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ORIGINAL ARTICLE

Ceramic Production and Dietary Changes at Juffure, Gambia

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Abstract This paper explores the connection between ceramic production and dietary changes immediately before, during, and through the decline of the Atlantic trade at Juffure on the Gambia River. The height of the Atlantic trade in the eighteenth century was a period of increased ceramic production and technical experimentation. Simultaneously, there is increase in the diversity of consumption evident in the faunal and botanical remains recovered. This diversity, in both ceramic manufacture and diet, all but disappears with the decline of the Atlantic trade on the river. It is argued that the greater variety observed in ceramic manufacture during the height of the Atlantic trade is related to social practices of display associated with food. This is accomplished through a comparison of everyday and special events composed of displays of food and wealth across ethnic boundaries. These are indicative of different traditions of consumption and discard rather than signaling ethnic differentiation.

Résumé Cet article explore le lien entre la production de céramique et des changements alimentaires immédiatement avant, pendant, et par le déclin de la traite atlantique à Juffure sur le fleuve Gambie. La hauteur de la traite atlantique dans le 18ème siècle a été une période de hausse de la production de céramique et de l'expérimentation technique. En même temps, il ya augmentation de la diversité de la consommation évidente dans les restes fauniques et botaniques récupérés. Cette diversité, à la fois dans la fabrication de céramique et de l'alimentation, mais tout disparaît avec le déclin de la traite atlantique sur la rivière. Il fait valoir que la plus grande variété observée dans la fabrication de céramique à l'apogée de la traite atlantique est liée à des pratiques sociales de l'affichage associés aux aliments. Ceci est accompli grâce à une comparaison des événements quotidiens et spéciaux comprenant des écrans de nourriture et de la richesse à travers les frontières ethniques. Il ne s'agit que de différentes traditions de consommation et de jeter plutôt que de signaler la différenciation ethnique.

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Introduction

"Foodways" has been used as an all-encompassing term, implying an understanding of the relationship between the food eaten and the material culture used to prepare and serve it; however, many studies fail to explore this relationship in-depth beyond the simple fact that food must be stored, prepared, and served in something (*cf.* McCafferty 2008: 69–71; Welch and Scarry 1995). Technical changes in material objects such as pots are often viewed simply in terms of aesthetics or expression of identity (often ethnic), rather than as a link between shifting culinary practices. The possible relationships between the culinary shifts and technical alterations in everyday and special consumption are rarely made, an observation that inspired the editors and contributors of the present special issue.

Here, we investigate changes in settlement and trade patterns at the Atlantic-era site of Juffure (*ca.* seventeenth to mid-nineteenth centuries) on the Gambia River. The Atlantic trade era on the Gambia River was one of increased interaction and socioeconomic exchange. Within this context, traders from various points in West Africa and Europe settled on the river, forming numerous trading enclaves within newly established settlements. In this paper, we compare ceramics, in tandem with faunal and macrobotanical data, within this specific historical context. By placing differing deposits distinguished by their content and depositional treatment within an analytical framework that distinguishes everyday from more occasional events, we examine the meal at Juffure in a range of social contexts during the Atlantic era.

The Atlantic Trade and the Gambia River

Juffure is located in the former coastal polity of Niumi along the Gambia River. The Senegambia region was the first area of West Africa incorporated into the Atlantic World. The first Portuguese traders arrived in the mid-fifteenth century at which time they encountered a number of polities with loose ties to the empire of Mali (Crone 1937). These loose affiliations persisted to varying degrees on the river, throughout the period of the Atlantic trade, with polities claiming allegiance to various states in West Africa and existing independently of one another (Coelho 1989; Crone 1937; Jobson 1968; Moore 1738). In fact, these entities were not consolidated under a single ruling authority until the founding of the larger Senegambia colony, managed by the French from modern-day Senegal in the late eighteenth century, and later existing as a separate colony under British rule commencing in 1816 (Gray 1996: 234–275; GNA CSO 1/1: 13–16). Throughout the period of the Atlantic trade, *mansas* (paramount rulers) of different local polities and village heads permitted European companies to construct trading factories along the river, several of which were constructed in the region of Niumi in exchange for fees paid out to local rulers. Prior to this, Niumi was a backwater of the interior, primarily supplying inland markets with salt from the coast and foodstuffs such as dried fish (Wright 1977: 13).

The rise of Atlantic commerce resulted in a sharp increase in the population of Niumi on the Gambia River's Atlantic shore (Fig. 1). Niumi's position on the coast, coupled with its possession of James Island where the British maintained their base of

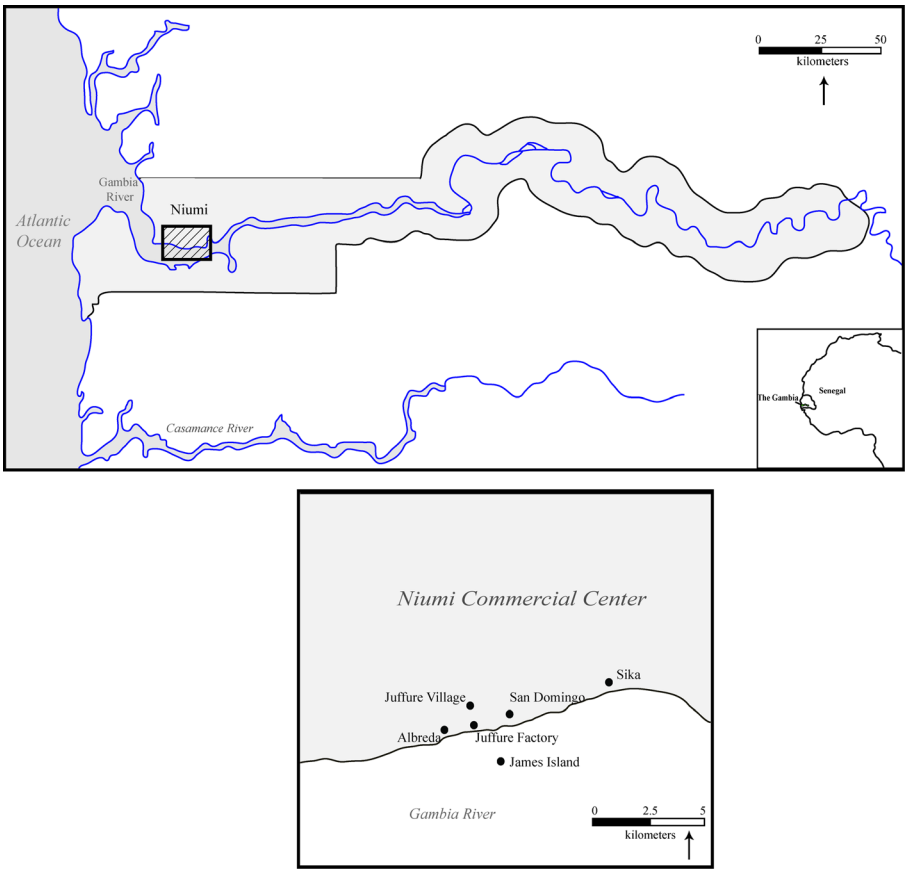

Fig. 1 The former Niumi commercial center

operations, as well as the main French depot of Albreda located directly opposite the island on the north bank, enabled the polity to transform within a single generation from a relatively poor salt supplier into a commercial meeting point for multiple overlapping exchange networks (Coelho 1989, Chapter 2: 2–3; Paris 2001: 31, 33). As European traders began entering the river regularly, a string of villages—including Juffure—was established in Niumi by their African counterparts to take advantage of the growing commercial opportunities. These villages also served as meeting points for maritime and overland networks from the interior, previously based in the upriver polities of Cantor and Wuuli (Wright 2004: 82–87). By the eighteenth century a local commercial center had emerged in Niumi with a diverse community of Mande traders, Muslim clerics, Luso-African merchants, and employees of the different European trading companies, in addition to local Mandinka and Wolof residents not directly participating in commercial exchange but engaging in subsistence practices, metal-working, or other traditional professions (Moore 1738: 67; Paris 2001: 31). To varying degrees, all residents were connected to the Atlantic world through some form of production, consumption, or exchange.

The village of Juffure emerged as the heart of the Atlantic commercial presence on the Gambia River. Oral sources indicate that it was likely settled by an Islamic clerical and trading family with the co-operation of Luso-Africans at nearby San Domingo sometime between 1495 and 1520 (Wright 2004: 81–82, 87). From its founding, Juffure was a trading village. It was the closest village on the north bank to James Island, for which it served as a fresh-water source; this, coupled with the proximity to nearby French Albreda drove the British to seek continuously a permanent presence at the village. Without Juffure, James Island would not have survived because of a lack of water and the reluctance of African traders to go to the island. Repeated pleas to this effect permeate letters sent to the Royal African Company's (RAC's) chief merchants on the river throughout the 1660s into the 1710s, attesting to the importance of the village within the commercial center (BNA T70/56). On 27 December 1727, an official factory had been opened in Juffure and was supplied with all the necessaries for trade under the direction of one Francis Griffith (BNA T70/55). Not only did Juffure attract the attention of the Royal African Company but also local traders. The relentless ambition of the RAC to have a factory here also attests to the village's prominence in local commerce.

