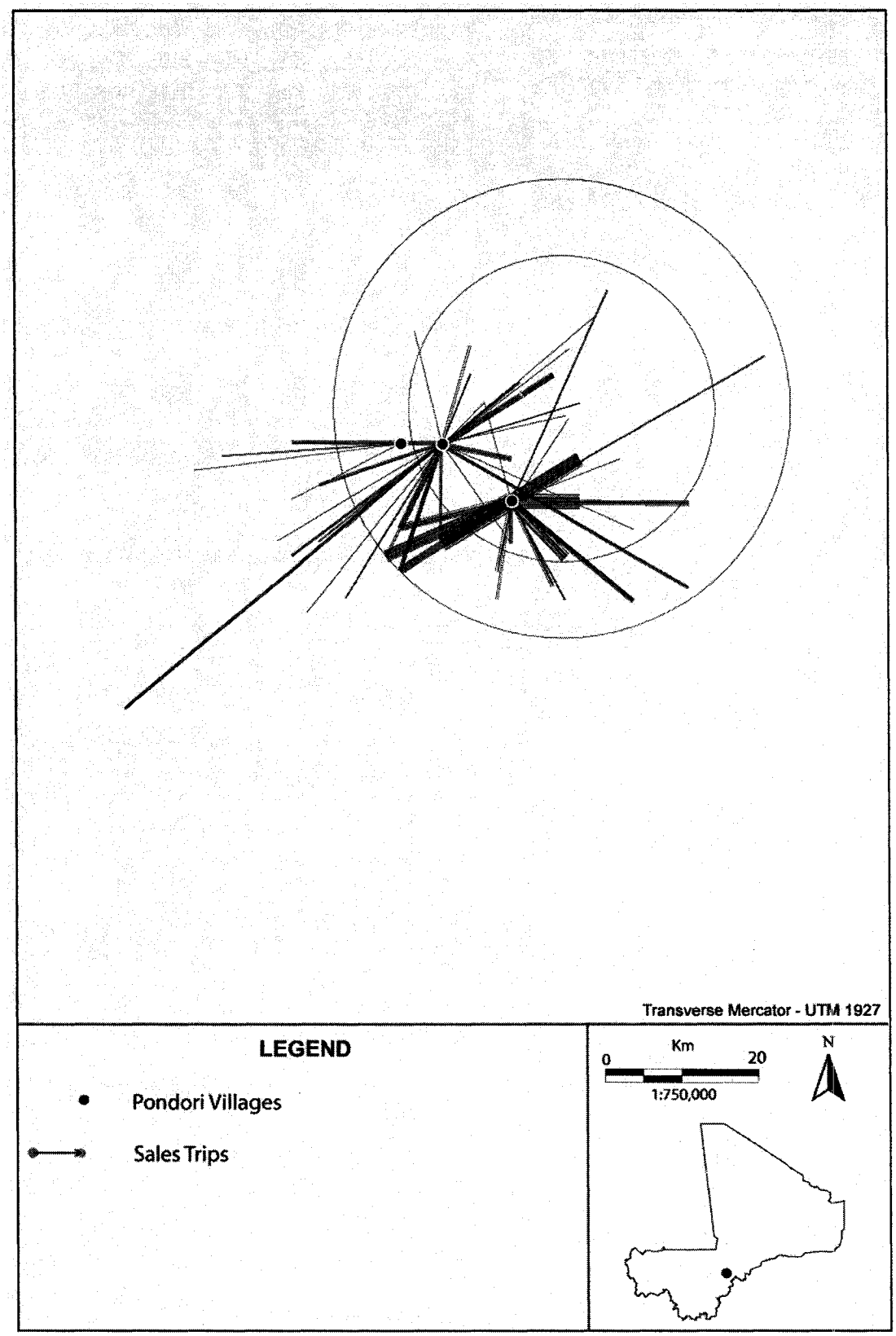


Figure 6.18: Pondori franchises.

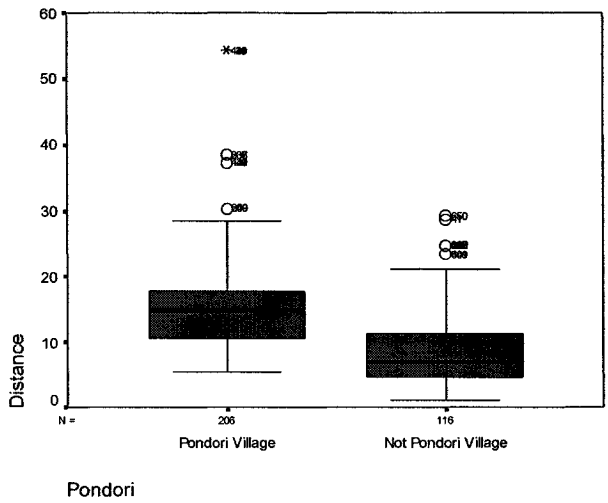


Figure 6.19: The contrast between average sales ranges for current franchises in and outside of the Pondori.

restarted after the harvest. The same discussion, however, also revealed that for the upcoming year (2002-3 flood) most potters had only a fraction of their regular inventories set aside because "housework" (probably associated with agriculture) had severely curtained their production.

The continued high density of potters and high rates of production seem to be a story of stubborn perseverance in the face of degrading circumstances. While there is potential for some potters to sell their entire inventories in a given year – as much as they could possibly make if they are graced with Boucarie's patronage – the use of resellers seems insufficient to account for Soa's total pottery production. Very few Soa potters – and none of the Kobassa ones – mentioned using resellers on anything more than a sporadic basis. Instead, potters in the Pondori rely on markets and franchises. Kobassa potters sell *en masse* with the assistance of a local contact from a single area in the Djenné market, while Soa and Pana potters frequent the Yébé and Mounia markets. The enforced sedentism of Pondori potters is also countered with the use of wide ranging

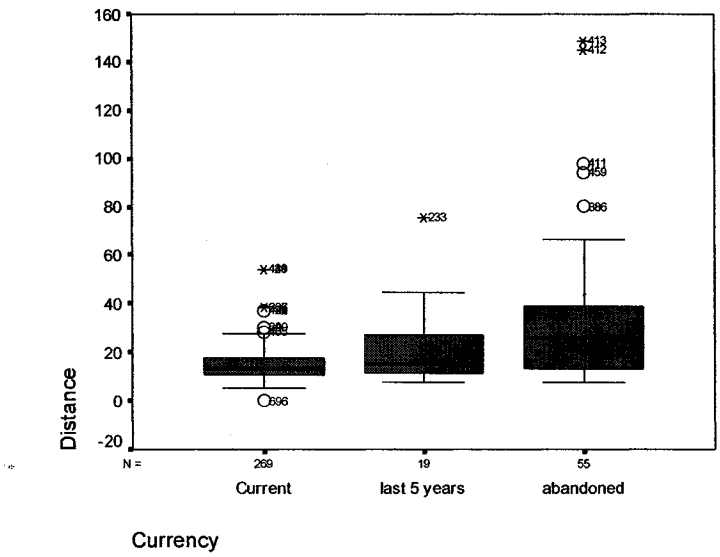


Figure 6.20: Changes through time in Pondori sales ranges.

franchises (Figure 6.18). Potters in Pondori villages (Soa, Kobassa and Pana) sell in franchises that average almost twice the typical distance of those of other, more upland villages. The villages where Pondori potters sell are an average of 16.1 km away, while franchises in other parts of the research area are just 9.9 km (Figure 6.19).

Potters also seem to be coping with the challenge of living in the drier Pondori by adopting cooperative programs of work not dissimilar to the "Djenné Coop". For example, the dry season production of four potters in Soa has been combined into large bimonthly firings (on the 8th and 25th days of the month) and smaller weekly firings for the market (P71). Because there are women in the family who are not involved in a trade and who thus conduct the bulk of the household chores, these potters can make ceramics full-time. The pottery is sold using a rural market and franchise marketing system. A retired potter in the patrilineage sells on behalf of the other four potters, making between 14 and16 trips per year; each trip involving two rented wagons loaded with pottery. She often visits the two villages where she has friends 2 to 5 times per year and visits an

additional four villages 1 to 2 times each per year depending on their harvests. Younger daughters in the family visit the markets of Yebe and Mounia each week; traveling in the community charette to sell small panniers of pottery (~10 pcs). The senior woman in the patrilineage both holds onto the proceeds of these sales and pays all of the production and marketing expenses. This concentrates the resources in her hands, but it also allows the potters to reach a slightly wider area – an average of 19.5 km for all current franchising trips. Thus, in the absence of itinerant marketing, potters are beginning to intensify their dry season selling strategies.

However, Pondori potters seem to be struggling to find markets to meet their historical production rates. The length of time that potters can continue to produce so much pottery despite the economic and social changes brought on by lower water levels is uncertain. When changes over time are analyzed, it seems that potters are fighting a losing battle (Figure 6.20). If we disregard local sales, abandoned marketing trips in the three Pondori villages averaged 33.7 km in length – a distance that reflects the use of pirogues and itinerant production. In the five years prior to my field work in 2002 (a time when wagons were extensively used), potters achieved an average sales range of 22.2 km. Current marketing trips have now shrunk to 15.1 km. The compression of such a high concentration of potters into a tighter and tighter sales range will most certainly affect the ability of potters to sell at their current production rates. As the map in Figure 6.4 demonstrates, after their apprenticeship, potters are now showing a slight tendency to leaving the Pondori for other areas. Kobassa, especially, seems to be exporting young potters.

Conclusion

Despite the challenges facing potters in the Pondori, there seems little sign that pottery manufacturing is quickly dying out. At least one potter from Bangassi (P46) was of the opinion that there are now *more* potters than there have been in the past. Pottery still acts as a way for women to generate an income independently of their husbands; providing, of course, they have access to a potter from whom they can learn and some sort of ethnic claim to a potter lifestyle. The ethnic diversity discussed earlier, especially the presence of Bozo potters, suggests that women may be stretching their claims to a potter heritage whenever this is possible. Potting may be a less than desirable form of work, but for many women it is one of the few options they have to meet their obligations within patrilineal households.

On the other hand, those women who have an opportunity to leave potting seem to be doing so. Individual potters were sometimes quite explicit about their desire to quit potting (P16, P18). The largest problem was finding some other economic activity that would generate a sufficient income. Potters noted quite frequently that their daughters – many of whom had started learning how to pot – have decided it is too hard when compared to the small returns that potters get (P26, P37, P60, P79, P90). Instead, many of the young women have moved into major centers with their husbands in a quest for easier employment. Those potters who remain in the countryside sometimes take on supplementary economic activities (P14, P45, P107), activities that can slowly become more important than the potting they once supplemented. Fatumata (P7) now has quit selling pottery except for the higher priced marriage jars for which she receives special

orders. She can make more money working with her husband in his small mercantile business than through potting, so now she sells salt and fuel out of her household in Pana. Another potter (P42) reported that she had quit potting so she could go to school and learn how to read, something that she hopes will open up new opportunities.

Perhaps most surprising, during my trip to Djenné in 2003, I discovered that Badji (P1) – the potter most deeply involved in the infiltration project and the ringleader of the "Djenné Coop" – had not made pottery since I left the previous year. Badji is one of the few potters who had attempted to cash in on Djenné's highly centralized tourist industry by selling small blackware pots designed specifically for tourist consumption. These include pen holders and jewelry jars sized to fit in someone's suitcase. Local souvenir shops resell some of her pots (at an incredible markup that she does not receive) and she tries to sells some herself when the Mission Culturelle guides bring tourists by her house to "see the traditional potter". Badji has quit potting because she has been learning to read and write Bambara and now is proficient enough that she can teach others. In the last year, she has started teaching members of a Bozo association in town how to read, making 1000 CFA per day, per student, in sessions that last 20 days. She now makes more in three weeks teaching literacy than she ever could have potting.

Badji's example perhaps underscores more than any other the economic nature of potting. The tie between ethnicity, caste and occupation embed potting in the social and cultural fabric of the Inland Niger Delta. But for women, the production and selling vessels is primarily a way of generating the income they need to meet their household obligations. Potting is not eternal; it is not a survival of a bygone era that makes it a window onto the "traditional technology" of a pre-colonial past. It continues to change in

response to the fluctuating economic, political and cultural realities that women address in their daily lives.

CHAPTER 7
THE CONTEXUALIZATION OF PROCESS

Ethnoarchaeology has in the past been expected to build "independent" middle range theory made up of lists of "unambiguous material correlates" that archaeologists could use to decode the archaeological record. In the preceding two chapters, we have seen the myriad of forces that affect the exchange and consumption of household vessels. The patterning visible in vessel distributions – both on a regional scale and within the confines of households – shows that the relations between human behavior and material culture are quite complex. Patterning is not a function of the operation of one process, but instead is the product of an intricate causal milieu.