Five years after the factory was finally settled, the RAC employee Francis Moore described Juffure as "a large town near the river where the Company had a factory pleasantly situated, facing the fort" (Moore 1738: 56). While documentary accounts are few, extant standing ruins and oral accounts of former structures indicate a substantial factory complex. The physical construction of the buildings out of laterite and brick, as compared with other (contemporary) factories constructed of mudblock and reeds in the local fashion, suggest a desire for longevity (DeCorse *et al.* 2010). In actuality, occupation was sporadic and short-lived; the RAC factory was abandoned in 1741 (BNA T70/56). It is not known if the British continued trading after its closure or whether a formal presence was re-established before the RAC was dissolved in the 1750s. The Committee of Merchants Trading in Africa subsequently sought a post at Juffure in 1761 (BNA T70/30). One year later, Governor Debat wrote the Committee announcing that "our house at Gillifree [Juffure] is finished" (BNA T70/30). While the date of the second abandonment is uncertain, the village no longer held regional prominence by the end of the 1700s (Lupton 1979: 46; Park 1807: 5). In 1816, the British transferred political and commercial control of the river from James Island to Bathurst, at its entrance on the south bank, as part of Britain's new stance against the slave trade. This action transformed Juffure from a wealthy commercial center into a colonial backwater, a transformation demonstrative of the larger decline of the Niumi commercial center and the Atlantic trade on the river. A final description from a colonial agent in 1847 describes Juffure as a small village with no hint of commercial activity (Ingram 1847: 150). The success of Juffure as a trade center connecting local economies to the Atlantic world system stemmed from its ability to supply foodstuffs as trade goods. Just as Juffure's importance cannot be understated, neither can the general lack of investment in the settlement by the different British trading companies. This holds significance for understanding the power of the British in dictating the terms of trade, including foods that supported factory life. The village's close connection to British and French trading companies allowed many residents to gain wealth and assert status to differing degrees. A prime tool for such expression was foodways, including contribution and participation in communal events or gatherings.

Differentiated Consumption at Juffure: Everyday vs. Episodic

The archaeological deposits included here were excavated at three loci at Juffure village and one at the Juffure factory site. Excavations at Juffure included shovel-test pits (STPs) and excavation units. Shovel tests were 50×50 cm and extended to sterile soil. In a number of instances, test pits were expanded into 1×1-m units if a deposit was uncovered. Units were also excavated in areas where test pits identified high concentrations of artifacts. All units were 1×1 m and varied in depth, terminating at subsoil. Units were excavated using a mix of natural stratigraphy and arbitrary 10-cm levels until sterile or subsoil was identified. When levels were more than 20 cm in depth, arbitrary 10-cm levels were employed until a change was noted or subsoil reached. In the sections that follow, data from STPs are excluded, and only a select number of units that contained datable deposits are included. Deposits that were accumulated in ditches or intentionally dug pits were often tested by excavating one or two units. Sheet middens were tested by a number of units in order to define the horizontal extent of the deposit as well as collect comparable samples. All excavations were conducted under a 12-month permit from the National Centre for Arts and Culture (Research Permit no. 51).

The archaeological deposits contained two forms of deposition. Here we introduce our explanatory framework for understanding the two depositional processes—*everyday* and *episodic*. Everyday refuse is characterized by accumulation in the form of sheet middens (see Fig. 2; Table 1). The primary trash deposit excavated at the factory site is to the northwest of the former factory house and characterized by a thin stratum with datable imports ranging from the late seventeenth to early eighteenth centuries. This deposit represents everyday consumption at the factory house. The often thin and intermittent contexts bracketing the sheet midden deposits suggest that these were fairly regular events in the eighteenth century.

Three distinct episodic deposits containing evidence of burning and rapid deposition of refuse were recorded at the Juffure village site. Residents of the village were likely not Europeans but other traders including Luso-Africans; drawing on historical descriptions at other regional villages, the episodic deposits at Juffure village could be interpreted as hosting events. One such deposit was encountered in the southwestern area of the site (Deposit 1a, Stratum 4–15); the other two were encountered in the same trash pit (Deposit 2a; Stratum 5/6-10 and Stratum 12–21) and are separated by a roughly 50-year period based on datable European trade materials. These contexts are distinguished from everyday trash disposal by extremely high densities of ceramics, fauna, oyster shell, and botanical remains as well as intermixed ash lenses and burnt soil in pits cut into the former ground surface (Figs. 3 and 4). These intrusive deposits made them further discernible from everyday sheet middens in the village and at the factory site, comprised of relatively even and level strata. These contexts were located between relatively sparse matrices representing natural soil column formation in the uppermost levels.

In this paper, the factory deposit, three distinct depositional episodes, and four everyday deposits spanning from the eighteenth to the early nineteenth century are compared (see Fig. 2). During this period, ceramic production, as well as diet including faunal and botanical remains, follow a similar trajectory of decreasing diversity. Is there a direct correlation that can be made between the technical choices made in the potting process and these dietary shifts? As Gijanto (2011a, b) has presented elsewhere, a strong correlation between dietary changes and temper selection is visible for the eighteenth

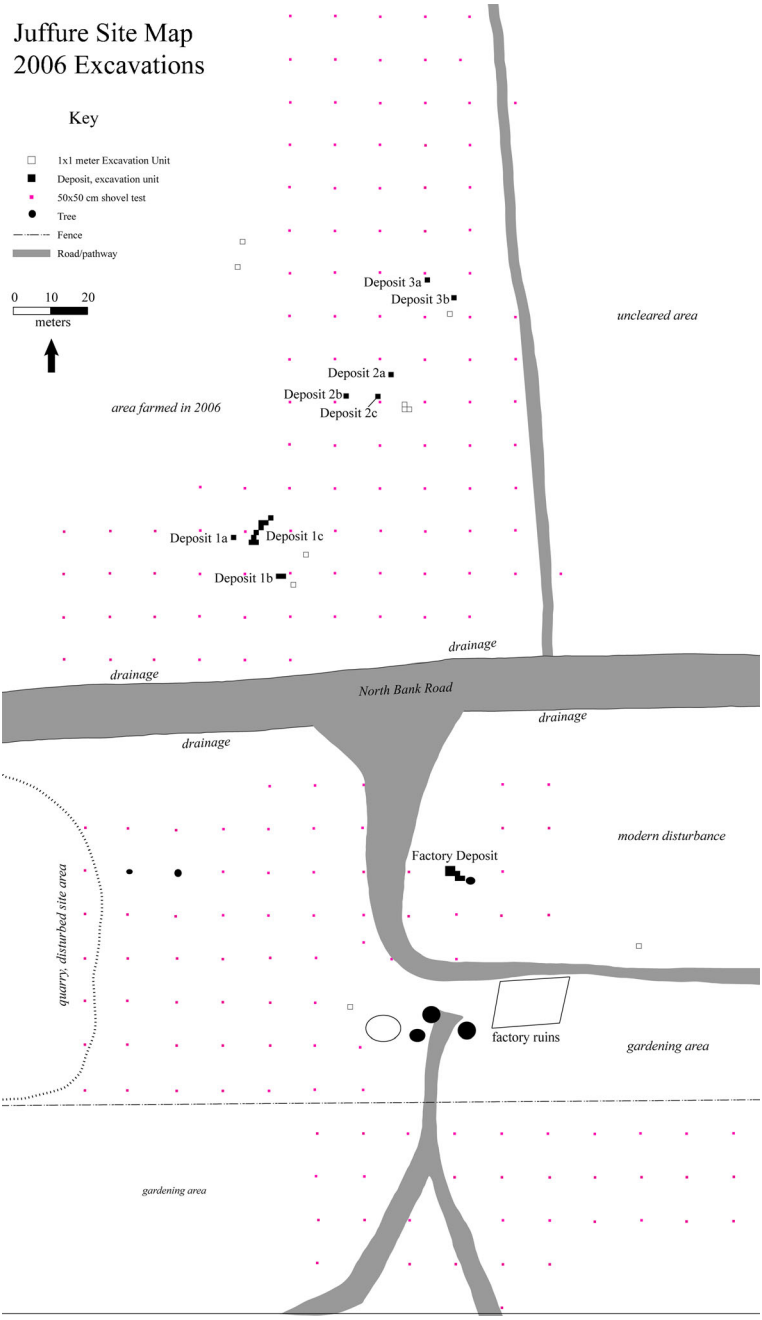

Fig. 2 Juffure site map

century. When viewed synchronically, a relationship between oyster shell and social context is also apparent: these ware types typically only appear in elite contexts. We present these data in the following section, including historical mentions and botanical, faunal, and ceramic investigations of consumption and depositional patterns at Juffure.

Table 1 Juffure deposits and dates

Locus	Deposit	Description	Dates
1	1a	Post episode 1	Mid-eighteenth century
	1b	Everyday	Early nineteenth century
	1c	Everyday	Eighteenth to early nineteenth centuries
2	2a	Post episode 1	Late eighteenth/early nineteenth century
		Episode 1	Late eighteenth/early nineteenth century
		Episode 2	Mid-eighteenth century
		Post episode 2	Mid-eighteenth century
	2b	Everyday	Eighteenth to early nineteenth centuries
3	3a	Everyday	Eighteenth to early nineteenth centuries
	3b	Everyday	Eighteenth to early nineteenth centuries
Factory	Factory	Everyday	Late seventeenth to early nineteenth centuries

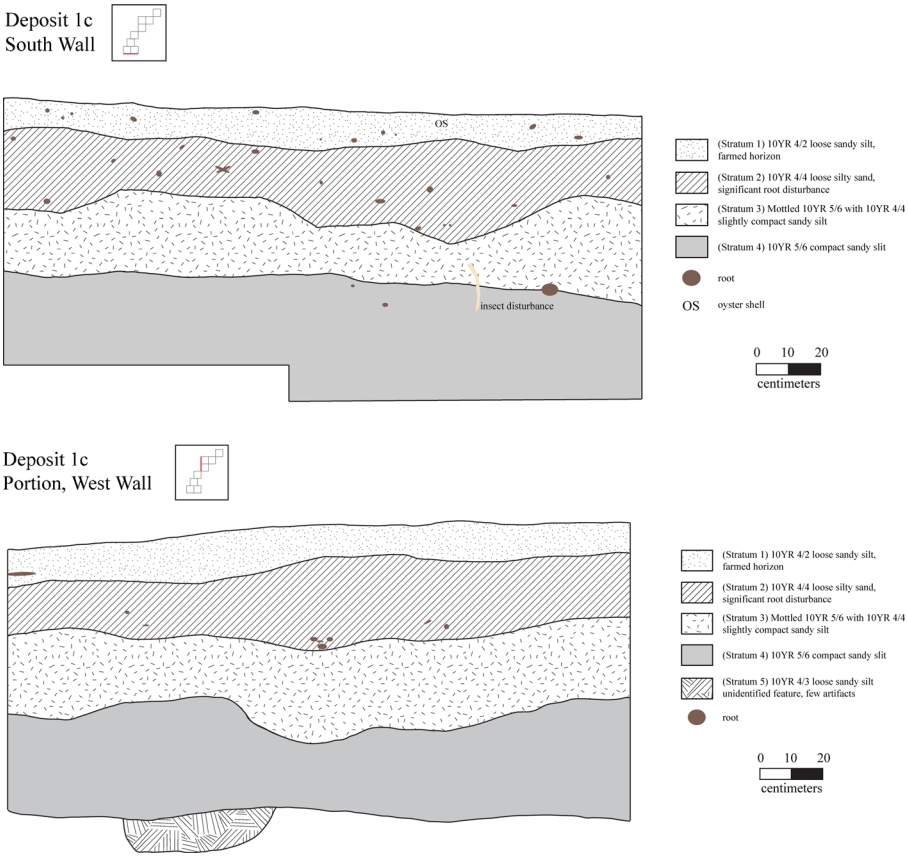

Fig. 3 Deposit 1c Profile South (**a**) and West (**b**) walls illustrative of everyday depositional patterns