The analysis in the previous two chapters was done with little consideration for the archaeological implications of the findings. The approach is explicit; to be a non-circular assessment of archaeological theory, ethnoarchaeology needs to structure its

research in a way that builds some vertical independence between its findings and archaeological issues. In this chapter, I return to archaeological considerations and look at the implications of these findings for archaeology. Doing so means moving from the practice focused and anthropologically inspired analyses to assess the more structured vision typical in archaeology. Saitta (1992) has suggested that ethnoarchaeological, "middle range" work is desperately needed on processes central to Marxist interest in domination, resistance, and labor and surplus extraction. The problem, as he sees it, is that there is little explicit "middle range" knowledge of how such processes relate to material culture. Thus, I narrow my focus to examine the effects that household political economy has on both potter and consumer poles of household vessel exchange. My point in both examples is to show the material effects that processes related to political economy have on material variability as well as the complexity visible in ethnographic contexts that often underlies archaeological visions. The recognition of this complexity is the basis for some suggested redefinitions of archaeology's broad range theory.

Household Vessel Movement and "Value"

One of the best known maxims in the archaeological literature on trade is that objects with higher "value" travel farther in any exchange relationship. Exotic goods typically travel greater distances, often linking elites who consume such goods as a way of distinguishing themselves from the general population. Distinct fall-off curves are visible archaeologically, pointing to these different values, the presence or absence of

markets, and the organization of systems of trade relationships (Renfrew 1975, 1977; Hodder and Orton 1976).

In a general way, the proposal that objects of different value travel different distances is supported by my findings. There is a positive correlation between the average cash value of objects in a material class and the distances they travel. The greater analytical resolution of ethnographic research does, however, suggest some intriguing additions to the general rule. We should note, first of all, that "value" is a loaded term and that simplified and highly abstract notions of "value" do not give due recognition to the complex ways in which objects gain value in a specific cultural context. In economics, value has been thought of as a reflection of the necessary expenses that go into the production of any object, measured in terms of labor and raw materials. In contrast to this "product theory of value", today many economists believe that the value of an object is derived from exchange as a product of the interplay of supply and demand (Wilk 1996). In archaeology, processualists have tended to see value as a measure of intrinsic, useful properties in objects that rational human beings directly apprehend. Postprocessualists emphasize the constructed nature of value – the fact that "value" is largely a symbolic quality ascribed to objects that owes relatively little to their intrinsic qualities. These different frameworks for "value" suggest quite different middle range expectations. For example, in terms of pottery alone, a production theory of value would propose direct ties between labor and raw material costs and the price demanded for some piece of pottery, while capitalists would anticipate that market negotiations are the key to understanding value. Each of these different definitions references different mid-level processes in identifying how it is that some set of objects attains greater worth.

The findings of this study show that different notions of value all come into play. In identifying the specific forces that contribute to establishing different "values" for specific vessels, it is necessary to consider symbolic, intrinsic, production and exchange approaches to value. For example, in ceramics, the actual value of a pot reflects a combination of both production and exchange theories of value. The vast majority of potters stated that they set prices according to the amount of work required to produce an object. Those objects that are hard to make, take a lot of time and leave the potter fatigued have higher prices. Potters also noted that pots have been going up in price (although not nearly enough to account for inflation) because production costs have also increased. Yet, potters also negotiate these prices in the market and thus they must address market forces such as price comparisons with new materials and the ebb and flow of demand. When they sell their pots in rural villages, potters seek to exploit these same market forces by selling during the harvest period when grain prices dip. Upon hearing that gutters in Djenné were selling for 750 CFA during the production season, a potter from Diablo promptly raised her prices to the same amount from the 500 CFA she had been asking (P19). Both production and market forces affect "value" and indeed they even have some direct impact on one another. The pressure from market forces to reduce the price potters ask for their pots has caused potters to shift some aspects of their production. Because other women can get comparable prices for poorly decorated pots, even those women who are trained to use tool impressions and incising have switched to using painted decorations, because it saves them production time and thus is more "in balance" with the returns they garner (see below). Unlike the pristine expectations of

synthetic theories of value, the results here show that the value a pot has "on the ground" requires the consideration of processes central to several different theories.

When the differences between the material classes are considered, we see that "value" is perhaps better conceptualized in relation to forms of "capital". Bourdieu (1977; 1986; 1984) has extended the economic notion of capital to other areas of social life. Following Smart's (1993) analysis and excellent clarification, we can see that Bourdieu's notion of capital applies to four different dimensions of social life (especially Bourdieu 1986). Economic capital reflects the conventional definition of being the economic wealth or property that an individual possesses. Social capital relates to social "assets" and is found in the network of social relations an individual has and the mutual obligations and social credit that these relations entail. Symbolic capital reflects the position of an individual in society and is found in the ability of that individual to generate prestige and reputation that, in turn, places that person in a position where society as a whole seems to owe her or him an unspecified "debt". As Smart points out (1993: 393), the real distinction between symbolic and social capital is that social capital is an obligation held between individuals in a specific social relation while symbolic capital is generalized so that it is an obligation owning to a person or a group within society because of their symbolically valued acts or social position. Finally, cultural capital emerges from the knowledge individuals possess about how to do things in society and thus to generate forms of income or prestige (see Bourdieu 1984). These four types of capital are not necessarily distinct, and indeed much of Bourdieu's work has gone into showing how one type of capital can be used to create another according to the goals and aspirations individuals possess. As "capital", these different sorts of

accumulated prestige are often envisioned in terms of power and its ability to command the actions of others. Smart (1993: 394), however, is quick to point out that capital (and especially social capital) is best thought of as the ability to "induce" actions in others through indirect claims to their labor or resources. Capital is not so much about the ability to compel another's action directly through economic, social or symbolic force as it is an appeal to norms of conduct, obligation and prestige that form a shared value system. Rather than direct power, capital compels individuals voluntarily to perform some action.

The value of different material classes of household vessels is tied quite directly to their use in the production and transference of different forms of capital. For potters, most forms of exchange seem operate primarily in the economic sphere. Potters seek direct forms of reciprocity when they sell in markets and villages other than their own in the hope of receiving cash and cereals. The exchanges are usually done with individuals whom potters do not know and with whom they have few social ties. In contrast, exchange in a potter's home village is intimately tied to the creation of social capital. Gifts create social debts that induce a counter gift at some later time from the receiver (Mauss 1967). Smart notes that the "misrecognition" (after Bourdieu 1977) of the gift as a form of exchange occurs through adherence to a specific social form. Even when a counter gift is expected by the initial giver, the presentation of that gift must follow a social form of "gifting" in which there is no explicit reference to the expected counter gift (Smart 1993: 395). Up to a third of pottery is given away with no direct expectation of a counter gift, while potters in some rural villages give another third of their pottery away with the expectation that they later will receive a counter-gift of rice. Because it takes the

social form of a gift, the amount of the expected counter gift is not discussed. In both cases, potters use their gifting to build social and symbolic capital. Giving pottery away without an expected return – especially giving pots to the old or infirm – builds a potter's reputation as a sympathetic and charitable individual within the community. In the case of delayed reciprocity at the harvest, potters transform their gift of pottery into a form of social capital that induces a debt until the counter gift is received. Potters risk possible losses by enacting this form of exchange because the individual who received their pots may not have a good harvest and thus may be unable to return a gift of grain. However, the delayed reciprocity has an important advantage for potters. The conversion of pottery into social debts repaid through grain at the harvest eliminates any rigid comparison of the economic values of the two gifts. The amount of cereals given in return is not rigidly defined as equal to the amount of pottery given, but reflects how good the harvest was (and thus the wealth of the farmer at that time) as well as the reputation of the potter in the community. Potters who possess the symbolic capital generated by being regarded as a charitable individual may receive more grain as counter gifts, especially during a year with excellent harvests. By shifting their pottery into other forms of capital, potters potentially may receive more cereals in return than they ever could have got through direct reciprocity. Because at times potters exist in a separate, relatively endogamous caste (Conrad and Frank 1995), these sorts of social debts allow for the maintenance of ties between potters and other members of their village. They become full members of their community because they share in their village's prosperity and hard times.

The greatest problem that potters now face arises from the unwillingness of consumers in their own communities to enter into this form of exchange and take on such

social debts. Potters reported that individuals tend to pay cash or "cash value" in grain for large vessels (even during the harvest) and exchange grain only for small pots. The use of cash creates a standardization of pot prices, which farmers now exploit when they buy pots or make return gifts. Farmers are aware of the "cash value" of the pottery they received as a gift and repay it with a comparable "cash value" of cereal. Potters thus lose one of the important ways they garnered enough grain to survive as full time specialists. On the other hand, potters seem to exploit a similar aspect of social relations within the villages through their use of franchises. Pottery is often left on the edge of the village for consumers to see. Purchasing a vessel normally means selecting a pot from the pile and then seeking out the agent in order to pay. There is little direct surveillance of the sales pile, which provides many opportunities for theft. However, because the agent is a member of the local community and typically is appointed into her role by the village chief, any theft would significantly diminish the symbolic capital – the reputation – of the entire village.

Enamels are the most "valuable" household object identified in the study. They also have the most direct role in the transference of capital from one form to another; by doing so, enamels directly aid women in resisting the exploitive forces present in the households into which they marry. Enamels and caldrons demand a comparable price in the market, yet enamels travel a significantly longer distance before entering the household. Enamels are also disproportionately located in the semi-private parts of households whereas aluminum, plastics and ceramics are found in the more utilitarian, public spaces. The difference lies in the different "values" enamel and aluminum vessels have. Despite the necessity of having caldrons in a trousseau, aluminums do not carry

the same symbolic importance that we see with enamels. Enamels have taken on the role once played by calabashes in marriage related displays. Calabashes possessed little economic value, yet were elaborately decorated by women in the village and then given as gifts to a bride who proudly displayed them for the entire community to see (Cooper 1997). They materialized the social capital that the bride possessed by virtue of her and her mother's social networks. The shift to enamel vessels since sometime before the 1950s has added an additional layer to this display of social capital. Because of their cost, enamels also reflect a rather explicit display of wealth – wealth over which the bride has exclusive control. Girls often move to larger centers in order to gain the cash needed to purchase a suitable number of enamels for a marriage display. As a result, the size of the display not only reflects the social and economic capital possessed by the bride at the time of marriage, but is also thought to reflect her future social and economic potential. The overt public display of the trousseau during and immediately following marriage transfers its social and economic capital into symbolic capital that builds for the bride a reputation of industry and amicability. The reputation she builds survives long after the display and its associated economic wealth have been redistributed or consumed.

Symbolic capital is normally considered as a way for individuals to compel other's actions. The symbolic capital generated by enamel collections, however, seems to function primarily as a way of shielding new brides from more explicit and localized forms of power in patrilineal households. Women with large collections of enamels at the time of their marriage display for the whole community their social connectedness and industry. Any conflicts within the bride's new household between herself and her husband's family are assessed by the community as a whole in the light of the bride's

established public reputation. The symbolic capital built by the marriage display thus protects women from excess exploitation during the period of their lives when they are the most vulnerable. The economic wealth evident in the display also makes plain the ability of the bride to support herself financially should conditions become too unbearable and require a divorce.

The essential tie between "value" and distance is sustained by the above analysis. The focus on practice, however, shows us that value is much more complicated than is normally assumed. To some extent, value is a reflection of intrinsic qualities: enamels travel farther and are more prominent, and they are the most expensive and – compared to ubiquitous pottery – are rare and exotic. Yet, part of the value of an object is the way it is contextualized within a highly gendered political economy. The high cost of enamels and the fact that they are an object that women alone control makes them a repository for women's wealth. Enamels are the sort of thing that someone goes "*en voyage*" to buy because going away ensures that wealth is not appropriated by others in the household before it can be stored in an enamel collection. There subsequent use in marriage-related displays acts as a performance through which the economic and social capital symbolized by enamels is converted into a reputation that protects a new bride from outright exploitation. Resistance to exploitation is thus a key factor in explaining the "value" enamels have and it shows up materially in the distances they travel and their prominent position within households.

Ecological Change and Pondori Marketing Ranges

The drought that has hit West Africa since the 1970s has reduced flood levels dramatically in the Inland Niger Delta. As we saw in the last chapter, the drought forced Pondori potters to abandon pirogue based sales and use wagons to transport their wares. The very thing that once made the Pondori an excellent place for pottery production and marketing – its ties to extensive transportation corridors – has with reduced water levels created a high concentration of potters who now try to sell to a more localized region. The drop in sales range is quite dramatic: a shift from 33.7 km with pirogues to 15.1 km with the current use of wagons. In archaeological contexts where clays could be sourced, through techniques like neutron activation analysis or petrography, or in cases where pottery from a particular village could be easily identified stylistically, the simultaneous reduction in flood levels and diminished marketing ranges could be identified. Thus, it would be possible to see these relations and propose a causal link.

The findings of the last chapter would seem to suggest the need for more than a simple "environment-produces-culture change" scenario. Potters have a number of different options in daily practice when it comes to dealing with environmental change. We might expect that a sudden change in water levels would result in a dispersal of craft specialists in order to find better markets for their wares. The Pondori is somewhat "overpopulated" with potters when compared to other areas. Significant ecological change could have caused potters to move away and hence for the Pondori to achieve a potter density comparable to other regions. Alternately, potters could stay in the Pondori at their present numbers and continue marketing their wares to the same hinterland.