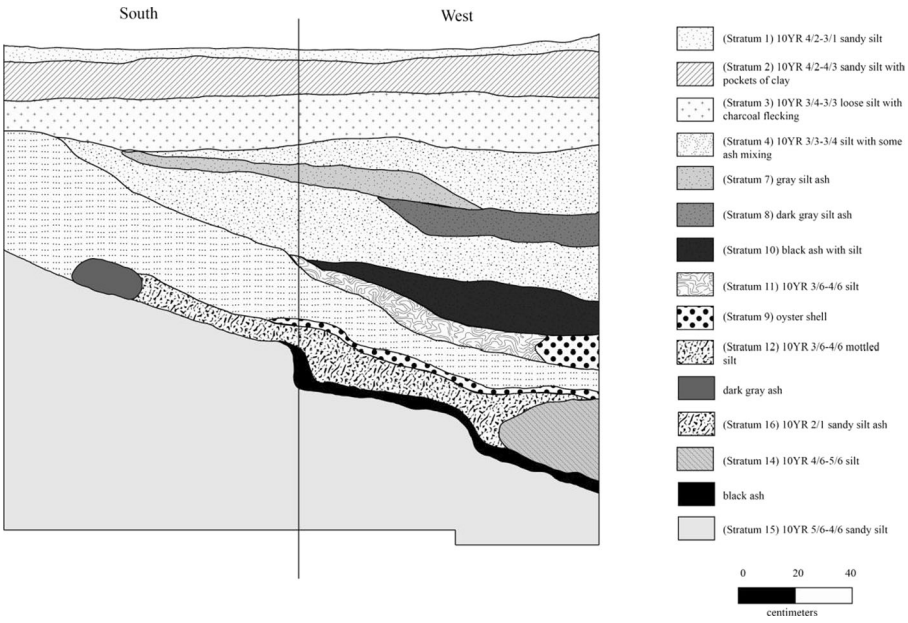

Fig. 4 Deposit 1a Profile showing episodic depositional patterns

The Nature of the Everyday and Occasional Meals: Historical Evidence

Food was integral both to participation in trade and assertion of socioeconomic status in the village during the height of the trade in the eighteenth century. Now our attention will turn toward illuminating the foodways that dictated daily meals as well as special occasions, as provided by a limited number of European accounts from this era. The meal typically comprised food, drink, and the materials used to prepare and serve. In trying to understand what the everyday fare was for the residents of Juffure during the Atlantic era and what might have been unique, we consider the overall relationship between the community and foodstuffs. This necessitates understanding the value placed on consumables at different points in time.

For the communities in Niumi, crops and livestock were commodities as well as food, as was the case in many coastal towns across West Africa during the Atlantic Trade Era (Carney and Rosomoff 2010). It is known from available documentary sources that no fewer than six types of domesticated grains were cultivated in the early seventeenth century and may possibly have included plants introduced via the Atlantic trade (Gamble and Hair 1999: 163). Jobson, who explored the River Gambia in 1620–1621, identified only rice by name, describing the rest as more "a kind of seed than corn, being as small a grain as mustard seed" (Gamble and Hair 1999: 163), which could describe local millets including pearl millet or sorghum. In 1466, the Italian slave trader and explorer Cadamosto declared that the diet on the Gambia was the same as in Senegal except the former had a greater variety of rice (Crone 1937: 26).

Many of the earliest travelers to the Gambia River provide vivid descriptions of the local wild flora and fauna, though little mention is made of introduced foods. Less detail is available in documents regarding daily meals and how these were prepared. Despite

the apparent variety of grains and fauna, British trader Richard Jobson commented that everyday meals were not diverse nor even remotely extravagant affairs:

> …the ordinary people eat but one meal a day…[that] is either Rice, or some other graine, boyled, which being brought unto them by the women in goardes, hot, putting in their hands, they rowle up into balles, and cast into their mouthes, and this is their manner of feeding: they doe seldom eate either flesh or fish, the rather because they cannot get it, then out of any will to refuse it: and although they are great breeders of such very poultry as are our Cockes and Hennes, and have understanding to cut Capons, yet they are great sparers thereof, and preserve them to sell unto us, for small peeces of Iron, beades, and such like commodities, whereof if we be furnished, we can want none of that provision. (Gamble and Hair 1999: 104–105)

Instead of consuming large amounts of the domestic meats and grains for use at home, they produced these for sale and profit, thereby providing them access to the Atlantic market through provisioning European traders. The investment of wealth and labor resources in raising domesticates of any kind was substantial, and all of these were viable goods in local markets and needed by foreign traders and companies to support their personnel on the river. The ability to turn grains and animals into prized commodities through exchange often restricted the producers' own diet as seen in Jobson's discussion. The French merchant François de Paris, operating between Niumi and the French possession of Gorée off the coast of modern-day Dakar in 1682 and 1683, detailed the French reliance on their outpost of Albreda. His visits to the region were often for provisioning, and he described the value of Albreda as a source of foodstuffs as well as ivory and slaves. Paris (2001: 29) wrote that the Gambia "…can pass as one of the rich countries of Africa. You can see fields of millet, as well cultivated and as productive as wheat fields in Europe." The image of a land of plenty is further supported by numerous entries in the Royal African Company and later Company of Merchant logs for cattle, goats, and "corn" being purchased from Juffure for James Fort. The French reliance on villages in Niumi's commercial center for provisioning was not an isolated occurrence. The different trading companies supported by the British also took advantage of this market well into the eighteenth century, and even more so in the nineteenth century, as all other trade declined in Niumi. This is evident by numerous payments to locals at Juffure for rice, "corn," cows, and goats (see BNA T70 series).

Despite the reservation of domestically grown and bred foodstuffs for sale to European traders, the local diet along the Gambia River became more diverse in the eighteenth century. At this time, a transformation in local subsistence practices can be discerned from limited documentary sources. According to Francis Moore (Moore 1738: 109),

> Fish dried in the sun, or smoked, is a great favorite of theirs; but the more it stinks, the more they like it. There is scarce anything which they do not eat; large snakes, Guanas [lizard], Monkeys, Pelicans, Bald-eagles, Allegators, and Sea-Horses are excellent food.

Despite the range of diversity, it should be noted that the list of animals does not include domesticates. This could be Moore's own bias toward the exotic. It may also be

inferred that these remained as commodities rather than dominant household fare. Moore does not provide the specific contexts in which these animals were eaten. Depending on the nature of the meal (*e.g.*, everyday meal, political feast), either Jobson's or Moore's description is applicable. Different foodstuffs were imbued with meaning signaling socioeconomic status, just as were ceramic vessels. The meaning was dependent upon the social setting of the consumption.

Food cultures and practices described in the historical record may also be used to assess the impact Islamic practice may have had in regional foodways, and which are tested against the archaeological record below. Jobson describes local alcohol production consistent with the brewing of sorghum or millet beer. After obtaining palm wine and discussing its reservation for the elite on the river, he writes:

> And being entered into their good liquor, I must not forget, to speake of the knowledge they have in making a compounded drinke, which wee can afford to tast, and accept of; and it is made of some corne, boild and ordered as wee doe our Ale, they call it Dullo, it is not common amongst them, but when the King or principall person will make a feast, he calles all the inhabitants about him, having a great gourd or two, sometimes three, of this liquor in his presence they drinke round, and it is devided amongst them, making an end of all before they part… (Gamble and Hair 1999: 168)

Not only does this attest to occasional local alcohol production and consumption (which goes against the Qur'an, which considers intoxicants *haram*), but it describes special occasions ("feasts") arranged by a political leader where alcohol is drunk communally, perhaps to bind members of the community together, perhaps also to strengthen the authority of the host. Adherence to Islamic food practices may also be observed in other foods, including pig, which we discuss below vis-à-vis the faunal record at Juffure.

We turn now to the archaeological record, and consider how to identify and interpret consumption patterns using botanical, faunal, and ceramic data. Drawing conclusions from the above historical accounts, we would expect *everyday* contexts to be less diverse, while *episodic* deposits likely created through communal gatherings would contain a greater array of material culture associated with foodways, due to the size and public spectacle associated.

Feeding and Supporting Niumi Economic Centers: Juffure Village and Factory

Before addressing changes and trends in ceramic production during the Atlantic trade at Juffure, an examination of food remains from the different deposits excavated is presented. This is followed by a discussion of the relationship between these findings and evidence of ceramic production.

Botanicals

Sediment samples were retrieved for flotation and analysis of charred macrobotanical remains from layers beneath the zone of agricultural disturbance. Flotation samples between 2 and 10 kg were collected by taking sediment from the center and corners of

each unit, in every archaeologically distinct layer as well as arbitrary levels. Freshwater flotation was conducted using buckets, with the light fraction being collected in 1/24-in. mesh. Dried light fractions were analyzed in the Archaeobotany Laboratory at Simon Fraser University under the supervision of one of us (Walshaw). Remains larger than 2 mm were fully sorted; identified nutshell was recovered to 1 mm, while seeds and chaff were recovered to .250 mm. Data are reported as frequencies (number of items per context) and ubiquities (percent presence across samples in each context). Where applicable, seed number estimates (SNEs) were applied to collections with highly fragmented remains. For wild/weedy seed types the number of different types reported is indicated as number of taxa in the last column (italicized) in Table 2.