While flood levels have been reduced, potters in the villages still have access to *marigots* and through them to the wider drainage of the Delta. This is perhaps more difficult for potters from Kobassa, but the *marigot* that passes Soa and Pana remains a major east-west corridor and provides access to many areas along the Bani and Niger rivers. While some former locations and routes used might have needed to shift, it would not be necessary for all pirogue based marketing to end just because of the reduced water levels. Indeed, some of the more frequently visited villages to the south of the research area around San remain easily accessible. Finally, even in cases where pirogue based marketing became impossible, potters could have maintained sales ranges greater than an average of 30 km by shifting from itinerant marketing to itinerant production. Either of these options – all of which are known to women in the region – would have been a suitable way of addressing climate change.

To understand why women instead adopted their current pattern of intensive franchising, we need to examine other processes active in women's lives. Household political economy is perhaps the single largest factor determining the current marketing system. The subordinate position of women in households – including the value of respect that orients their labor and many of their proceeds toward their husband's extended family – restricts their abilities to make unilateral decisions. Lower water levels resulted in those potters with Forgeron husbands also shifting their focus from ironworking to cultivation. In part, this was due to changing demand throughout West Africa. The availability of imported iron tools and high quality scrap iron has made smelting unnecessary and ironworkers have seen their income diminish. Most current iron work now is restricted to the occasional repairing of tools and transformation of

scrap (such as leaf springs) into knives and other items instead of smelting and this does not garner enough grain to make specialist iron working worthwhile. Because these changes affect the entire region, changing villages is not an option. The recent reduction in flood levels caused lower harvests and diminished surpluses across the local area, which further restricted the ironworker's abilities to trade their products for enough grain to feed their families. Potters' husbands have thus stayed in their original villages and adopted agricultural activities. Women's labor has been diverted to helping with these harvests, which effectively curtails women's abilities to do itinerant production or marketing during the flood. Lower water levels did not *directly* force women to change transportation technologies. Instead, they use wagons because agricultural labor requirements have restricted their marketing to the dry season. The reduction in sales region because of agricultural work loads mimics what is seen elsewhere for household labor. Recall that women who spent a third or less of their days working for their husband's family possessed sales ranges that averaged above 13 km. However, women who were required to dedicate more than half their days to hauling water and preparing meals for the *grande famille* saw their average sales region drop by more than half (Table 6.5). In both cases, increased domestic labor requirements reduced a potter's ability to make and sell her wares.

Under such conditions, franchises offer one of the few remaining options for potters to market to a wider region. The emphasis on franchises is possible because potters have been able to manipulate certain ideological structures present in the region. Islamic values of charity, cooperation, hospitality and community allow potters to develop quite easily contacts in outlying villages where they have no other direct social

ties. These contacts can be called upon and trusted to act as sales agents on the potters' behalf. As a result, during the dry season, women are able to make and sell more pottery than normally would have been possible if they alone were responsible for their sales. By enlisting other women to operate franchises, they are able to both meet the labor requirements of their now agriculturally focused households and continue to market their pottery, despite a completely saturated local market.

Explaining the shift from wide ranging itinerant marketing to more localized franchises thus requires a consideration of a number of different processes. Rather than the standard cliché that ecological explanations are simply invalid, the Pondori examples show that ecological change in the form of lower water levels is causally related to a shift in marketing range. Unlike the postprocessualist rejection of all ecological impacts on culture, we cannot deny that ecological degradation is still at the heart of the change, because without a reduction in water levels harvests might have remained sufficient for ironworkers and their wives to access surplus grain though exchange and thus continue to operate as craft specialists. On the other hand, the marketing change encountered cannot be attributed only to ecological change. Instead, it is the combined circumstances of reduced flood levels and grain surpluses, the lessening value of iron work, and a deeply patriarchal political economy that together have forced the marketing change.

Consequentially, we cannot attribute the reduced sales region to a single process. There is no "law" that says pirogue-based itinerant marketing reaches an average range of 33.7 km or that wagon-based and franchise sales ranges are 15.1 km. The current average franchise range of 15.1 km in the Pondori is a figure that reflects the *combined effect* of several different processes. Increased household labor – either normal domestic

labor or labor that results from increased reliance on agriculture – restricts the amount of time potters can contribute to potting and decreases correspondingly a potter's marketing range. The high concentration of potters simultaneously drives women to seek a wider market and thus they use contacts to develop franchises that increase the very same range. When all current sales trips (combining all marketing strategies) are considered, high-density Pondori potters have a mean sales range of 12.8 km compared to 5.6 km outside the Pondori. Yet, Djenné also has a high number of potters, but a low average sales distance because of the presence in the town of a large regional market. The point is that there is no one-to-one relation between patterns and processes; no unambiguous material correlates; no smoking gun to tell us that a single process was present. The change in marketing range that we see in the Pondori is the net result of those processes that impact its cultural setting.

Marxist approaches in economic anthropology have long questioned the role of petty commodity producers in peasant societies. Two key issues have often been at the forefront of the economic theorizing of the household (see contributions to Littlefield and Gates 1991). First, why is it that many commodity producers operate at less than optimum levels when they could easily increase production and their own wealth? Second, how have the surpluses created by petty commodity producers been appropriated by others? This study suggests that both cases relate to household political economy. First, pot production is severely limited by the obligations potters have within the household. Most potters certainly would like to produce more pottery; however they only are given the opportunity or the right to do so when freed from household obligations by specific circumstances such as those related either to catastrophic local harvests or to

their daughter's impending marriage. It is quite telling that at the time their ironworker husbands were losing their ability to earn enough grain to support their families, Pondori potters were not given leave to pursue more intensive forms of potting (and take a primary role in the household economy), but instead their labor was co-opted to aid their husband's new agricultural focus. Second, the money gained from increased production related to marriage is converted into consumer items such as enamel vessels for their or their daughter's household. While pottery and some cast aluminum items may be locally produced, enamels and plastics must be bought with cash from retailers who in turn have purchased their objects from in some cases multi-national companies. Trousseau building not only increases the production of potters (and other women), but also extracts surpluses generated from that increase and transfers it to capitalist ventures.

What is perhaps most interesting, however, is that these purchases are not the ephemeral form of "consumption" aimed either at emulation or at addressing women's alienation from production (see chapter 4). The simple narratives that are the focus of Miller's (2001) critique of the consumption literature do not work here. Women increase local production or go to the cities and work as domestics because the vessel displays they generate help them to build a reputation that stays with them the rest of their lives. Women engage with the capitalist economy and become consumers of global commodities like enamels because these objects transform economic and social capital into symbolic capital. Enamels have such power because they have been contextualized in the tradition of calabash displays. Yet, they are also transformative. The economic wealth embodied by enamels reacts to, and reifies, an increasingly commoditized social setting in which cash and wealth have become another component of reputation-building.

Enamel collections may force women into a wage economy, but the vessels they buy with the proceeds emancipate them from a more localized and immediate form of marginalization.

Those processes related to household political economy have perhaps the most dominant influence over the production, marketing and even consumption of household vessels. Household vessels are enigmatically part of women's work and women's production. It is not then surprising that many of the findings here point in some way to the power differentials women encounter in their daily lives. Yet, there is no single aspect of household vessel exchange and its associated material culture that is an "unambiguous material correlate" for "patriarchal control of women's labor". The impact of men's control over women's labor is widespread, yet its effect is always partial. Rather than distinct patterns reflecting specific processes, as was typically expected of ethnoarchaeology's traditionally defined middle range focus, patterning in both behavior and material culture seems to be the result of several processes working in tandem.

Discussion

In identifying the underlying processes that go into ceramic exchange, this research has demonstrated the different analytical resolution that typifies ethnographic and archaeological research. Ethnoarchaeological and archaeological perspectives are respectively somewhat analogous to geomorphological studies that employ surface reconnaissance to better understand remote sensing data. Remote sensing may identify a series of landforms in a region and suggest causal forces like "erosion" that led to their

development. Surface reconnaissance, including subsurface testing to look at soils, can examine the more localized processes, such as scouring or slumping, as well as processes that impede "erosion," such as a reduced slope angle or vegetation cover. By outlining how these local processes articulate, future remote sensing studies that do not have ground reconnaissance components can use this knowledge to look for factors visible on satellite photos that should be considered if "erosion" produced the landforms under consideration. In the same way, archaeological explanations often encapsulate a large number of short term processes that are difficult for archaeologists to identify directly. Middle range research – in the Mertonian instead of Binfordian sense – identifies these processual complexities "on the ground" through empirically focused ethnographic research. These findings provide a basis on which better broad range or "structural" models can be built, and pinpoint processes and other material patterning that should be considered in making archaeology's interpretive leaps.

The effects that those processes typical of household political economy have on material variability require us to rethink our understanding of the relation between patterns and processes. Rarely will archaeological patterns be a direct correlate of a single process; in most, if not all cases, explaining a material pattern will require a consideration of several interacting processes that all have a partial influence on its final character. This is not a deathblow to ethnoarchaeology's relevance. We are not, for example, forced to find some prehistoric context where an identical structure of integrated processes exists before some analogy can be usefully applied in archaeology. If this were the case, ethnoarchaeology would be forever doomed because no archaeological context will ever be exactly the same as one identified through

ethnoarchaeological research. It also does not mean that ethnoarchaeology is forever relegated to defending particularlism. Rather, it forces us to emphasize the processes themselves, the conditions that bring about their contextual (as opposed to universal) presence in some cultural settings and their partial effects on material variation. Focusing middle range research on processes allows the structures they form to be the focus of empirical study rather than the dogma that defines an investigation.

Such bottom-up knowledge of processes and the structures they form may then be applied to the archaeological situations where they most relevant. For example, household political economy will have no effect on ceramic exchange in many archaeological situations. But where patriarchical systems give men a monopoly over their wives' labor, and where women are the potters and consumers of household vessels, we may expect that household political economy will have some impact on ceramic production and exchange. Based on the findings here, an increase in domestic or agricultural labor requirements may decrease the time women can spend on ceramic production and marketing and thus result in reduced marketing ranges just like we have seen in the Pondori. To be a valid analogy, then, the archaeological context need not be an inland delta, be characterized by rice and millet farmers, or involve followers of Islam. In another case, evidence of great disparities in the distances some objects travel in the archaeological record may suggest that those objects had a more central role in the accumulation and transference of types of "capital," similar to the way enamels function here. Or, low "value" items like pottery or even foodstuffs that rarely result in specific purchasing trips by consumers, but nonetheless have a wide regional distribution in the archaeological record, may suggest that producers traveled widely or used franchise-

styled agents to market their wares. Alternatively, ideological factors, like shared religion and cultural norms, may increase distributive ranges because, as Sahlins (1972; 1976) has pointed out, they make rights and obligations in exchange predictable and secure.

As noted in chapter 2, ethnoarchaeological studies are also concerned with assessing the implications of their findings for archaeological broad range theory. As Trigger (2003a) has noted, processual and postprocessual schools in archaeology have been quite limited in their view of the causal forces impacting human behavior. The processual-postprocessual debate tended to essentialize and partition processes in mid-level theorizing in ways that reified the importance of certain axioms in their broad range models of culture (see Cunningham 2003a). Middle range findings were expected to be consistent with either a rationalist or a cultural determinist approach to human action. One of the most enduring middle range manifestations of essentialism and partitioning has been the proposed distinction between "style" and "function" in formal variability. Style and function are "statuses" archaeologist assign to material patterns (Cunningham 2003a). Functional patterns tend to be read as a reflection of the material constraints acting on material culture or the adaptive needs it addresses, while style is thought of as a manifestation of ideology or identity. In ceramics, the distinction between style and function is thought to be most clearly identifiable in the differences between decorative and morphological variation. Morphological variation is believed be to be a relatively direct reflection of the functional constraints affecting the use of a vessel, whereas decorative variation is more free from, or "adjunct" to, these functional requirements (Sackett 1977, 1986). The distinction effectively proposes which elements of formal

variability are caused by utilitarian processes (of interest from a materialist perspective) and which aspects are symbolically or socially generated (and typical of idealism). Various forms of ceramic sociology emerge from this distinction, so that decorative parallels or divergences are thought to be a direct measure of the social distance between the producers (Deetz 1965; Longacre 1970).

In the Inland Niger Delta, ethnicity has a pervasive impact on the production of ceramic variability. Its effects, however, are not limited to decorative variation alone. As previous researchers have noted in some detail, the choices made at different stages of the production sequence, or *la chaîne opératoire,* varies between ethnic groups and these distinctions result in some significant differences in both formal variability and decorative treatments (de Ceuninck 1993; Gallay 1992; Huysecom 1994a; Gallay and Huysecom 1989; LaViolette 2000). Some sorts of vessels in the region are produced by only one of the two groups of potters, while others are functional equivalents despite some significant differences in their morphology. What is perhaps most noticeable is that, unlike the standard archaeological vision of decorative variation as a distinctly "iconic" or symbolic medium, potters seem to entertain little or no consideration of ethnic symbolism when they decorate their pots. Instead, potters are primarily concerned with decorating pots in a way that they believe will generate sales. Because consumers show so little concern with ethnic symbolism in their purchases, potters do not explicitly try to create iconic decoration that reflects their identity.

This point is perhaps most clearly seen in two distinct changes in ceramics that have occurred in the region. Traditionally, Forgeron water pots tended to have long necks that constrict at the midpoint of the neck and then flare to a large mouth. The new

style of pottery – making up an estimated half the all pots for sale in the Djenné market – possesses absolutely no neck. Potters generally acknowledged that their production of this "new style" was a response to market forces – consumers tended to buy the un-necked vessels more frequently than the old high necked variety. Potters attributed the change to the desire by consumers for narrow mouthed vessels with no neck because it allowed them to use plastic or enamel plates as lids (e.g., P56). Lids made of new materials were lighter, more durable and fashionable than the heavy and fragile clay lids that are used to close the larger mouths of long necked pots. Consumers likewise noted that their preferences changed because un-necked jars were easier to use with new plastic or stainless steel drinking cups. The constricted opening of the long necked pots made it difficult to get cups down to the level of the water, especially for children (e.g., C38). The change in morphological style is thus an accommodation to the desire by consumers to use plastic and stainless steel objects.

The second change in ceramic variability is found in the almost complete replacement of incised and tool impressed decorative treatments by painted designs. As noted in the last chapter, this change is a result of market forces. The time it took to decorate a vessel with incised or tool impressed designs was not rewarded by higher prices for those pots. Prices were largely the same for well decorated or poorly decorated vessels, and, as a result, many potters "degraded" their decorative treatments to reduce their labor investments. Even pots meant to be beautifully decorated, like specially ordered marriage jars, tend to be painted. The shift to painting seems to have produced an interesting diversification in decorative motifs. Geometric designs were typical of incised vessels, but painting has allowed for the use of new decorative elements,

including stylized plant and animal imagery and even alphabetic symbols. The use of alphabetic characters especially seems to be related to an attempt to garner better sales. Mopti water jars remain the epitome of beautiful marriage pots and they often have "Souvenir de Mopti" or a bride's name written on the side in relief. Potters emulate these vessels and thus have adopted alphabetic characters despite the fact that they and their clientele often are illiterate. The letters tend to be randomly placed within the decorative fields and on occasion are even reversed.

Both changes in ceramic variability are largely caused by economic forces. Changes in ceramic variability reflect "economic" processes because, despite its embeddness in the caste structure and its ties to ethnicity, ceramic production here is primarily an economic activity. Women make pottery because they desire the income that its production brings. We would expect that changes in ceramic variability would thus reflect such role. Indeed, pottery seems to be an amazingly plastic medium, not just in terms of the forms it can take, but also in its ability to reflect divergent aspects of a social context. The point, perhaps, is to state that some caution should be used in invoking old adages like "style" and "function" that propose strong *a priori* cross-cultural relations between some aspect of material variation and a specific facet of behavior. The plasticity of ceramics makes it possible for them to reflect any number of processes that are operating in a specific cultural context – including those not normally considered in archaeological interpretations of ceramic variability.

Conclusion

Despite the tendency for vessel exchange and consumption to be tied to political economy and ceramic changes to be tied to economic forces, no one set of processes dominates these situations in a way that renders a "materialist" or "idealist" reading of either spurious or epiphenomenal. Instead, it is the combined influence of the processes typical of processualism's materialism and postprocessualism's idealism that produced the behaviors related to household vessel exchange and consumption. The "symbolic" and "inherent" qualities of vessels contribute to the ways they are used and the material patterns that they ultimately create. The implication for broad range theories in archaeology is that they have been premature in reducing all explanations of human action to the specific tenets of a preferred cultural model. Integrative approaches like Marxism that at least recognize the causal import of both ideological and economic forces are much more realistic, but they too often fall to simplifications (Trigger 1993; Kolakowski 1978, especially volume 3). In contrast, it may be necessary to maintain a certain agnosticism toward competing axiomatic positions and instead to seek to instill a degree of broad range pluralism. It would then fall to more empirically focused middle range research – research that seeks to identify the causal forces behind some cultural phenomenon or material patterns – to identify the ways that those processes articulate and hence the extent to which one model has some cross-contextual application.

CHAPTER 8
CONCLUSION

Although it may be difficult to accept, ethnoarchaeology is not as essential to archaeology as the Binfordian Model suggested. As Trigger (1989) has so clearly shown, archaeological knowledge showed progression long before the New Archaeology arrived on the scene and defined ethnoarchaeology as the key to a new, scientific archaeology. In the tumultuous years that followed ethnoarchaeology's rebirth, the changes wrought by the rejection of the New Archaeology's positivism and the rise of interpretive or hermeneutic approaches created a renewed skepticism about ethnoarchaeology's actual value (Hodder 1986a). Indeed, if archaeology did not need ethnoarchaeology before the New Archaeology – and the positivism that gave this approach wings has now been debunked – then why should anyone continue working in the field?

Understanding ethnoarchaeology's potential in post-positivist research requires first recognizing that ethnoarchaeology is not nearly as unproblematic – or archaeology as impotent – as Binford's model would propose. The same ambiguities and the same

prospects for theory ladening occur regardless of whether one studies material culture patterns from the archaeological record or whether one observes human behavior. In each case, the significance of the things observed and their identification as meaningful units of "data" ("behaviors", "practices", or "material patterns") depend on the preconceptions used to frame the study. Ethnoarchaeology can never be *the* secure anchor in archaeology's research process, the essential moment of pure empirical apprehension. Second, archaeologists are no less able than ethnographers to revise the theory they use in the light of empirical data. Despite the various ways that cultural and theoretical preconceptions frame empirical studies, the data that such framing creates have an uncanny ability to resist our wildest flights of fancy. Ideologically driven proposals about world history, such as that Native Americans did not reach "high levels" of evolution (Trigger 1989: 105-108) or that African history has few examples of state level societies and thus is of interest only because it offers a window onto early hominid history (Schmidt 1995) – are defied by archaeological data that are inconsistent with such interpretations. Archaeology is quite able to revise its own theories without the assistance of a dedicated ethnological sub-discipline.

The importance of ethnoarchaeology comes in the unique contribution that it can make in validating or revising archaeological theory. If, as post-positivist researchers now recognize, empirical data are (at least partially) a product of the theory used to frame any analysis, then advancement in our knowledge can come not just from acquiring more data (i.e., digging more sites) but also from changing the theories we use. Old sites become new again when they are interpreted in the light of different assumptions that require reconsideration, reorganization, or even a literal "remaking" of the data.

Archaeologists seek to build security and prompt change in the theories they use, for example, their theories about the nature of "style", by looking at different types of material culture on several sites, each of which is associated with a different culture area and time period. Such testing creates horizontal independencies in the theory by showing that a single body of theory applies to a wide range of archaeological situations (Wylie 2000, 2002). Ethnoarchaeological tests, however, offer more security than would be created by just another test in an archaeological context. Ethnography's practice-focused perspective on human action is significantly different from the structured or *longue durée* perspectives typically used in archaeological testing. By focusing on individuals and their daily experiences – on the things that distinguish ethnographic data from archaeological perspectives – ethnoarchaeology provides opportunities to create vertical independence in addition to the horizontal independence that comes from interrogating any theory in a new context. Wiessner (1983), for example, assessed the archaeological notion of "style" as a medium of symbolic communication by asking individuals directly whether or not they were able to read social information from San point styles. Rather than having to start her analysis by presupposing the existence of "styles" and associated social groups, she was able to consider directly the meaning that specific points had for specific individuals. Ethnoarchaeology thus offers a more focused and critical test of archaeological theory because it reduces the possibility that the findings of a test owe their results to paradigmatic knowledge or theory-ladening and thus are inescapably tautological. Ethnoarchaeological tests that build-in vertical independence yet nonetheless support archaeological propositions validate that proposition to a greater extent than would a comparable archaeological test. In the same way,

ethnoarchaeology's ability to distance itself from archaeology's background assumptions through a focus on practice offers more opportunities to revise existing theory in accordance with empirical findings.

One can imagine – as did Binford – a total program integrating archaeological and ethnoarchaeological research. Yet, the relations between archaeology and ethnoarchaeology are perhaps too complex ever to be integrated in a single program of research or a single version of "ethnoarchaeology" (David and Kramer 2001; Cunningham 2003b). For this reason, the distinct roles outlined in Chapter 2 that partitioned the Binfordian program into more manageable research foci continue to have relevance. For example, ethnoarchaeology could continue to devote itself to testing archaeological propositions about relations between material culture and human action. Archaeologists may identify a pattern in material culture, such as distinctive regional variations in rock art, and propose as an explanation that these breaks delineate a cultural tradition. Various forms of ethnoarchaeological research could be enacted to test this interpretation. Testing could examine the many processes that go into the production of rock art – or indeed any form of art – to see whether processes thought to be the corollaries of "distinct cultures" in daily practice (i.e., vertical transmission, maintenance of socio-cultural boundaries) were the primary causal forces behind this expression. Other ethnoarchaeologists might seek to refocus the "analogical consciousness" (David 1992) of archaeologists by sharing their understandings of ethnographic realities about the concepts used in this interpretation. For example, anthropologically derived critiques of holism (Brightman 1995) may be used to reconsider the archaeological notion of "cultural traditions". Finally, "interpretive discovery" (Charlton 1981) could be used to

identify unknown relations between cultural processes and material patterns. Such research could seek either to identify in as much detail as possible the multitude of factors that impact some aspect of material culture (such as rock art) or to assess the diverse impacts that a given process or set of processes (such as those related to "culture traditions") could have on material patterning in different societies or in different forms of material culture belonging to the same society (Cunningham 2003a).

The findings of this research would allow for a revision of archaeological theory related to "cultural traditions" and prompt new and more detailed archaeological investigations of rock art patterning. Yet, it is important to reiterate that such findings are not the final word on the validity of theory under assessment, but represent one element in a continuing program of theory revision. Ethnoarchaeological studies may affirm a very instrumentalist reading of the processes that affect artistic production, whether on rocks or other mediums, yet archaeological studies could continue to show that rock art in a particular region has very limited variability through time and across space. Such findings have the power to challenge instrumentalist approaches (derived from an analysis of daily practice) and prompt further ethnoarchaeological research which seeks to identify the conditions under which instrumental practices result in regional and temporal homogeneity.

The research reported in this dissertation draws upon the last focus discussed above, specifically the desire to identify relations between processes and material culture through "interpretive discovery". By seeking to identify the various processes that affect the movement of household vessels from production to consumption locales, I hope to have furthered our knowledge of the forces responsible for vessel distributions. The

findings identified in this study show just how complex are the processual configurations behind the production of material patterns. I have described such situations elsewhere as a demonstration of "processual pluralism" (Cunningham 2003b, a). As the name suggests, processual pluralism reflects a realization that many different processes may interact in the creation of a single material pattern. This is in sharp contrast to the behavioral-material isomorphisms ("one pattern = one process") that Binford hoped ethnoarchaeology would identify. Because material culture is the outcome of a web work of interacting processes, understanding actual material patterns requires considering the different processes and their relative import within a specific cultural context. For example, the change in ceramic decoration seen in Djenné reflects an attempt by potters to reduce their labor investments in potting in the face of diminishing economic returns. Ethnicity may, as is usually assumed, be the primary causal force influencing decorative variation in cultural situations where ethnic identities are politically charged and/or where ethnicity organizes individuals into corporate bodies. In the Inland Niger Delta, however, ethnic groups share relatively amicable relations and an overarching religion that integrates people across ethnic lines. Potters must sell their wares to a wide clientele including other ethnic groups to make a living, hence economic considerations would discourage strong ethnic iconism. In this particular context, decorative variation is free of the processes that often link it to ethnic symbolism and thus it has instead materialized economic change. In a pluralistic environment, understanding such change is not just a matter of identifying the key process that impacts some aspect of material culture, but also of identifying the broader causal milieu in which that process operates.

There is an important epistemic consequence of processual pluralism. If material patterns are the net result of multiple causal forces, then getting at the causal complexity behind the material patterns may require the use of several distinct lines of analysis. Rather than dogmatism, ethnoarchaeology may need to maintain a degree of pluralism both at the level of general theory and in its specific research projects. The tensions within contrasting theories – the true dialectical heart of the academic process – are what allow for these complexities to be explored. In specific projects aimed at characterizing in detail the causal forces that affect some aspect of material culture, pluralism means heeding Chamberlin's (1965) suggestion that researchers employ multiple working hypotheses. Different hypotheses identify different bodies of data and create contrasting conclusions that rupture simple tautologies. Such pluralism is an outgrowth of the desire to build independence into the methods of ethnoarchaeological and archaeological projects.

The Ethnoarchaeology of Household Vessel Exchange

Both Arnold (2000) and Stark (2003) have produced long and detailed analyses of ceramic ethnoarchaeology and their reviews point to the richness and diversity of the field. Yet, based on the findings of this study, it appears that two bodies of knowledge in the ethnoarchaeology of household containers are in particular need of more research and development.