Juffure village and factory sites yielded macrobotanical assemblages rich in the charred remains of domesticates and wild taxa (see Table 2). African domesticated grains dominated, including pearl millet (*Pennisetum glaucum* L. Br.), sorghum (*Sorghum bicolor* (L.) Moench), and rice (most likely the African domesticate *Oryza glaberrima* Steud). Brachiaria/Setaria millet grains and millet grains without sufficiently preserved identifiable features (UNID millets) were also common. Grain chaff, in the form of embryos and spikelet bases (rachillae), was rare at both sites (20 pieces from the village and 4 from the factory), suggesting that crop processing waste was used for fodder, tempering, or discarded elsewhere. Grain was most likely brought from production centers off-site, possibly transported while still in the chaff, and evidence of organic tempering in a large number of ceramics from Deposit 1c and deposits in Locus 3 suggests that chaff may have served as temper, and therefore little would be left in archaeological deposits. African legumes, including the hyacinth bean (*Lablab purpureus* L. Sweet) and cowpea (*Vigna unguiculata* L. Walp.) were present but uncommon. Cotton (*Gossypium* sp.) and/or baobab (*Adansonia digitata* L.) seed fragments were observed (seeds of these Malvaceae family taxa are difficult to distinguish when fragmented), and entire baobab seeds were found in several samples (Deposits 1a and 2b). A wide range of wild and/or weedy taxa were observed, of which more below.

New World crops, represented by little maize (*Zea mays* L.), and one possible *Manihot* (cassava genus) seed, are surprisingly rare given the Atlantic trade context of the sites, and that two centuries of botanical exchange with the New World had transpired by the founding of Juffure. The retention of indigenous crops may have resulted from any combination of: a need to meet local tastes, a reliance on (inland) trade for grain crops, feasting in amount rather than in kind (Goody 1982), or disdain for maize and other New World crops. This is consistent with Logan's (2012: 265–271) observation of the limited distribution of New World food plants in historical archaeological sites located inland in Ghana, which she interprets as the retention of local food tastes. It remains a possibility that New World crops were isolated in their consumption and discard at Juffure, rendering them relatively less visible archaeologically. Considering the absence of maize-cob rouletting on Juffure ceramics (see below), however, the more parsimonious explanation is that maize was present in only limited quantities in the region. This is significant, considering that maize agriculture has been credited recently with enabling the slave trade along the west coast of Africa (Carney and Rosomoff 2010; McCann 2001) building on earlier hypotheses offered by Miracle (1965: 43–44) and Crosby (1972: 188). The relative infrequency of maize at Juffure may be an index of the inability of Europeans in the region to control food production, and signals reliance on regional trade networks in the food supply.

Table 2 Macrobotanical samples from Juffure

0	Deposit	Context	Samples (*n*)	Sediment floated (kg)	Grains Seed Number Estimate (ubiquity)							Other Crops SNE (ubiquity)		Wild/weedy SNE (ubiquity; no. taxa)
					Pearl millet	Sorghum	Rice	Maize	UNID millet	*Brachiaria*/ *Setaria*	*Digitaria*	Beans	Baobab/ Cotton	
Juffure Village	1a	Special	3	14.1	2 (33 %)	6 (100 %)	10 (100 %)	0	15 (100 %)	15 (67 %)	0	1 (33 %)	53 (100 %)	45 (100 %; 8 taxa)
	1b	Everyday	2	13.9	9 (100 %)	0 (0 %)	2 (50 %)	1? (50 %)	0 (0 %)	1 (50 %)	0	1 (50 %)	0 (0 %)	8 (100 %; 4 taxa)
	1c	Everyday	3	10.5	1 (33 %)	2 (66 %)	4 (66 %)	0	1 (33 %)	0	0	4 (33 %)	1 (33 %)	16 (100 %; 8 taxa)
	2a	Period 1 Special	Context5	6.9	4	0	18	0	0	0	0	0	0	19 (6 taxa)
			Context9	2.7	0	0	2	0	0	0	0	1	0	57 (5 taxa)
	2a	Period 2 Special	6	18.5	18 (50 %)	5 (50 %)	17 (83 %)	0	4 (33 %)	7 (17 %)	0	0	0	32 (50 %; 7 taxa)
	2b	Everyday	2	10.9	2 (50 %)	0	2 (100 %)	0	0	2 (50 %)	0	0	2 (50 %)	5 (100 %; 4 taxa)
	2c	Everyday	3	9.2	2 (33 %)	0	0	0	0	0	1 (33 %)	0	0	1 (33 %)
	3a	Everyday	4	10.9	0	0	36 (100 %)	0	9 (100 %)	3 (50 %)	0	0	3 (25 %)	37 (75 %; 2 taxa)
	3b	Everyday	3	23.4	2 (66 %)	0	6 (66 %)	2? (33 %)	13 (100 %)	0	0	1 (33 %)	5 (33 %	14 (66 %; 2 taxa)
Juffure Factory	Factory		8	33.1	55 (88 %)	24 (88 %)	20 (88 %)	0	72 (100 %)	4 (13 %)	0	3 (25 %)	3 (25 %)	20 (75 %; 8 taxa)

General considerations of consumption and discard among factory and village contexts reveal that grains were more commonly found at the factory (see Table 2). This may be the product of differential food production practices between the two settlements, as wet preparation of local foods like millet porridge would not lead to charring as readily as millet bread or boiled millet grains might. Pearl millet was more common among the factory than village contexts at Juffure, and a similar pattern was observed with respect to sorghum and unidentifiable millets likely to be either sorghum or pearl millet (UNID millets). At both sites, pearl millet was found at approximately double the frequency of sorghum, although sorghum outnumbered pearl millet in deposit 1a. Rice was commonly found at both factory and village. Maize was absent from Juffure factory and present only in a few specimens (one kernel fragment, eight cupules, and one cob fragment) from one eighteenth-century context at the village. Today in Juffure, only a few households grow maize in the rainy season.

This trend in grain distribution between village and factory coincides with documentary descriptions previously discussed, whereby grains were traded to Europeans and private consumption was limited. The consumption of local crops such as millet by the French (as evident in Paris's discussion) as well as reliance of the various British companies on the local communities for foodstuffs, supports the high presence of local grains at the factory. The lack of maize as well as comparatively low amounts of rice (despite its ubiquity) is of interest here, because of the numerous references to purchasing "corn" and rice from Juffure by the Royal African Company (*e.g.*, BNA T70 847, 563,561, 565, 574). It is unknown how much of the foodstuffs obtained from Juffure went to James Island, was designated for the factory, or used to supply outgoing ships. However, the quantities and ubiquity of millet in the factory deposit lends credence to the assertion that this was the preferred domesticate there. Similarly, the near absence of maize at the factory and in the village suggests that it may have been cultivated primarily to be sold to the British, consistent with Carney and Rosomoff's (Carney and Rosomoff 2010: 59) argument that maize fulfilled food surplus requirements for the slave trade at coastal African centers. Unfortunately botanical sampling has not been carried out at James Island, which would be needed to draw more meaningful conclusions. Following the break-up of the company factory at Juffure, the most numerous commodity acquired from the village determined from Royal African Company logs was "corn," which may be a reference to any number of grains: principally maize or one of the African millets or sorghum (BNA T70 576, 575).

Other crops included economically important fiber and food plants, such as baobab, cotton, a grass most similar to *Digitaria* (the fonio genus), grains of unidentified millet closest to *Brachiaria* and *Setaria,* and legumes. The *Digitaria*—type comes primarily from an early eighteenth-century Juffure village unit (below Deposit 1b; not included in Table 2) that yielded a high diversity of plant remains, including the only verifiable maize in this region. *Brachiaria/Setaria* remains are more common at Juffure village than factory. The hyacinth bean and cowpea remains come from the factory alone, while the village contained unidentified Fabaceae remains. Recognizeable baobab was restricted to only a few contexts, one of which was quite rich in baobab with a seed number estimate of 48 from 2.88 g of fragmented seeds (Juffure village, Deposit 1a, see below). In addition, several whole or partial cotton seeds were identified at an everyday deposit at Juffure village Locus 3, Deposit 3.

Wild and weedy taxa are represented by a diversity of plants of disturbance, and field and garden greens and weeds, most commonly members of the pink family (Caryophyllaceae), nightshade family (Solanaceae), and well-known weeds of the grass family (Poaceae; *Eleusine indica*). Eight wild and weedy taxa are represented in the seed record from Juffure factory, compared with 16 at Juffure village, with the latter containing 234 wild and weedy seeds in contrast to the mere 20 seeds in this category at the factory. However, the occurrence of wild and weedy seeds seems to decrease by the late eighteenth and early nineteenth century; contexts from Deposit 1b dating to this period are limited in their representation of noncrop plants. In fact these contexts represent low botanical diversity among food taxa as well, and a decline in foodstuff diversity echoed in the faunal and ceramic records (about which more below).

Consideration of everyday versus special contexts at Juffure village compared with factory foodways is instructive. Table 2 presents data from everyday village deposits (1b, 1c, 2b, 2c, 3a, and 3b), as well as three special midden deposits (1a and two in Locus 2a). Village special contexts do not appear to indicate greater diversity of foodstuffs, or privileging of European foods, but rather a higher quantity of locally available grains, notably rice and sorghum: a pattern similar to that found at the factory. Rice is present in all but one of the episodic contexts (91 %), compared with 88 % of factory contexts and 71 % of everyday contexts from the village. Sorghum is found at 88 % of factory contexts and 55 % of village episodic contexts, but only 12 % of samples from everyday contexts from the village. When considering that much of the UNID millet could be unrecognizable sorghum, it is possible that this contrast is exaggerated, however sorghum is clearly more common among factory and occasional deposits compared with everyday village deposits. This suggests that sorghum was valued in regional trade and may have been available for routine consumption less frequently than pearl millet. This is consistent with RAC logs recording the purchase of "corn" (likely to be sorghum) discussed above. In fact, it may be part of a wider trend in the circulation of sorghum via trans-Saharan trade in western Africa for almost one thousand years according to Arab historical sources (Logan 2012: 131, citing Lewicki 1974).

Special occasion deposits at the village also demonstrate some variability among them, which may signal unique aspects to some individual events. Notably, special context deposit 1a is richer by far in probable baobab seeds (SNE=53) than any other context. Baobab fruits and leaves are highly valued in West African cuisine, particularly for the mucilaginous qualities of the leaf in cooking stews and soups (National Research Council 2006: 75–79). Special deposit 1a also contains a high quantity of *Setaria/Brachiaria* seeds and a large number and diversity of wild/weedy taxa, among them potential food plants from the purselane genus (*Portulaca*) and the mallow family (Malvaceae). Together with the faunal data (see below and Table 3), this botanical diversity suggests a wide collection of food types for this event, resulting in potentially many different and/or complex dishes that drew on regional resources, and privileged regional tastes.

Taken together, episodic features at Juffure village more closely resemble those of the factory in the higher ubiquity of rice and sorghum. This suggests that both sites were likely supplied by the same trade patterns that governed regional distribution of plant foods. Significantly, episodic events would have required withholding of foods from the European supply line to feed guests; clearly these events were economically

Table 3 Animal Resources Exploited at Juffure

			Terrestrial				Aquatic	Dietary Shell		
			mammal	reptile	avian	UID	aquatic fish	*Cardium costatun* (*great ribbed clam*)	*Grassostrea tulipa* (mangrove oyster)	gastropod
Juffure Factory			3189	111	110	290	434	2171	779	434
(NISP=7518)			[42 %]	[2 %]	[1 %]	[4 %]	[6 %]	[29 %]	[10 %]	[4 %]
Juffure Village			6329	82	473	679	754	1835	1527	512
(NISP=12,191)			[52 %]	[1 %]	[4 %]	[6 %]	[6 %]	[15 %]	[12 %]	[3 %]
Locus	**Deposit**	**Context**								
1	1a	Post-episode 1	51	–	1	1	–	7	13	53
		(NISP=186)	[61 %]		[1 %]	[1 %]		[8 %]	[16 %]	[13 %]
		Episode	1713	40	131	216	391	289	313	53
		(NISP=3146)	[55 %]	[1 %]	[4 %]	[7 %]	[12 %]	[9 %]	[10 %]	[2 %]
	1b	Everyday	1158	4	5	48	40	22	20	44
		(NISP=1341)	[86 %]	[<1 %]	[<1 %]	[4 %]	[3 %]	[2 %]	[2 %]	[3 %]
	1c	Everyday	445	–	2	10	5	106	29	31
		(NISP=628)	[71 %]		[<1 %]	[1 %]	[1 %]	[17 %]	[5 %]	[5 %]
2	2a	Post-episode 1	206	2	2	21	9	91	47	16
		(NISP=394)	[52 %]	[1 %]	[1 %]	[5 %]	[2 %]	[23 %]	[12 %]	[4 %]
		Episode 1	595	16	160	57	99	212	195	65
		(NISP-1399)	[43 %]	[1 %]	[11 %]	[4 %]	[7 %]	[15 %]	[14 %]	[5 %]
		Post-episode 2	6	–	–	–	2	128	635	177
		(NISP=948)	[1 %]				[<1 %]	[13 %]	[67 %]	[19 %]
		Episode 2	586	17	139	79	34	538	495	116
		(NISP=1994)	[29 %]	[<1 %]	[7 %]	[4 %]	[2 %]	[27 %]	[25 %]	[6 %]
	2b	Everyday	81	10	3	22	6	–	–	1
		(NISP=123)	[66 %]	[8 %]	[2 %]	[18 %]	[5 %]			[1 %]

Table 3 (continued)

			Terrestrial				Aquatic	Dietary Shell		
			mammal	reptile	avian	UID	aquatic fish	*Cardium costatun* (*great ribbed clam*)	*Grassostrea tulipa* (mangrove oyster)	gastropod
3	3a	Everyday	13	–	2	147	19	3	43	55
		(NISP=282)	[5 %]		[1 %]	[52 %]	[7 %]	[1 %]	[15 %]	[19 %]
	3b	Everyday	124	1	1	11	5	6	84	1
		(NISP=233)	[53 %]	[<1 %]	[<1 %]	[5 %]	[2 %]	[3 %]	[36 %]	[<1 %]
Factory	Factory	Everyday	3188	111	110	290	253	1959	677	323
		(NISP=6911)	[46 %]	[2 %]	[1 %]	[4 %]	[4 %]	[28 %]	[10 %]	[5 %]

and politically valuable such that potential interruption of European trade could be tolerated. Furthermore, inhabitants tapped into local value systems, using *more* of the locally available African grains and greens and not *different* types of ingredients. This does not rule out culinary differentiation of episodic contexts in terms of the meals prepared (*e.g.*, 1a, and see discussion of meat sources below). However, it reinforces the value of African grains as commodities that maintained and challenged the social order at Juffure.

Fauna

Only a small portion of the recovered faunal remains were identifiable to the genus or species level, and the bulk of these identifiable remains were recovered from episodic contexts. Therefore, the comparison of quantities of broader classes of fauna—mammal, reptile, bird, or fish—between contexts is the most appropriate in this study, given the high degree of fragmentation in everyday consumption and discard contexts (see Table 3). Besides the type of meat consumed, the level of processing is indicative of cooking practices; cut marks, slicing, intentional breakage, heating, boiling, and charring are all potential indicators of cooking. Here, we present and discuss the taxonomic and taphonomic features of the faunal remains from archaeological contexts, which apparently contradict the RACs employee Francis Moore's assertion that meat was important in everyday consumption in the region in the 1730s. In fact, other than the dietary practices of European traders residing at Juffure factory, it does not appear as though large quantities of meat were consumed on a daily basis, despite the increased consumption of non-domesticates. Furthermore, besides episodic events at the village consistent with hosting shared meals, the factory is the only locale in this study where a diverse everyday diet of reptile, bird, fish, and mammal (domestic and wild) was encountered archaeologically (Table 3). The continued minimal consumption of meat in the village is supported by the highly processed, comparatively small percentage of faunal material present throughout Juffure in trash middens not associated with episodic events. This speaks to Jobson's late-seventeenth-century description discussed above, of daily meals as sparse in terms of meat and the sale of cattle and goat to the Royal African Company.

Archaeological data suggest that residents at Juffure exploited a mix of marine and land resources. Faunal remains indicate the consumption of several species of shell and aquatic fish, domesticate and non-domesticate mammals, birds, and to a lesser extent reptiles in the eighteenth and nineteenth centuries. During the height of the Atlantic trade at Juffure, the animal resources exploited contained a mix of terrestrial and marine species, with most shellfish consumption occurring in episodic contexts. The deposition of the shellfish varied amongst deposits with oyster shell forming discrete strata in episodic contexts, while shell was intermixed in other deposits with the exception of the factory deposit. There, two strata primarily composed of clam shell were encountered. However, the discrete oyster shell contexts did not translate into a prominence of oyster over clam or gastropod species (Table 3). In all episodic deposits, there is a relatively even exploitation of clam and oyster with minimal gastropods present. In everyday contexts in the eighteenth century, there is a dominance of one type of shell fish that often forms a significant portion of all animal resources present.

A comparison of archaeological contexts indicative of everyday consumption with episodic events reveals that meal composition was highly contextual at Juffure. Faunal

remains from everyday contexts were highly fragmented, indicating high levels of processing, and often unidentifiable at Juffure village. This is seen in the extreme in Deposit 3a where 81 % of the total fauna was unidentifiable (52 % for the entire assemblage). For those in everyday contexts that could be identified as mammals for example, excluding complete bones, 55 % were 1 cm or less in diameter, followed by those between 1.01 and 2 cm in diameter at 34 %. This level of processing is reminiscent of stews utilizing limited amounts of meat consistent with present-day West African cooking practices. If fragment size can be positively attributed to processing, this would be what is expected for foodway practices where meat consumption is intentionally limited. However, this interpretation is applied cautiously here (see Heinrich 2012).

By contrast, the episodic pits contain larger pieces of fauna with traces of heating and burning indicative of roasting larger cuts of meat (Bauer 2008: 1; Fisher 1995: 5; Monroe and Janzen, this issue). This includes fauna that can be identified to the elemental and species level unlike the bulk of the collection. In episodic contexts, the fragment size increases slightly, with the smallest fragments making up 36 % of the collection while those between 1.01 and 2 cm increase to 45 %. Significantly, these also displayed a relatively low level of processing with regard to heating, boiling, and burning as opposed to those from episodic assemblages, making them more identifiable. Individual bone fragments also contain fewer cut marks per specimen than in everyday settings, indicating larger cuts of meat.

Evidence of postdepositional conditions also differed by context. In everyday Deposit 3a, 58 % of the fauna was highly fragmented and 1 cm in diameter or less, resulting in 81 % being unidentifiable to even broad categories like mammal. However, evidence of butchery was only visible on 10 % of the assemblage. Fifty-four percent of the fauna was charred and just 6 % presented evidence of heating or boiling. Because of this, it is not possible to positively attribute the fragmentary nature of the fauna to culinary practice. The deposit was a fairly regular sheet midden and likely taphonomic processes were in play. The weathered appearance of fauna in the uppermost strata suggests these were often exposed, and the fragmentary nature implies these were likely stepped on and crushed. This is contrasted with Deposit 3b. In this deposit, the majority of the assemblage was identifiable to broad categories and the majority of the fragment sizes range between 2 and 4 cm with only 34 % being 1 cm or less. However, the evidence for butchery remains the same (10 %). Additionally, 30 % of the fauna have evidence of heating, 6 % of boiling, and fewer are charred (43 %). Traces of heating along with charring may either represent roasting or depositional trash burning; however, charring on bones is restricted mainly to the ends, and thus can be associated with roasting. In the special, episodic contexts at Juffure, both trash burning (determined through burnt bone and surrounding ash) and roasting meat occurred in greater frequencies than in everyday deposits as seen with Deposits 3a and 3b, where no ash was encountered, and burnt bones were not present in high numbers (7 % in Deposit 3a and 14 % in Deposit 3b). Similarly, only 7 % of the fauna in the factory deposit was burned. For all noneveryday deposits, burnt bone ranges between 17 and 25 % of the assemblages.