First, ethnoarchaeology has shown little explicit concern with the consumption component of exchange systems. A perusal of detailed studies of ceramic exchange in

the ethnoarchaeological literature offers a number of different models, most of which focus on the role potters have played in determining distributions. For example, Carol Kramer's work in India points to a number of networks through which ceramics are distributed, primarily focusing on middlemen retailers, markets and patron-client relations (Kramer 1997; Kramer and Douglas 1992; see also David and Kramer 2001). When potters themselves sell their wares, they tend to do so by foot and visit villages within a 20 – 30 km region (Kramer 1997: 176). Retail shops in larger urban centers tend to draw in pottery from a wider region. Miller (1981: 225; also see 1985), working also in India, notes that potters sell primarily at the nearest village with a market, only 4 km away. Balfet (1981: 264) suggests that there is huge variation in the distances that pots tend to travel, depending on the marketing channels that they follow. In the Maghreb potters traveling on foot or with the assistance of donkeys and camels sell to markets 20 km to 30 km away. A degree of itinerancy with overnight stays extends this range to 50 km to 100 km. With the use of merchant-resellers, pottery may be sold as much as 250 km to 500 km away from its point of production. Vossen (1984), working on the assumption of non-mechanized transportation and a weekly market system, has created a model based on Moroccan potters that sees pottery moving 20-30 km from the potter household and perhaps an additional 20-30 km before entering the house compound. Finally, de Ceuninck's (1993; 2000; de Ceuninck and Mayor 1994) work in the IND suggests that pottery primarily moves through markets and typically enters each household after traveling a distance of only 17.4 km.

None of these studies emphasizes the role that consumers have in impacting the movement of objects from the point of exchange to the household. Philip Arnold's

(2000) recent overview of ceramic ethnoarchaeology jumps directly from discussions of production to household assemblages without any discussion of consumption, while Miriam Stark's review of the field shows that studies that are described as focusing explicitly on "consumption" tend to emphasize topics such as use-life and use modification, recycling and disposal of ceramics, or ties between assemblages and variables like status or house size (see Stark 2003: 208-210; e.g., Aronson, et al. 1994; Arthur 2002, 2003; Tani 1994; Deal 1998). In contrast, Hodder (1979a; 1979b; 1982b) noted some time ago that social boundaries in the Baringo district were more or less impermeable to the movement of some or all forms of material culture despite constant interaction across these boundaries. The findings suggest that, depending on the nature of the social relations across that boundary, different consumption choices are made that emphasize or diminish the materialization of those social differences. A recent study by Vander Linden (2001) in Northern Cameroon as part of the "Ceramics & Society Project" investigates consumption more directly. Vander Linden notes that less than 5% of domestic pottery is bought on the market. Most pottery is exchanged through consumers visiting potter compounds from villages within a 15 km radius (Vander Linden 2001: 143). Of the two communities that supply pottery to the ethnic group that is the focus of the investigation, one has the reputation of being the "village of pottery" because of the diversity of objects that it has available. Because of that reputation, the village services a wider area than the other. While the analysis does not go into detail, it suggests that aspects of this reputation result in preferential consumption practices *vis-à-vis* the village with more diversity.

While these studies go a long way toward envisioning a more active role for consumers in exchange relationships, they nonetheless reflect relatively isolated examples. In most cases, consumers are thought to be passive and consumption to be a product of availability and proximity (by contrast, see Stahl 2002; following Thomas 1991). The distribution of objects in such a situation is largely a product of a market's service area, reintroducing in many respects tendencies that Robert McC. Adams noted were characteristic of diffusionist approaches to exchange thirty years ago (Adams 1992 [1974]; e.g., Hirth 1998). In such scenarios, the key component underlying ceramic distributions is the choice potters and other producers make regarding which markets to attend.

The findings here, however, suggest that the distance between production location and the point of exchange may account for only a small part of the total distance objects travel. Consumers take an active role in the procurement of some types of vessels, often bypassing local markets entirely to get highly valued vessels and not even bothering to attend the market in order to obtain others. The special roles enamels and aluminums have in trousseaus and their relatively high costs mean that the majority of vessels enter the economy from markets located outside Djenné's immediate region. Women travel relatively long distances to get these objects, often making special trips that include time spent working as migrant laborers. Likewise, the small portion of consumers that bought pottery through the market tends to live in the same town as the market where they bought their pottery. In most cases, consumers would not even leave their village in order to procure these vessels. The notable exception with ceramics is marriage jars that may be purchased in Mopti or specially ordered from well reputed potters. Plastics are

the only material class that tends to be distributed primarily through local markets in a way consistent with utilitarianist and diffusionist visions of consumer behavior. They lack the symbolic importance of enamels or aluminums, but are inexpensive enough that they remain an essential part of the tool kit of even the most frugal consumer. Women replace broken plastics as they need them, often using them as a way of transforming modest profits in the market into personal items that allow them to keep their wealth. Nevertheless, the fact that such consumption accounts for only a small minority of the vessels in the average household suggests that the general applicability of the utilitarian-diffusionist model may need to be reconsidered.

Consumption studies thus have been overlooked in the ways that researchers have ignored the processes underlying the movement of vessels from the point of purchase to consumer households. Yet, the impact of consumption is not limited to this sphere. Consumer choices can also have a direct impact on the practices that craft producers follow in attempting to market their wares. This is especially true for areas where craft production is primarily driven by the desire for exchange. The relatively low value assigned to most types of pottery by consumers in the upper Delta – and the associated unwillingness of consumers to make special trips either to markets or to nearby villages to buy pots – means that potters have to be quite active in their marketing. Potters travel further to sell in franchises then would be necessary if they could sell all of their production in the closest market or in their village. Instead, potters use a number of intensive techniques to sell their pottery. They go directly to rural villages, target villages that have had a good harvest and hence have surplus agricultural produce available for exchange, use local franchise contacts to "naturalize" their pottery in that village, and

give away their pottery on credit in the hope that the social capital it generates will result in a counter-gift disproportionate to the price of the vessel. The marketing strategies that potters use cannot be disassociated from the perceptions and other purchasing choices that consumers have regarding household vessels.

The second area in ceramic studies that is often underrepresented are the relations between household political economy, labor, production and marketing. This issue is perhaps the clearest sign of a need to "thicken" ethnoarchaeological explorations of craft industries. In many areas of the world where ceramic production has not become industrialized, women tend to make up the majority of the potters. Once ceramic production becomes profitable, men tend to take over the industry. Yet, despite extensive anthropological studies of gender and household political economy in Africa and elsewhere (contributions to Hodgson and McCurdy 2001), few studies consider the ways that potting is affected by gender disparities (but see Duncan 1998). To my knowledge, none look explicitly at the material consequences of such disparities. Here, potters obliged to spend more than half their days working for their *grande famille* experienced a fifty percent reduction in the marketing ranges they could use. Potters in the Pondori shifted from wide-ranging itinerant marketing practices to the use of more localized franchises because of an increase in domestic workload. Potters who must prepare their daughter's trousseau increase their production and intensify their marketing, often by following itinerant marketing strategies that they are not allowed by their husbands' families to use at any other time. Women undertake this additional work to ensure their daughter's reputation is sound and that she enjoys the financial security and protection that a collection of enamels offers from over-exploitation by her husband's family.

Understanding craft producer practices and the ways that those practices become encoded in material patterns requires consideration of the goals, aspirations and limitations that craft producers work under and that craft production addresses.

Conclusions

Whether the focus is on potters or consumers, no accurate account of ceramic exchange in the Inland Niger Delta could be developed if it first disembedded these women potters from their current cultural and economic contexts. Ethnoarchaeological subjects cannot be removed from modernity just to make the technology they use seem more like that which is found in the archaeological record. So-called "traditional technologies" are not vestiges of some remote past that have miraculously survived into the present unchanged. The definition of ethnoarchaeology as the pursuit of unambiguous material correlates legitimized the separation of traditional technologies from the rest of culture. If relations between patterns and processes were isomorphic and held across cultural contexts, then traditional technologies could be envisioned as an isolated sub-component of culture that, regardless of changes elsewhere in a society, ought to have remained largely the same as those that operated in the past. Ethnoarchaeology quite literally could visit the past by going to the "developing world" and examining the surviving behavioral remnants of a distant past. Material patterns, however, are not isomorphic. Any pattern is always the net result of several processes that combine to determine its formation. Modernity is interwoven deeply into the fabric of material systems, rendering it impossible to disarticulate in ethnoarchaeological

research those aspects of the causal milieu that have direct archaeological relevance from those that have not.

Ethnoarchaeology has much to gain by studying the material systems that exist rather than the material systems archaeologists hope to find. Ethnoarchaeology's value to archaeological study originates in its ability to engage with ethnographic worlds. It is the opportunity afforded by ethnographic research to build vertical independence that makes ethnoarchaeological tests of archaeological theory distinct from archaeological tests of the same theory. Ethnoarchaeology is important to archaeology because, through its ongoing research, it improves archaeology's theoretical tools and thus facilitates better archaeologically-derived understandings of the past

APPENDIX I
INTERVIEW LISTS

Table I.1: Potter interviews

P1	Interview with B.S. in Djenné, October 31, 2001; March 4, 2002; March 19 2002; May 13, 2003.
P2	Interview with K.B. in Djenné, March 22, 2002.
P3	Interview with D.C. in Bangassi, May 14, 2002.
P4	Interview with B.C. in Djiguiné, March 31, 2002.
P5	Interview with F.C. in Djiguiné, March 31, 2002.
P6	Interview with F.C. in Siratinti, May 11, 2002.
P7	Interview with F.(P.)C. in Pana, May 9, 2002.
P8	Interview with H.C. in Djenné, May 21, 2002.
P9	Interview with K.C. in Soa, May 8, 2002.
P10	Interview with N.C. in Sirmou, May 10, 2002.
P11	Interview with P.C. in Soa, April 26, 2002.
P12	Interview with P.C. in Soa, April 27, 2002.
P13	Interview with T.C. in Soa, April 28, 2002.
P14	Interview with T.C. in Tomina, June 3, 2002.
P15	Interview with F.C. in Kobassa, June 7, 2002.
P16	Interview with F.D. in Perta, May 13, 2002.
P17	Interview with S.D. in Yumi, May 28, 2002.
P18	Interview with K.D. in Taga, May 14, 2002.
P19	Interview with S.D. in Diablo, May 29, 2002.
P20	Interview with M.D. in Bangassi, May 17, 2002.

P21 Interview with F.D. in Ndorobougou, March 30, 2002.
P22 Interview with I.D. in Koumaga, May 13, 2002.
P23 Interview with N.D. in Taga, May 14, 2002.
P24 Interview with M.D. in Bangassi, May 16, 2002.
P25 Interview with F.G. in Balé, March 29, 2002.
P26 Interview with D.G. in Djenné, June 4, 2002.
P27 Interview with F.G. in Bangassi, May 15, 2002.
P28 Interview with H.G. in Senoussa, April 11, 2002.
P29 Interview with H.J. in Tomina, May 23, 2002.
P30 Interview with V.J. in Djenné, May 24, 2002.
P31 Interview with K.J. in Senoussa, November 14, 2001; March 27, 2002.
P32 Interview with W.J. in Tomina on June 3, 2002.
P33 Interview with F.K. in Kobassa, June 6, 2002 (double interview with P89).
P34 Interview with H.K. in Kobassa, April 20, 2002.
P35 Interview with J.K. in Kobassa, June 6, 2002.
P36 Interview with M.K. in Ngola, April 21, 2002.
P37 Interview with K.K. in Sirabougou, April 21, 2002.
P38 Interview with H.K. in Soa, June 8, 2002.
P39 Interview with B.K. in Gania, May 11, 2002.
P40 Interview with B.K. in Djenné, March 27, 2002.
P41 Interview with F.K. in Senoussa, April 11, 2002.
P42 Interview with M.K. in Bangassi, May 17, 2002.
P43 Interview with I.K. in Tomina, May 23, 2002.
P44 Interview with F.K. in Ngola, April 21, 2002.
P45 Interview with F.K. in Bougoula, May 22, 2002 (double interview with P107).
P46 Interview with F.K. in Bangassi, May 17, 2002.
P47 Interview with H.K. in Bangassi, May 16, 2002.
P48 Interview with H.K. in Bangassi, May 16, 2002 (double interview with P53).
P49 Interview with I.K. in Yumi, March 31, 2002.
P50 Interview with K.K. in Siritinti, May 11, 2002.
P51 Interview with M.K. in Taga, May 14, 2002.
P52 Interview with M.K. in Yumi, May 28, 2002.
P53 Interview with S.K. in Bangassi, May 16, 2002 (double interview with P48).
P54 Interview with S.K. in Toumadiama, May 18, 2002.
P55 Interview with K.K. in Tonbonka, May 15, 2002.
P56 Interview with F.K. in Ngola, April 21, 2002.
P57 Interview with I.K. in Sirmou, May 10, 2002.
P58 Interview with K.K. in Toumadiama, May 18, 2002.
P59 Interview with S.K. in Djenné, June 14, 2002.
P60 Interview with T.K. in Gomitogo, April 24, 2002.
P61 Interview with F.K. in Soa, June 8, 2002.
P62 Interview with F.K. in Djenné, June 14, 2002.
P63 Interview with K.K. in Gomitogo, April 24, 2002.
P64 Interview with K.K. in Soa, April 26, 2002.
P65 Interview with K.K. in Soa, April 26, 2002.
P66 Interview with M.K. in Soa, May 8, 2002.