In summary, the differences between the types of food consumed, and how food was prepared in everyday contexts at the factory and in the village is striking. Not only is there less evidence for roasting practices in everyday contexts, but there are also fewer

instances of depositional burning in everyday deposits. In addition to *how* food was prepared, the types of meat eaten differ as well; for instance, as part of the feast, there is an increased consumption of fish, bird, and reptiles (see Table 3). When compared with the daily meals at the factory—and hence those of the Europeans and their associates—the range of fauna exploited and meat preparation more closely resembles the noneveryday contexts at Juffure village rather than daily meals, although the types of mammals consumed may be an exception. Though pig is present in the village, it made up a greater percentage of the factory assemblage (19 %) than the village (4 % everyday contexts versus 6 % in noneveryday contexts). While the majority of the Juffure population was Muslim and therefore, in theory, prohibited from eating swine, there was a significant Luso-African community that likely did consume it. It is possible that the pig meat was either prepared by the latter, or for company officials in attendance at meals in different compounds or at community events. Pigs are raised in Juffure and Albreda today by Christians. It is posited here that Luso-Africans, who were professed Christians, raised pigs at Juffure in the eighteenth century. At this time, it has not been possible to distinguish between wild (bush pig is still hunted in the area) and domesticate species, making it harder to discern the origin of the meat. The assemblage from the factory resembles the earliest episodic in Deposit 2a of Juffure village. The mammals from the two episodic periods in Deposit 2a do not only contain more domesticates overall but also include a greater variety of non-domesticates including herbivores than that in Deposit 1a. In comparison, the Deposit 1a assemblage at the village is dominated by unidentified bovid or antelope species, with a noticeable decrease in identifiable cow fauna from the everyday consumption levels in the village (5 *vs*. 27 %).

Taken together, the botanical and faunal evidence from Juffure factory and village suggest that special events transpired occasionally at the village, which more closely resembled factory consumption patterns than everyday village fare. Differentiation can be seen in the faunal remains, suggesting that access to domesticates at the factory and at occasional village events shaped meat consumption and even cooking patterns (roasting *vs.* stewing). The importance of local grains across all the deposits signals a reliance on local trading patterns to supply foods; rice and sorghum in particular seemed to be valued in factory and episodic village contexts. Now our attention turns to ceramic production and use, to determine how cooking and serving practices influenced ceramic construction during the Atlantic trade period.

Ceramics and Society in Niumi

For all excavations at Juffure, 100 % sampling of ceramics was employed. The ceramics were preliminarily sorted in the field into three broad classes—rims, undecorated body sherds, and decorated body sherds. The ceramic assemblage from the two Juffure village and factory sites is biased toward body sherds. All undecorated body sherds were analyzed in the field employing an attribute recording system, using methods and recording systems developed by McIntosh (1995) and adapted to a number of other projects throughout the Senegambia (*i.e.*, Gallay 2010; Gokee 2012; Lawson 2003; McIntosh and Bocoum 2000; Richard 2007; Thiaw 1999). A second level of analysis was completed for rim and decorated body sherds. These were analyzed jointly under an attribute and typological system. In doing so, all attributes were recorded for each sherd and all decorated and rim pieces were assigned to a ware

group and, when possible, a specific type. Ware types were designated based on temper, paste color, primary or secondary manufacture, slips, and firing patterns when appropriate. Alterations in paste recipes are observed at Juffure and the surrounding sites within the former Niumi commercial center throughout the Atlantic trade. Over time, the use of different tempering recipes, firing practices, and potentially clay sources brought about new ware types. Analysis demonstrated that decorations were not restricted to particular wares with very few exceptions (see Gijanto 2011a), and therefore were not included in ware designations. Ware type identification was not attempted for sherds smaller than 3 cm in diameter due to the highly variable nature of color and firing patterns observed in larger sherds, which would be obscured in smaller pieces. To date, analysis of the ceramic collection has focused on select units with datable contexts. In total, 1,268 rims, 28,914 undecorated body sherds, and 13,960 decorated body sherds from Juffure have been analyzed, representing roughly 60 % of the total excavated collection from the village and factory. Of these, the following discussion focuses on six deposits representing everyday deposition and large-scale communal events containing a total of 35,481 sherds (42 % decorated body sherds, 54 % undecorated body sherds, and 4 % rims).

At Juffure, locally produced ceramics overwhelmingly dominate most contexts and form a significant portion of the episodic assemblages. The ceramics in these contexts differ from those produced in either the late seventeenth or the early nineteenth century. To understand the full nature of this change, and potential importance oyster temper may have had, it needs to be situated within the long-term tradition of ceramic production in the commercial center as well as the complete context of the meal. It is asserted that other attributes should be considered, such as vessel "…construction techniques, durability, the required surface areas for specific patterns of decoration, and the skill level of those who produced the object" (van Keuren 2004: 195). In light of these considerations, we present our analysis of Juffure settlement ceramics and contemplate the meaning of differences across time and space between what are characterized here as episodic, or occasional, and everyday meals. The three attributes that are most chronologically sensitive and illustrative of these large- and smaller-scale events are temper, paste color, and firing patterns (Gijanto 2011a). The earliest produced ceramics in this study first appear in late seventeenth-century contexts at the nearby settlement of Lamin Conco. These are fairly uniform in terms of paste color, temper, firing, and decorative motifs. They are tempered with a mix of sand and organic materials, with limited oyster shell inclusions visible at times in the fabric, but rarely on the surfaces. These types are brown or orange/brown with a slight tendency toward pink colors largely attributed to the effects of firing. The decoration is a mix of thick twine impressions, overlaid with wide incised lines forming boxes over the initial design element. Some examples were recovered at Juffure in the village and factory locales but not in great numbers. In addition to these dominant wares, ceramics with a mix of sand and grog temper are also present and increase in frequency in the eighteenth century at Juffure. However, these types are largely restricted to everyday deposits like Deposit 1c, Deposit 3a, and Deposit 3b, with only a few appearing in noneveryday contexts. In the latter context, oyster shell becomes the main tempering agent in place of sand or grit.

At Juffure, increased consumption of oyster during the Atlantic trade and the resulting use of the shell as a tempering agent is observed in the eighteenth century. This is similar to the Diola use of mollusks in the Casamance (Linares de Sapir 1969: 9). For them, this mollusk was a primary food source. This left a large quantity of the

shell by-product that, when converted to temper, was not restricted to certain vessels, and these in turn were not restricted to particular social contexts. Prior to and immediately after this period, oyster does not form a significant portion of the Juffure community's diet. The potential importance of oyster is supported by the absence of other shell types as temper. Clam and gastropod species form a noteworthy portion of local consumption during the Atlantic trade, yet neither of these shell types was incorporated into ceramic recipes. This manufacturing choice, focusing on one type of shell of the variety available, may have converted some ceramics into status items in and of themselves. The most ubiquitous ware types in episodic deposits contain oyster shell that is visible on the exterior surface. Oyster replaced organic material—most likely chaff—as the prime tempering agent, often combined with sand and, to a lesser extent, grog. In everyday wares, organics continue to form part of the ceramic recipes and this is likely the reason why chaff was not recovered in greater quantities at Juffure.

As the population of Juffure became more involved in commerce, presumably gaining wealth, the ability to display this wealth also increased. The increase in ware types during the Atlantic trade, in addition to increased variation within individual wares, is indicative of heightened production to support a growing population, as well as less time for perfection. The variation and tendency to "rougher" looking ceramics may be partially attributed to lesser skilled potters producing more wares to meet the growing demands of a large population. These wares include a dominance of shell temper and increased variety in temper combinations, with a decrease in the use of organic materials. In the eighteenth-century contexts a total of 154 ware types were identified, many of which were restricted to particular social contexts. While other methods of display were enacted, such as forms of personal adornment (Gijanto 2011c), archaeological investigations demonstrate that status was likely actively expressed through food at Juffure in the eighteenth century. The increase in occurrence of these events at this time necessitated a growth in pottery manufacture, and as a result, the associated rise in demand for ceramics and subsequent heightened production led to a decline in standardization.

A number of researchers argue that ceramics used during feasting will differ from everyday wares in their size as well as form (Hayden 2001: 48; Junker 2001: 284). During the Atlantic trade, three specific ware types dominate noneveryday assemblages at Juffure and were rarely present in everyday contexts (Ware Types 8d, 12d, and 17d). These all have some amount of oyster-shell tempering and tend toward dark pink or black paste. All have slightly more refined exterior surfaces within the ware groups they represent. These are distinct from ceramics recovered often less than 3 m away in contemporary everyday deposits, dominated by tempers of sand with organics, or sand and grog mixed tempers, but are not the same wares from earlier contexts (*i.e.*, between Deposits 1a and 1c). It appears as though there was a distinction between private and more publicly viewed wares largely based on temper. In Deposit 1b, postdating the Atlantic trade, many of the everyday wares are no longer present and the majority of the ceramics are grog-tempered. Many of these are the same wares found in late eighteenth- and nineteenth-century deposits at the south bank site of Berefet.

Discrete oyster shell deposits were intermixed in trash pits, frequently associated with episodic contexts at Juffure village. What needs to be considered is why the shell was brought to the village area at all, rather than shelling oysters at the beachside which is common practice today. This is partially explained by the large-scale use of oyster shell for temper in local ceramics during the eighteenth century at the village (Table 4).

Table 4 Ceramic tempers per deposit for all sherd types (*notes ongoing analysis of body sherds)

Locus	Deposit	Context	shell	sand	grog	sand/shell	sand/grog	sand/grog/shell
1	1a	Post-episode 1 (n=540)	17 [3 %]	94 [17 %]	104 [19 %]	166 [57 %]	127 [9 %]	32 [3 %]
		Episode 1 (n=3468)	761 [22 %]	741 [21 %]	210 [6 %]	1227 [36 %]	413 [12 %]	116 [3 %]
	1b	Everyday (n=1994)	59 [3 %]	1043 [52 %]	554 [28 %]	117 [6 %]	209 [10 %]	1 [3 %]
	1c*	Everyday* (n=8205)	269 [3 %]	4758 [58 %]	2210 [27 %]	176 [2 %]	759 [9 %]	33 [1 %]
2	2a	Post-episode 2 (n=1926)	306 [16 %]	114 [6 %]	76 [4 %]	1144 [59 %]	118 [6 %]	168 [9 %]
		Episode 2 (n=1576)	228 [15 %]	67 [4 %]	59 [4 %]	865 [55 %]	163 [10 %]	194 [12 %]
		Post-episode 1 (n=1597)	145 [9 %]	448 [28 %]	290 [18 %]	484 [30 %]	213 [14 %]	17 [1 %]
		Episode 1 (n=1136)	240 [21 %]	62 [6 %]	48 [4 %]	645 [57 %]	106 [9 %]	35 [3 %]
	2b	Everyday* (n=923)	144 [16 %]	505 [55 %]	174 [19 %]	16 [2 %]	79 [8 %]	5 [<1 %]
3	3a	Everyday (n=1606)	45 [3 %]	889 [55 %]	389 [24 %]	70 [5 %]	192 [12 %]	21 [1 %]
	3b	Everyday (n=1528)	141 [9 %]	758 [50 %]	356 [23 %]	93 [6 %]	163 [11 %]	17 [1 %]
Factory	Factory	Everyday (n=10982)	4571 [42 %]	2065 [19 %]	564 [5 %]	2876 [26 %]	619 [6 %]	287 [2 %]

The practice of tempering with oyster may therefore be viewed as a direct result of increased consumption at the episodic events, and a need not only to produce more vessels for this purpose, but also as an innovative way to dispose of the shell. Additionally, the near absence of oyster shell in nineteenth-century deposits at Juffure village coincides with the replacement of this temper by grog as the favored tempering agent and in some cases, a return to sand tempering or mix of sand and grog. This implies that oyster may not have been readily available to residents in the nineteenth century, possibly tied to decreased wealth or over exploitation. A second hypothesis is that this coincides with the end of pottery production in the village. When everyday deposits are compared with episodic contexts, it can be inferred that oysters were reserved for specific events as a potential display of wealth and access throughout the height of the Atlantic trade. In general, the wares from Deposit 3a and 3b are mainly sand or sand/grog temper mixes (63 % and 83 %, respectively). The same is true for the rims in Deposit 2b (63 %) and Deposit 1c (68 %). Interestingly, only the post-episode 2 period in Deposit 2a resembles episodic assemblages in terms of temper trends.

As a result, several observations can be made. First, we note the lower amounts of shell-tempered wares in Deposits 3a and 3b as compared with episodic assemblages. Second, we note the diversity in artifact classes including those not related to meals are utilitarian items such as thimbles, files, nails, chain links, and fishing hooks as well as imported ceramics from Europe. The datable imports range between the eighteenth and early nineteenth centuries, suggesting long-term everyday deposition. These features shed light on the nature of diet and display enacted by the residents who contributed to the trash middens. The dominance of heavily shell-tempered ceramics in these settings, compared with the continued use of sand, or sand and grog, temper combinations in everyday settings, suggests that certain wares were reserved for special events serving as the local ‘fine china’. Not only did the temper vary, but these were also more refined vessels overall with a greater range of decorative motifs and use of slips and burnishing.

When attempting to find connections between culinary practice and technical choice in ceramic manufacture, other features are considered including vessel form and size. Unfortunately, the overall small size of the sherds recovered (often<4 cm) limits this discussion. Vessel reconstruction is ongoing, and a slow process. Considering the small percentage of the collection that has been cross-mended, the statements made here do not represent general trends, but rather those observed so far. What is discernible from a number of the larger rims containing complete lips and partial shoulders is that the opening of the vessel is not representative of the overall vessel size. The small, restricted openings provide minimal insight into potential use. Water storage, food storage, food preparation, and serving can be cautiously surmised. Finally, fragments of steamers were recovered from Deposits 1a, 2a, and 3a and at the factory (Figs. 3 and 5), providing evidence for wet-cooking techniques.

The most noticeable difference between the episodic assemblages and the deposits in Locus 3 is the range of rim forms present (Fig. 6). Rims with orifices less than 10 cm were only recovered from everyday deposits including Deposit 1c and the factory. All rims from Locus 3 were too fragmentary to determine diameters. Only three sizes could be recorded for Deposit 2b, again precluding useful comparison. Rims indicative of storage vessels requiring a lid were found in the village as opposed to the factory and are more common in everyday contexts. However, this distinction is not seen between the rim forms identified in Deposit 1c and episodic assemblages

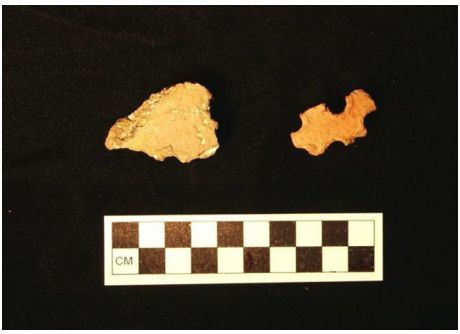

Fig. 5 Steamer fragments recovered from different deposits at Juffure (Photo by Gijanto)

from Deposit 1a and Deposit 2a with regards to the range of forms—between 18 and 20 subgroups. Rather, the distinction lies in which forms are more prominent (Table 5). Unidentified rim types form the greatest portion of the rims from Deposit 1c and are the fourth most numerous in Deposit 2b, speaking to the taphonomic processes associated with sheet middens. The three forms comprising the greatest percentage of identifiable forms are sharp, gradual, and regular everted rim; short-lipped everted ones; and closed ledged forms. In the episodic assemblage from Deposit 1a, sharp, gradual, and regular everted rims are again the most numerous, followed by short-lipped everted; short lipped overhanging; and down-turned overhanging forms. There is a greater range in the most numerous rim forms in the Deposit 1a post-episode context, with more storage forms (collared) present. This trend is not observed in Deposit 2a, but the greater range of forms is recognized between everyday and episodic contexts in general. These patterns suggest that rim forms are somewhat indicative of social context.

Both the early years of the Atlantic trade, and the period following its decline during the formal colonial era, are represented by limited number of ware types with little internal variation with regard to paste recipes, color, and firing practices. As the practice of oyster shell tempering becomes less common in early nineteenth-century deposits,

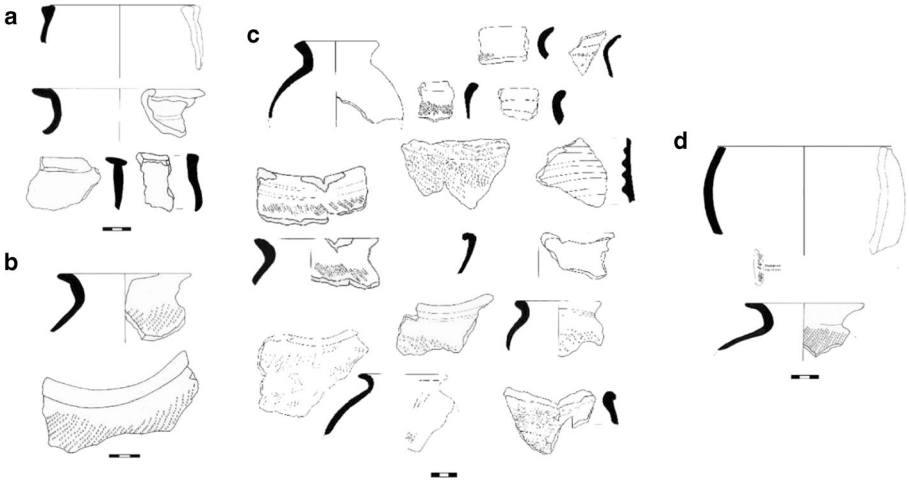

Fig. 6 A sample of vessel forms from Juffure deposits: **a** Deposit 1a, **b** deposit 1c, **c** deposit 2a, and **d** the factory deposit (drawings by Sarah Platt and Caroline Mende)

Table 5 Most numerous rim forms in Juffure deposit

Locus	Deposit	Context	Rim Form	Percent	Count
1	1a	Post-episode	Regular, sharp, gradual everted	32	13
			Short lip everted	20	8
			Folded everted	12	5
			Down-turned overhanging	5	2
			Simple vertical	5	2
			Simple open	5	2
			Short open collar	5	2
			Short closed collar	5	2
				Total deposit	41
1	1a	Episode	Regular, sharp, gradual everted	39	44
			Short lip everted	12	13
			Short lip overhanging	10	11
			Down-turned overhanging	6	7
			Folded everted	5	6
			Long lip everted	4	4
				Total deposit	112
1	1c	Everyday	Regular, sharp, gradual everted	32	49
			Unidentified	27	41
			Short lip everted	13	20
			Long lip everted	2	3
			Ledged closed	7	11
			Regular overhanging	5	8
				Total deposit	154
2	2a	Post-episode 1	Regular, sharp, gradual everted	55	11
			Short lip everted	20	4
			Simple open	10	2
			Rolled lip overhanging	5	1
			Thickened closed	5	1
			Short open collar	5	1
				Total deposit	20
2	2a	Episode 1	Regular, sharp, gradual everted	64	40
			Folded everted	10	6
			Short lip everted	6	4
			Short lip overhanging	5	3
			Long lip everted	5	3
				Total deposit	62
2	2a	Post-episode 2	Regular, sharp, gradual everted	43	68
			Short lip everted	14	22
			Long lip everted	6	10
			Folded everted	6	10
			Regular overhanging	6	10

Table 5 (continued)

Locus	Deposit	Context	Rim Form	Percent	Count
			Down-turned overhanging	6	10
				Total deposit	159
2	2a	Episode 2	Regular, sharp, gradual everted	40	34
			Short lip everted	26	22
			Short lip overhanging	9	1
			Regular overhanging	7	4
			Folded everted	3	3
				Total deposit	99
2	2b	Everyday	Regular, sharp, gradual everted	53	10
			Simple vertical	16	3
			Short lip everted	11	2
			Unidentified	5	1
			Rolled lip overhanging	5	1
			Ledged vertical	5	1
			Thickened vertical	5	1
				Total deposit	19
3	3a	Everyday	Regular, sharp, gradual everted	40	13
			Short lip everted	18	6
			Folded everted	12	4
			Long lip everted	9	3
			Closed ledged	6	2
				Total deposit	33
3	3b	Everyday	Regular, sharp, gradual everted	44	12
			Short lip everted	11	3
			Down-turned overhanging	7	2
			Open T-rim	7	2
			Short open collared	7	2
				Total deposit	27
	Factory	Everyday	Regular, sharp, gradual everted	47	108
			Short lip everted	17	38
			Long lip everted	6	14
			Regular overhanging	6	13
			Simple open	5	11
				Total deposit	378

coinciding with the decline of the Atlantic trade at Juffure, the gradual disappearance of all ware types from the eighteenth century is observed, and these are replaced with buff-colored, grog-tempered wares exhibiting a limited range of firing patterns and decorative motifs. These same wares are present in early nineteenth-century contexts in the capital of Banjul and throughout the eighteenth- and nineteenth-century deposits at Berefet on the south bank (Gijanto and Platt 2012), implying a possible end of ceramic

production at Juffure and reliance on southern potters as is the case today, beginning in the early nineteenth century.