P67 Interview with M.K. in Pana, May 9, 2002.
P68 Interview with M.K. in Soa, June 8, 2002.
P69 Interview with N.K. in Djenné, November 20, 2001; May 31, 2002.
P70 Interview with N.K. in Djenné, June 14, 2002.
P71 Interview with P.K. in Soa, May 8, 2002.
P72 Interview with P.K. in Pana, May 9, 2002.
P73 Interview with U.K. in Pana, May 9, 2002.
P74 Interview with Y.K. in Soa, April 27, 2002.
P75 Interview with M.M. in Senoussa, April 11, 2002.
P76 Interview with F.N. in Koroboro, April 3, 2002.
P77 Interview with F.N. in Kobassa, April 16, 2002.
P78 Interview with K.N. in Kobasa, April 17, 2002.
P79 Interview with M.N. in Kobassa, April 16, 2002.
P80 Interview with M.N. in Kobassa, June 6, 2002.
P81 Interview with M.N. in Kobassa, June 7, 2002.
P82 Interview with P.N. in Kobassa, April 20, 2002.
P83 Interview with T.N. in Kobassa, April 20, 2002.
P84 Interview with T.N. in Kobassa, June 112, 2002.
P85 Interview with N.N. in Kouima, April 12, 2002.
P86 Interview with F.N. in Soa, April 28, 2002.
P87 Interview with N.N. in Kéké, April 4, 2002.
P88 Interview with N.N. in Tie, April 12, 2002.
P89 Interview with K.N. in Kobassa, June 6, 2002 (double interview with P33).
P90 Interview with P.N. in Gania, November 18, 2001; May 11, 2002.
P91 Interview with T.N. in Sirmou, May 10, 2002.
P92 Interview with M.N. in Kobassa, June 7, 2002.
P93 Interview with K.S. in Djenné, November 21, 2001.
P94 Interview with K.S. in Taga, November 22, 2001; May 14, 2002.
P95 Interview with M.S. in Gomitogo, April 24, 2002.
P96 Interview with N.S. in Djenné, April 10, 2002.
P97 Interview with F.S. in Soa, April 27, 2002.
P98 Interview with M.S. in Soa, April 27, 2002.
P99 Interview with M.S. in Soa, June 9, 2002.
P100 Interview with F.S. in Djenné, May 7, 2002.
P101 Interview with B.S. in Djenné, date unknown.
P102 Interview with B.S.(C.) in Djenné on May 27, 2002.
P103 Interview with H.S. in Djenné, April 2, 2002.
P104 Interview with I.S. in Djenné, November 14, 2001; March 20, 2002.
P105 Interview with N.S. in Djenné, November 15, 2001; March 21, 2002.
P106 Interview with P.S. in Djenné, November 14, 2001; March 23, 2002.
P107 Interview with K.T. in Bougoula, May 22, 2002 (double interview with P45).
P108 Interview with K.T. in Bougoula, May 22, 2002.
P109 Interview with N.T. in Djenné, November 20, 2001; May 21, 2002.
P110 Interview with N.N. in Kobassa, April 17, 2002.

Table I.2: Consumer interviews

C1 Interview with F.J. in Gomitogo, February 26, 2003.
C2 Interview with B.K. in Gomitogo, February 25, 2003.
C3 Interview with J.T. in Gomitogo, February 25, 2003.
C4 Interview with F.S. in Soa, February 27, 2003.
C5 Interview with N.G. in Soa, February 27, 2003.
C6 Interview with P.T. in Soa, February 27, 2003.
C7 Interview with M.S. in Nogouna, February 28, 2003.
C8 Interview with F.K. in Nogouna, February 28, 2003.
C9 Interview with N.K. in Kobassa, February 28, 2003.
C10 Interview with F.S. in Kobassa, February 28, 2003.
C11 Interview with H.K. in Sirabougou, March 1, 2003.
C12 Interview with H.T. in Sirabougou, March 1, 2003.
C13 Interview with B.T. in Sirabougou, March 1, 2003.
C14 Interview with I.B. in Sirabougou, March 1, 2003.
C15 Interview with M.D. in Soala, March 1, 2003.
C16 Interview with N.T. in Diablo, March 1, 2003.
C17 Interview with D.D. in Soala, March 1, 2003.
C18 Interview with M.B. in Diablo, March 1, 2003.
C19 Interview with F.K. in Saron-Tonbo, March 2, 2003.
C20 Interview with B.K. in Saron-Tonbo, March 2, 2003.
C21 Interview with M.K. in Koui, March 2, 2003.
C22 Interview with K.K. in Tako, March 2, 2003.
C23 Interview with M.T. in Tatia, March 2, 2003.
C24 Interview with D.B. in Tonbonka, March 2, 2003.
C25 Interview with M.K. in Siné, March 2, 2003.
C26 Interview with N.T. in Siné, March 2, 2003.
C27 Interview with U.B. in Soala, March 3, 2003.
C28 Interview with F.S. in Yéra, March 3, 2003.
C29 Interview with F.N. in Gomitogo, March 3, 2003.
C30 Interview with M.D. in Gomitogo, March 3, 2003.
C31 Interview with F.K. in Yéra, March 3, 2003.
C32 Interview with N.T. in Kera, March 4, 2003.
C33 Interview with J.K. in Perta, March 4, 2003.
C34 Interview with K.J. in Tiékorabougou, March 4, 2003.
C35 Interview with F.B. in Balé, March 4, 2003.
C36 Interview with H.M in Waya, March 4, 2003
C37 Interview with K.K. in Baratou, March 4, 2003.
C38 Interview with H.J. in Taga, March 5, 2003.
C39 Interview with I.K. in Taga, March 5, 2003.
C40 Interview with H.K. in Taga, March 5, 2003.
C41 Interview with J.T. in Niala, March 5, 2003.
C42 Interview with K.A.B. in Koumaga, March 5, 2003.
C43 Interview with F.K. in Koumaga, March 5, 2003.

C44 Interview with A.B. in Koumaga, March 5, 2003.
C45 Interview with K.M. in Niala, March 5, 2003.
C46 Interview with M.T. in Kolélé, March 6, 2003.
C47 Interview with F.C. in Kolélé, March 6, 2003.
C48 Interview with K.B. in Kolélé, March 6, 2003.
C49 Interview with M.G. in Kolélé, March 6, 2003.
C50 Interview with A.C. in Wonon, March 6, 2003.
C51 Interview with M.K. in Weraka, March 6, 2003.
C52 Interview with F.T. in Weraka, March 6, 2003.
C53 Interview with F.C. in Souman-Bozo, March 7, 2003.
C54 Interview with B.T. in Souman-Bambara, March 7, 2003.
C55 Interview with G.K. in Gania, March 7, 2003.
C56 Interview with I.J. in Gania, March 7, 2003.
C57 Interview with K.T. in Koina, March 7, 2003.
C58 Interview with K.C. in Koina, March 7, 2003.
C59 Interview with F.C. in Gania, March 7, 2003.
C60 Interview with D.D. in Gania, March 7, 2003.
C61 Interview with N.S. in Gania, March 7, 2003.
C62 Interview with F.K. in Toumi-Diaka, March 8, 2003.
C63 Interview with U.T. in Koba, March 8, 2003.
C64 Interview with S.D. in Payaba, March 8, 2003.
C65 Interview with K.C. in Djimatogo, March 8, 2003.
C66 Interview with M.B. in Yébé, March 8, 2003.
C67 Interview with T.P. in Yébé, March 8, 2003.
C68 Interview with A.C. in Yébé, March 8, 2003.
C69 Interview with I.K. in Soumatogo, March 9, 2003.
C70 Interview with K.K. in Siratinti, March 9, 2003.
C71 Interview with H.T. in Siratinti, March 9, 2003.
C72 Interview with H.J. in Yantela, March 9, 2003.
C73 Interview with D.K. in Yantela, March 9, 2003.
C74 Interview with W.T. in Kotola, March 9, 2003.
C75 Interview with F.T. in Sirmou, March 9, 2003.
C76 Interview with T.S. in Sirmou, March 9, 2003.
C77 Interview with F.C. in Gomnikouboi, March 10, 2003.
C78 Interview with M.C. in Vélingara, March 10, 2003.
C79 Interview with F.T. in Kammraga, March 10, 2003.
C80 Interview with B.C. in Senoussa, March 11, 2003.
C81 Interview with I.C. in Senoussa, March 11, 2003.
C82 Interview with F.B. in Senoussa, March 11, 2003.
C83 Interview with F.S. in Senoussa, March 11, 2003.
C84 Interview with T.S. in Senoussa, March 11, 2003.
C85 Interview with F.K. in Senoussa, March 11, 2003.
C86 Interview with D.G. in Senoussa, March 11, 2003.
C87 Interview with W.K. in Djenné, March 12, 2003.
C88 Interview with J.K. in Djenné, March 12, 2003.
C89 Interview with K.B. in Djenné, March 12, 2003.

C90 Interview with D.S.S. in Djenné, March 12, 2003
C91 Interview with F.G. in Djenné, March 12, 2003.
C92 Interview with D.T. in Djenné, March 21, 2003.
C93 Interview with K.N. in Djenné, March 12, 2003.
C94 Interview with B.D. in Djenné, March 12, 2003.
C95 Interview with M.G. in Djenné, March 12, 2003.
C96 Interview with L.T. in Djenné, March 13, 2003.
C97 Interview with I.D. in Djenné, March 13, 2003.
C98 Interview with B.T. in Djenné, March 13, 2003.
C99 Interview with P.K. in Djenné, March 13, 2003.
C100 Interview with K.S. in Djenné, March 13, 2003.

APPENDIX II
INTERVIEW FORMS

Potter Interviews

POTTER AND LOCATION

Name: Village:

Salient Identities: GPS:

Map Reference: Learned potting from:

Age and Marital Status: Works with:

CERAMIC VARIATION

Types Made	Sold at	Sold when	Price	Types Made	Sold at	Sold when	Price

(t) transportable
(nt) not transportable

Features identified by the potter as unique and their justifications:

Photo #'s:

MARKETING

Where are the pots sold?			
Perceived distance:			
Social contacts:			
Frequency			
Main Types Sold			
Transportation: (include cost estimates per visit)			
To Whom			
. Exchange type:			

Notes:

How's business?

GENERATIONAL CHANGE

Are there any characteristics that distinguish your pottery from the pottery made by the person who taught you to make pottery?

Are there any things I could look for that would tell me if I was looking at a pot from 30 years ago rather than one from today?

FINANCIAL INFORMATION

What does your husband do for a living?

What is your estimated monthly income for the household?

How much of that monthly income comes from your potting?

How do you come up with the price for each type of pot? Do you consider that price to be a reflection of its actual value? (is value based on labour inputs & production costs or on market forces)

Who owns the pottery you make? (Who has the right to give it away? Husband? Cowives? Children?)

Who gets the money from each sale? Normally, what is the money gained from pottery sales used for?

Who or what do you consider to be direct sources of competition for your products? How do you adjust to competition?

Does someone other than you ever sell your pottery for you? Do you ever sell to middlemen?

Do you have a storage location near where you sell your pottery?

Has your economic situation changed in the last 10 years, 20 years . . . ? How? Why do you think there has been a change?

How do natural factors affect your marketing strategies? For example, to you think the possibility that any change in the water levels as a result of the Bani Dam will affect your livelihood? How do you expect you will address this change?

BREAKAGE RATES, ETC.

Do some pots break more often (and need to be replaced more) than others?

What is the difference between traditional medicine preparation pots and sauce pots or cooking pots?

Consumer Interviews & Census

Name: Village:

Ethnicity: Date:

Occupants & occupations:

1. Who owns the vessels (husband, wives, specific wife, household)? Can anyone sell the pot a second time, or give it away?

2. Potters or Potting knowledge?

3. Marché(s) visited & transportation costs:

4. From whom do you usually buy pottery (Relations? Where? Trans Cost? Alternatives?):

. . plastics:

. . enamels:

. . aluminum:

5. How do you go about buying vessels? Is it preplanned? Do you usually go to one place? Do you buy from a specific potter or a specific group of potters? Do you comparison shop for pottery?

6. How do you go about selecting a specific pot? What criteria do you consider? What makes a pot beautiful or desirable?

7. Are there specific vessels you want but cannot buy? Why do you want these objects? Why can't you buy these objects (Cost, rarity)?

8. Do you feel ethnicity is important in the IND? Are there any relations between identity (ethnicity) and pottery? What are they?

9. What type of recipients would someone own (and why) if they were rich:

. . . poor:

. . . Peul:

. . . Forgeron:

. . . traditional:

. . . modern:

PILE SORTS

A) Pots & New Materials:

1. "Tell me about the pots in these pictures":

1	16
2	17
3	18
4	19
5	20
6	21
7	22
8	23
9	24
10	25
11	26
12	27
13	28
14	29
15	30

2. "Sort these pictures into groups of vessels that go together"

3. "Sort these pictures into groups according to which vessels you desire, don't desire, or have no opinion"

B) Pottery:

1. "Can you sort these pots according to who made them?"

Map Key	Vessel type and present use	Rarity	Age	Typical discard location.	Bought by? Name or relation.	Age	M / F	Where bought? Trans & Trans cost?	P / L	Bought from? social relation?	C B G	Exchanged for? Cost? Good Price?	Why was this one bought? Quality (funct & aesth). Did it meet expectations? Notes.
P / Pr		R / C					M / F		P / L		C B G		
P / Pr		R / C					M / F		P / L		C B G		
P / Pr		R / C					M / F		P / L		C B G		
P / Pr		R / C					M / F		P / L		C B G		
P / Pr		R / C					M / F		P / L		C B G		
P / Pr		R / C					M / F		P / L		C B G		
P / Pr		R / C					M / F		P / L		C B G		
P / Pr		R / C					M / F		P / L		C B G		
P / Pr		R / C					M / F		P / L		C B G		

Date:_____ Town: _____ Household:_____

APPENDIX III
TABLES

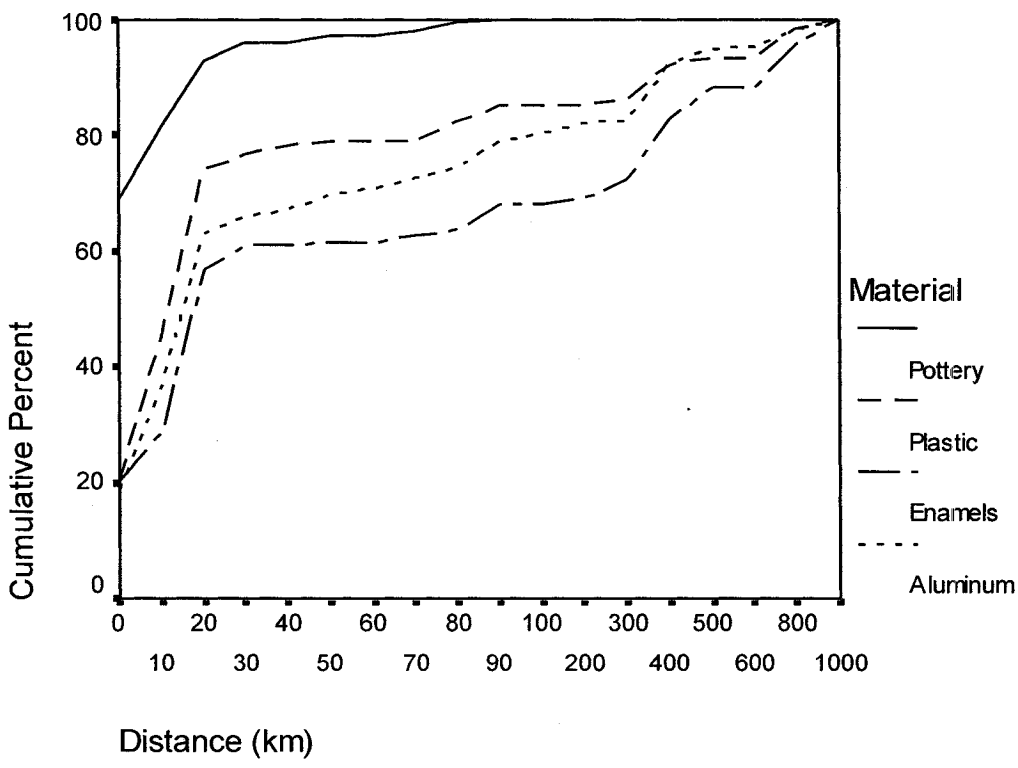


Figure III.1: Cumulative percent of household vessels by distance.

Table III.1: Transportation costs to primary, secondary and tertiary markets.

	N	Min. (CFA)	Max. (CFA)	Mean (CFA)	Std. Deviation
Transportation cost to Primary Market	102	0	1500	190.20	234.947
Transportation cost to Secondary Market	40	50	2500	481.25	487.627
Transportation cost to Third Market	15	350	1000	556.67	191.672

Table III.2: How consumers usually buy pottery.

How do you routinely buy pottery?	Frequency	Percent	Valid Percent
In my village from local potters	24	21.1	22.9
In a market	30	26.3	28.6
In my village from a visiting potter	28	24.6	26.7
I usually have to leave my village to buy pots	23	20.2	21.9
Total	105	92.1	100.0
Unknown	9	7.9	
Total	114	100.0	

Table III.3: Vessels described by consumers as the most desirable.

Most desired vessel	Frequency	Percent	Valid Percent
Gas brazier	3	2.6	3.0
Stainless steel serving dish ("Super")	14	12.3	14.1
Enamel serving dish	26	22.8	26.3
Enamel wash basin	7	6.1	7.1
Aluminum caldron	32	28.9	33.3
Tin bucket	3	2.6	3.0
Aluminum wash basin	8	7.0	8.1
Plastic bucket	2	1.8	2.0
Total	99	86.8	100.0
Unknown	15	13.2	
Total	114	100.0	

Table III.4: Main vessel types identified in the census, including frequencies & mean distance traveled before entering the household.

Vessel Type	Frequency	Percent	Valid Percent	Average Distance (km)
Ceramics				
Water Jar	330	15.5	15.5	8.2
Cook Pot	27	1.3	1.3	3.2
Sauce Jar	54	2.5	2.5	5.5
Medicine Jar	19	.9	.9	3.0
Footed Medicine Jar	2	.1	.1	0.0
Wash pot (for hands)	29	1.4	1.4	2.6
Wash Pot (portable)	12	.6	.6	6.5
Toilet Jar	22	1.0	1.0	3.1
Charcoal Brazier	14	.7	.7	4.7
Wood Brazier	21	1.0	1.0	6.1
Pot Stands	30	1.4	1.4	0.0
Recycled Pot (pot stand)	20	.9	.9	2.3
Steamer	16	.8	.8	4.9
Lid	27	1.3	1.3	6.1
Rice Soaker/Cattle Waterer	74	3.5	3.5	1.7
Chicken Waterer	4	.2	.2	0.0
Recycled Pot (animal feeder)	6	.3	.3	3.5
Stool	23	1.1	1.1	2.1
Toys	1	.0	.0	0.0
Bed Legs	6	.3	.3	8.1
Cotton Pot	2	.1	.1	0.0
Cake Maker	2	.1	.1	0.0
Gutter	2	.1	.1	0.0
Plastics				
Plastic Bowl	29	1.4	1.4	40.6
Plastic Cup	9	.4	.4	9.0
Plastic Kettle	90	4.2	4.2	93.2
Plastic Server	73	3.4	3.4	151.7
Plastic Bucket	162	7.6	7.6	75.8
Plastic Wash Basin	26	1.2	1.2	198.2
Enamels				
Enamel Server	290	13.6	13.6	232.5
Stainless Steel Server	40	1.9	1.9	284.8
Enamel Casserole	141	6.6	6.6	unknown
Enamel Wash Basin	6	.3	.3	105.9
Enamel Kettle	2	.1	.1	unknown
Aluminum & Tin				
Caldron	358	16.8	16.8	102.3
Aluminum Kettle	5	.2	.2	209.6
Tin Cook Pot	17	.8	.8	unknown
Aluminum Bowl	8	.4	.4	8.2
Tin Server	34	1.6	1.6	137.9
Aluminum Wash Basin	44	2.1	2.1	125.5
Tin Bucket	51	2.4	2.4	119.0
Total	2128	99.8	100.0	98.4
Unknown	4	.2		
	2132	100.0		

Table III.5: Relationships between vessel material types and how they are acquired by consumers.

		Exchange Type								Total
Material Type		Paid Cash	Barter	Gift	Inherited	Found	Delayed Reciprocity	On Loan	Made by Owner	
Pottery	Count	236	103	87	103	50	7	12	6	604
	% within Material Type	39.1%	17.1%	14.4%	17.1%	8.3%	1.2%	2.0%	1.0%	100.0%
	% within Exchange Type	24.1%	97.2%	31.2%	75.7%	83.3%	87.5%	31.6%	100.0%	37.4%
Plastic	Count	300	2	43	2			9		356
	% within Material Type	84.3%	.6%	12.1%	.6%			2.5%		100.0%
	% within Exchange Type	30.6%	1.9%	15.4%	1.5%			23.7%		22.1%
Enamels	Count	165		74	11	3		2		255
	% within Material Type	64.7%		29.0%	4.3%	1.2%		.8%		100.0%
	% within Exchange Type	16.8%		26.5%	8.1%	5.0%		5.3%		15.8%
Aluminum	Count	279	1	75	20	7	1	15		398
	% within Material Type	70.1%	.3%	18.8%	5.0%	1.8%	.3%	3.8%		100.0%
	% within Exchange Type	28.5%	.9%	26.9%	14.7%	11.7%	12.5%	39.5%		24.7%
Total	Count	980	106	279	136	60	8	38	6	1613
	% within Material Type	60.8%	6.6%	17.3%	8.4%	3.7%	.5%	2.4%	.4%	100.0%
	% within Exchange Type	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table III.6: Consumer relations with vender by material type.

Material Type		Relationship to Seller				Total
		none	acquaintance	friend	family	
Pottery	Count	263	87	32	11	393
	% within Material Type	66.9%	22.1%	8.1%	2.8%	100.0%
	% within Relationship to Seller	25.5%	91.6%	100.0%	61.1%	33.4%
Plastic	Count	306	4			310
	% within Material Type	98.7%	1.3%			100.0%
	% within Relationship to Seller	29.7%	4.2%			26.4%
Enamels	Count	171			1	172
	% within Material Type	99.4%			.6%	100.0%
	% within Relationship to Seller	16.6%			5.6%	14.6%
Aluminum	Count	291	4		6	301
	% within Material Type	96.7%	1.3%		2.0%	100.0%
	% within Relationship to Seller	28.2%	4.2%		33.3%	25.6%
Total	Count	1031	95	32	18	1176
	% within Material Type	87.7%	8.1%	2.7%	1.5%	100.0%
	% within Relationship to Seller	100.0%	100.0%	100.0%	100.0%	100.0%

Table III.7: Occupations of potters' husbands.

	Frequency	Percent	Valid Percent
Craft Producers			
Ironworker	12	10.9	11.1
Leatherworker	5	4.5	4.6
Jeweler	1	.9	.9
Woodworker	1	.9	.9
Total			*17.5*
Diversified Craft Producers			
Ironworker & Cultivator	38	34.5	35.2
Woodworker & Cultivator	3	2.7	2.8
Leatherworker & Cultivator	2	1.8	1.9
Cultivator (Ironworker)	1	.9	.9
Ironworker, Cultivator & Fisherman	1	.9	.9
Tailor & Cultivator	1	.9	.9
Weaver & Cultivator	1	.9	.9
Mason & Cultivator	1	.9	.9
Ironworker & Merchant	1	.9	.9
Total			*42.6*
Primary Industry			
Cultivator	11	10.0	10.2
Fisherman	2	1.8	1.9
Fisherman & Cultivator	2	1.8	1.9
Hunter	1	.9	.9
Total			*14.9*
Other			
Cultivator and Marabout	2	1.8	1.9
Cultivator (& Merchant)	2	1.8	1.9
Marabout	1	.9	.9
Unapplicable	1	.9	.9
Divorced	1	.9	.9
Deceased	17	15.5	15.7
Total	**108**	**98.2**	**100.0**
Unknown	2	1.8	
Total	110	100.0	

Table III.8: Structure of potter work groups.

	Frequency	Percent	Valid Percent	Cumulative Percent
Alone	40	36.4	37.0	37.0
Retired	1	.9	.9	38.0
Neighbor	1	.9	.9	38.9
Cousin	2	1.8	1.9	40.7
Mother in law	1	.9	.9	41.7
Mother	5	4.5	4.6	46.3
Sister(s)	3	2.7	2.8	49.1
Daughter(s)	14	12.7	13.0	62.0
Daughters & granddaughters	2	1.8	1.9	63.9
Daughter(s) & daughter(s) in law	2	1.8	1.9	65.7
Daughter(s) in law	4	3.6	3.7	69.4
Cowife	6	5.5	5.6	75.0
Sister(s) in law	16	14.5	14.8	89.8
Grand famille workgroup	7	6.4	6.5	96.3
Granddaughter	4	3.6	3.7	100.0
Total	108	98.2	100.0	
Unknown	2	1.8		
Total	110	100.0		

Table III.9: Social relationships between potters and their instructor.

	Frequency	Percent	Valid Percent	Cumulative Percent
Mother	67	60.9	60.9	60.9
Neighbor	2	1.8	1.8	62.7
Mother & then mother in law	1	.9	.9	63.6
Grandfather	1	.9	.9	64.5
Mother in law	11	10.0	10.0	74.5
Grandmother	5	4.5	4.5	79.1
Sister	1	.9	.9	80.0
Sister in law	5	4.5	4.5	84.5
Mother & grandmother	6	5.5	5.5	90.0
Father	1	.9	.9	90.9
Aunt	9	8.2	8.2	99.1
Brother	1	.9	.9	100.0
Total	110	100.0	100.0	

Table III.10: What potters state they normally receive in exchange for their pottery.

	Frequency	Percent	Valid Percent	Cumulative Percent
Cash	20	18.2	18.7	18.7
Cash & cereals	77	70.0	72.0	90.7
Rice or millet	5	4.5	4.7	95.3
Condiments	1	.9	.9	96.3
Mixed	4	3.6	3.7	100.0
Total	107	97.3	100.0	
Unknown	3	2.7		
	110	100.0		

Table III.11: What happens to the cereals potters receive in exchange for pottery.

	Frequency	Percent	Valid Percent	Cumulative Percent
Sells	8	7.3	8.6	8.6
Eaten by *petite famille*	33	30.0	35.5	44.1
Eaten by *grande famille*	31	28.2	33.3	77.4
Given to her mother	1	.9	1.1	78.5
Never receives cereals	20	18.2	21.5	100.0
Total	93	84.5	100.0	
Unknown	17	15.5		
	110	100.0		

Table III.12: Who normally "holds" onto the cash received in exchange for pottery.

	Frequency	Percent	Valid Percent	Cumulative Percent
Potter	90	81.8	84.1	84.1
Mother	2	1.8	1.9	86.0
Mother in law	2	1.8	1.9	87.9
Husband	8	7.3	7.5	95.3
Save for daughter	1	.9	.9	96.3
Pooled for household	3	2.7	2.8	99.1
Son	1	.9	.9	100.0
Total	107	97.3	100.0	
Unknown	3	2.7		
	110	100.0		

Table III.13: Cross-tabulation of social contacts by marketing strategies.

Marketing Strategy		Social Contacts				Total
		None	Acquaintance	Friend	Family	
Local sales	Count	1	2			3
	% within Marketing Strategy	33.3%	66.7%			100.0%
	% within Social Contacts	1.8%	.6%			.6%
Neighboring village	Count	31	12	1	3	47
	% within Marketing Strategy	66.0%	25.5%	2.1%	6.4%	100.0%
	% within Social Contacts	54.4%	3.3%	5.3%	10.7%	10.2%
Franchise	Count	4	272	13	20	309
	% within Marketing Strategy	1.3%	88.0%	4.2%	6.5%	100.0%
	% within Social Contacts	7.0%	75.8%	68.4%	71.4%	66.7%
Market	Count	13	56	3	3	75
	% within Marketing Strategy	17.3%	74.7%	4.0%	4.0%	100.0%
	% within Social Contacts	22.8%	15.6%	15.8%	10.7%	16.2%
Itinerant marketing	Count	7	2			9
	% within Marketing Strategy	77.8%	22.2%			100.0%
	% within Social Contacts	12.3%	.6%			1.9%
Itinerant production	Count	1	15	2	2	20
	% within Marketing Strategy	5.0%	75.0%	10.0%	10.0%	100.0%
	% within Social Contacts	1.8%	4.2%	10.5%	7.1%	4.3%
Total	Count	57	359	19	28	463
	% within Marketing Strategy	12.3%	77.5%	4.1%	6.0%	100.0%
	% within Social Contacts	100.0%	100.0%	100.0%	100.0%	100.0%

Table III.14: Cross-tabulation of social contacts and their role in marketing

		Contacts Role					Total
		Accommod-ation	Store	Store and sell	Accommod-ation, store & sell	None	
Acquaint-ance	Count	83	22	192	29	2	328
	% within Social Contacts	25.3%	6.7%	58.5%	8.8%	.6%	100.0%
	% within Contacts Role	76.1%	91.7%	94.1%	85.3%	50.0%	87.5%
Friend	Count	12	1	4	1	1	19
	% within Social Contacts	63.2%	5.3%	21.1%	5.3%	5.3%	100.0%
	% within Contacts Role	11.0%	4.2%	2.0%	2.9%	25.0%	5.1%
Family	Count	14	1	8	4	1	28
	% within Social Contacts	50.0%	3.6%	28.6%	14.3%	3.6%	100.0%
	% within Contacts Role	12.8%	4.2%	3.9%	11.8%	25.0%	7.5%
Total	Count	109	24	204	34	4	375
	% within Social Contacts	29.1%	6.4%	54.4%	9.1%	1.1%	100.0%
	% within Contacts Role	100 %	100 %	100 %	100 %	100 %	100 %

Table III.15: Relationship between transportation types and marketing strategies

Transportation (Tr.)		Marketing Strategy (M.S.)						Total
		Local sales	Neighbor-ing village	Franchise	Market	Itinerant marketing	Reseller	
No transportation	Count	133			23		1	157
	% within Tr.	84.7%			14.6%		.6%	100.0%
	% within M.S.	97.8%			23.7%		50.0%	25.2%
On foot	Count	2	20	6	6			34
	% within Tr.	5.9%	58.8%	17.6%	17.6%			100.0%
	% within M.S.	1.5%	40.0%	1.9%	6.2%			5.5%
Donkey cart	Count	1	17	127	18	2		165
	% within Tr.	.6%	10.3%	77.0%	10.9%	1.2%		100.0%
	% within M.S.	.7%	34.0%	41.0%	18.6%	7.1%		26.5%
Wagon	Count		12	169	16		1	198
	% within Tr.		6.1%	85.4%	8.1%		.5%	100.0%
	% within M.S.		24.0%	54.5%	16.5%		50.0%	31.8%
Bush taxi (wagon)	Count			1	30			31
	% within Tr.			3.2%	96.8%			100.0%
	% within M.S.			.3%	30.9%			5.0%
Pirogue	Count		1	7	1	26		35
	% within Tr.		2.9%	20.0%	2.9%	74.3%		100.0%
	% within M.S.		2.0%	2.3%	1.0%	92.9%		5.6%
Bush taxi (pirogue)	Count				2			2
	% within Tr.				100.0%			100.0%
	% within M.S.				2.1%			.3%
Combination pirogue & wagon	Count				1			1
	% within Tr.				100.0%			100.0%
	% within M.S.				1.0%			.2%
Total	Count	136	50	310	97	28	2	623
	% within Tr.	21.8%	8.0%	49.8%	15.6%	4.5%	.3%	100.0%
	% within M.S.	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table III.16: Comparison of the ethnicity of potters in consumers in marketing trips.

Usual Buyer's Ethnicity		Potter's Ethnicity					Total
		Griot	Bambara	Bozo	Somono	Forgeron	
Bambara	Count	5	5		36	61	107
	% within Buyer Ethnicity	4.7%	4.7%		33.6%	57.0%	100.0%
	% within Potter Ethnicity	5.5%	31.3%		22.9%	26.3%	21.0%
Marka	Count		3		29	15	47
	% within Buyer Ethnicity		6.4%		61.7%	31.9%	100.0%
	% within Potter Ethnicity		18.8%		18.5%	6.5%	9.2%
Peul	Count	11			3	4	18
	% within Buyer Ethnicity	61.1%			16.7%	22.2%	100.0%
	% within Potter Ethnicity	12.1%			1.9%	1.7%	3.5%
RimaiBe	Count	9				1	10
	% within Buyer Ethnicity	90.0%				10.0%	100.0%
	% within Potter Ethnicity	9.9%				.4%	2.0%
Somono	Count				6	7	13
	% within Buyer Ethnicity				46.2%	53.8%	100.0%
	% within Potter Ethnicity				3.8%	3.0%	2.6%
Djenneké	Count			1			1
	% within Buyer Ethnicity			100.0%			100.0%
	% within Potter Ethnicity			7.7%			.2%
"Anyone"	Count	65	8	5	59	126	263
	% within Buyer Ethnicity	24.7%	3.0%	1.9%	22.4%	47.9%	100.0%
	% within Potter Ethnicity	71.4%	50.0%	38.5%	37.6%	54.3%	51.7%
Malinké	Count	1					1
	% within Buyer Ethnicity	100.0%					100.0%
	% within Potter Ethnicity	1.1%					.2%
Bobo	Count				20	17	37
	% within Buyer Ethnicity				54.1%	45.9%	100.0%
	% within Potter Ethnicity				12.7%	7.3%	7.3%
Bozo	Count			7	4		11
	% within Buyer Ethnicity			63.6%	36.4%		100.0%
	% within Potter Ethnicity			53.8%	2.5%		2.2%
Forgeron	Count					1	1
	% within Buyer Ethnicity					100.0%	100.0%
	% within Potter Ethnicity					.4%	.2%
Total	Count	91	16	13	157	232	509
	% within Buyer Ethnicity	17.9%	3.1%	2.6%	30.8%	45.6%	100.0%
	% within Potter Ethnicity	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table III.17: Transportation types, average cost and average distance.

Transportation type	Mean cost (CFA)	Standard deviation	Mean distance (km)	Standard deviation
On foot	n/a	n/a	4.7	2.6
Donkey cart	1264	1101	9.7	5.5
Horse or ox drawn wagon	1893	1252	14.6	7.5
Pirogue	1893	2498	16.0	8.7
Community charette	262	172	10.2	3.2

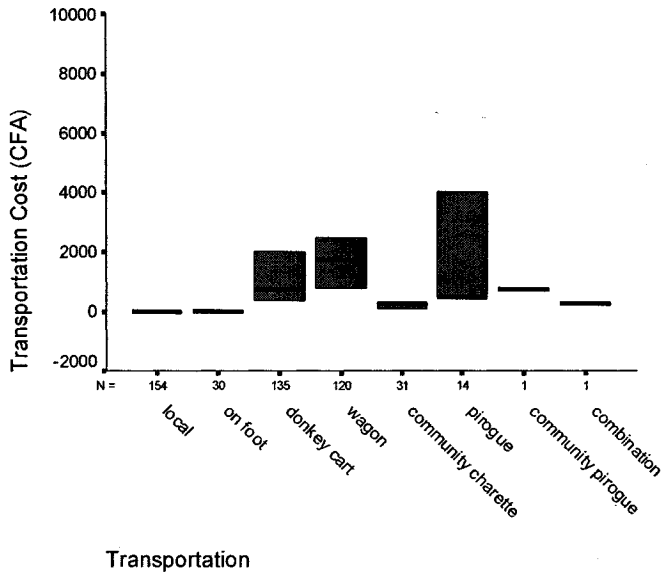


Figure III.2: Box and whisker plot of the cost of different forms of transportation.

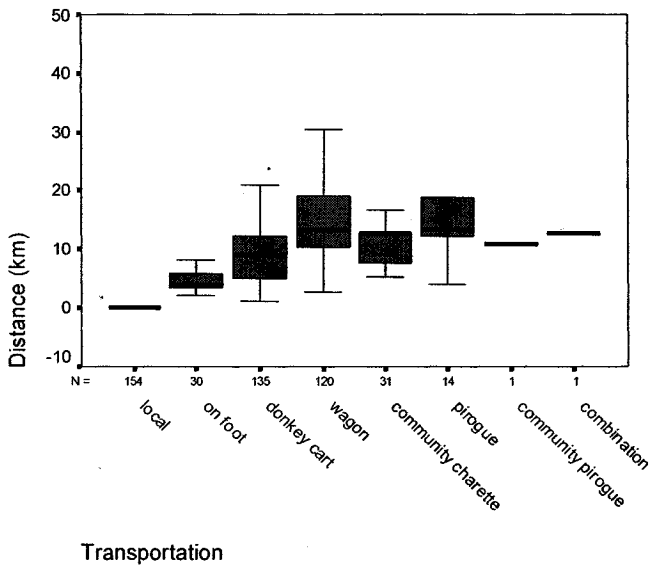


Figure III.3: Box and whisker plot of average distances traveled by transport type.

APPENDIX IV
ETHICS CERTIFICATE

McGill

Research Ethics Board Office
c/o Lynda McNeil, Research Ethics Officer
Research Grants Office
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Sept.20, 2001

Jerimy Cunningham
Anthropology
Leacock Bldg.

RE: Ceramic Consumption in the Inland Niger Delta of Mali: An Ethnoarchaeological Study (Supervisor: Dr. B. Trigger)

In accordance with the Tri-Council Policy Statement for Research Involving Humans, the University Research Ethics Board-1 reviewed the above project submission at its meeting of Sept.18, 2001 and the committee approved the project.

The committee noted that in the ethics form and in the consent form the word synonym should be replaced by the word pseudonym. It was indicated that the researcher will make copies of the research upon request. The committee suggests that, as a matter of routine, theses and other documents should be made available to the host country and/or host institution.

Sincerely,

John Galaty, Ph.D.
Chair, REB-1

cc: Dr. B. Trigger

McGill

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Research Ethics Board I
Certificate of Ethical Acceptability of Research Involving Humans

Project Title: Ceramic Consumption in the Inland Niger Delta of Mali: An Ethnoarchaeological Study

Applicant's Name: Jerimy J. Cunningham Department: Anthropology

Undergraduate Student ( ) Master's Student ( ) Ph.D. student (x)

Supervisor's Name: Dr. Bruce Trigger

This project was approved on 18/09/2001

Expedited Review _____ Full Review ✓

Departmental Level Review : For research projects that are carried out by undergraduate or graduate students as part of their course work – course number:

_____
(Signature of departmental designate/ date)

_____ 19/09/2001
Signature/Date

John Galaty, Ph.D.
Chair, REB I

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