These distinct patterns demonstrate that over a relatively short period, there are significant changes in the local ceramics. When viewed over time and contextualized within a past punctuated by specific large-scale events (*e.g.*, opening and decline of the Atlantic trade, small-scale status enactments through diet during the trade's eighteenth-century height), it is apparent that periods of increased interaction are characterized by a burst in variety of local ceramics, tied to tempering agents and other aspects of production. The increased variation within individual ceramic types and ware groups is most prominent in mid- to late-eighteenth-century contexts. The favoring of certain ware types amongst this broad range of choice for episodic meals suggests that pottery production, at least to some extent, was driven by the regularity and expectations surrounding these events in the village. While it is known that multiple ethnic groups occupied this region, these more likely were displays of status. This can be seen today amongst the village's residents fulfilling social obligations of naming ceremonies and Ramadan in similar ways, despite different ethnic backgrounds. Conversely, public displays influenced manufacturing practices and in turn the physical make-up of these vessels, most notably in the tempering agent selected.

Taken together, the lines of evidence drawn from ceramic analysis indicate change over time and space in response to the population increase brought with Atlantic trade settlement. Throughout the world, many anthropologists have observed that pottery production increases—including the range of diversity—during periods of increased population (Arnold 1985: 179; Chatterjee 1975; Chilton 1998; David and Hennig 1972: 25; Hammond 1966; Joyner 2007; Papousek 1974: 1010–1011). A part of this is pressure to feed a growing population, which necessarily is linked to the food options available and food production, cooking, and serving practices. Moreover, ceramics and other vessels used for food preparation and consumption are key indicators of differential meals. Increased variability in ceramic form, increased reliance on shell temper, and evidence of ceramic manufacture by new and/or less-skilled practitioners may be tied to an increased demand for ceramic vessels that outstripped local resources. Ceramic production, like all other facets of cultural practice, is in a constant state of flux, subject to the whimsy of the potter or perhaps tied to a causal chain, being subject to the potters' and users' relationships to broader socioeconomic interactions (Ashley 2010; *cf.* Dobres 2000; Hegmon 1995). Furthermore, ceramics help distinguish between social contexts: oyster shell tempering is found in higher frequencies among episodic deposits, possibly indexing the value of shellfish as a prized foodstuff, and indicating a preference for this ware type for episodic social events involving food. In the next and final section we consider how to put the three lines of evidence—botanical, faunal, and ceramic—in dialog to consider the meaning of differences in food traditions between Juffure village and factory, and across everyday and episodic deposits. The latter point necessitates an examination of the food remains found in association with the various ceramic types recovered through archaeological excavation, to which we return below.

Social Implications of Everyday and Episodic Consumption Practices

The available archaeological data from Juffure suggest that episodic deposits were the result of larger meals, indicative of communal gatherings similar to what archaeologists

working in multiple regions and time periods have identified as feasting (*i.e.*, Blitz 1993; Dietler 2001; Klarich 2010; LeCount 2001; Potter 2000), which occurred fairly frequently in the eighteenth century. This can be correlated with access to Atlantic wealth and levels of interaction in the former commercial center. The simplest definition of a feast is any meal that departs from everyday practice in scale and composition. The nomenclature "feast" in this study is used to refer to a small-scale event that included food and drink of some form, presented to members outside the compound for a specific purpose or occasion that remains unknown (*cf.* Dietler and Hayden 2001a: 3; Hayden 2001: 28). Researchers have developed elaborate typologies for the various forms of feasts that are distinguished by size, by the guests, and by the host; while these can be defined ethnographically or through the documentary record, many are elusive in the archaeological record (Dietler and Hayden 2001b). All of these happenings, however, are seen as lying within the sociopolitical sphere (Dietler 2001: 88). Along these lines, feasts are equated with social action whereby individuals maneuver within an accepted framework to bring about change to the existing social order (Hegman 2008: 222–223; *cf.* Sewell 2005: 131).

Feasting serves multiple purposes within a community. Many addressing this practice throughout the world note that a feast is meant to be a display of wealth to assert or affirm status within a community (Dietler 2001; Grammer 1996; Mills 2004; Rosenswig 2007; Wiessner and Schiefenhövel 1996). Along the Swahili coast, feasting as a form of status performance tied to Muslim valorization of generosity was attested by Ibn Battuta in 1331 at Mombasa (Hamdun and King 1998: 17–19) and is argued to be observable in the archaeological record at the eleventh- to fifteenth-century town of Chwaka on Pemba Island (Fleisher 2010: 22–23) and tied to the growing importance of (Asian) rice at Chwaka (Walshaw 2010). Feasts can also serve to create alliances or fulfill obligations of an elite to his/her labor force thus maintaining the social order (Dietler 2001: 69). For our purposes, perhaps the term "party" is more applicable, as the single description of such an event on the river in the Atlantic era describes music and dancing with potluck-style contributions of food to celebrate a male circumcision at Cassan upriver (Gamble and Hair 1999: 152). Depending on the time and scale of event, hosts might be required to feed large numbers of people over anywhere from an evening to several days. Events may have been held whereby multiple hosts throughout the village were competing to attract the largest crowds, or these may have occurred in communal village spaces with several "hosts" competing in a shared local context. In the 1730s, Francis Moore describes the obligation of a man to hold a feast lasting 3 or 4 days upon marrying (1738: 132). He also noted that at Yamyamacunda upriver, feasts were held each evening during Ramadan, which included slaughtering "an abundance of cows" (Moore 1738: 144). Based on the occurrence of these events, members of a community might be expected to provide food for shared consumption on a regular basis, thus necessitating the continuous reification of their status in the local hierarchy dependent upon their contribution. The influential nature of this practice on the Gambia River was not lost to European traders, as noted by Almada at the close of the sixteenth century. When describing why the trade on the Gambia River was lost to the Portuguese, Almada (1984: 22) writes: "…the English hold banquets for them [local traders] on land, to the sound of music from violins and other instruments." The manipulation of this practice by the English to gain a foothold in the commercial sphere speaks to the importance of public display and presentation in these communities. At Juffure the act of participating in these feasts likely had more to do with societal

expectations to reaffirm or assert individual status in addition to a shared communal identity, rather than being purely the act of display. This reaffirmation or assertion is seen today at Juffure through naming ceremonies, Ramadan events, and feasts or parties for a family member's return from Mecca for which the entire community is invited. Both Mande and Islamic traditions of hospitality may be at play. Within these contexts, the distinction between the food served, and the ceramic vessels on display would vary in some way between everyday meals and more infrequent happenings.

Available archaeological data from Juffure suggest that village feasts were small-scale events or happenings, distinguishable from the everyday by being larger and more sumptuous, and potentially by the presence of alcohol, but are most likely part of the expected rhythm of community life. Whereas common fare was likely simple and restricted due to provisioning of European traders and companies, a feast would include things like a range of grains and domesticates often reserved for sale. Technical differences in ceramics resulting in different aesthetics are observed also. The relationship between food and ceramics is complex. On one level we look at the quality of the vessels and the style. Are they refined, elaborately decorated, or in some other way meant to signify status? Alternatively, the more functional aspects of serving, storing, and cooking food must also be considered. Vessel size is often a by-product of intended use (see McIntosh 1995: 158) but may also be seen as an indication of the size of the gathering.

An alternate reading of the Juffure food and ceramic records is that differences among village everyday and episodic deposits and factory deposits reflect socially differentiated food practices, based on ethnicity, wealth, and/or status. This differentiation is more problematic to argue, given the diversity of people, religions, and food traditions represented in the Niumi settlements and the possibility that these dynamics shifted in time and space. This is further complicated by the likelihood that these were not agricultural settlements themselves, and that all inhabitants would have relied on the same supply of regionally produced goods. At the very least, the patterns presented here demonstrate that during the Atlantic trade everyday meals were sparse, lacked variety, and the vessels used to prepare and serve them were comparatively plain and uniform across space. As the trade progressed, we see a change in the variety or types of meals encountered in the archaeological record as well as the associated ceramics. Moreover, special deposits did not contain a significantly greater diversity of meat or botanicals, although faunal evidence suggests that roasting occurred at these occasions, as opposed to the stew preparations common to everyday deposits. This is correlated with relatively stable production of vessel forms over time as well. Rather than a shift in the foods present, we see certain types dominating different settings. For example, rice is the most ubiquitous grain in special contexts, and sorghum seems restricted almost entirely to special occasion village and factory deposits. This suggests that meals with rice and sorghum were served at parties or on special occasions, perhaps signifying shared value of this food across social differences in Niumi society.

The impact of the Atlantic trade was not a shift in communal or everyday practice. There was neither widespread adoption of European nor American ceramics. Despite adoption of American crops like tomato and peanut known through the documentary record, these were brought into traditional stews and sauces, a culinary practice that reduces archaeological visibility as seen in the large portion of the faunal assemblage that is unidentifiable. Charred plant remains indicate the continued reliance on African grains brought in through regional trade networks; maize, while present, is exceedingly rare. Likewise shifts in ceramic

manufacture and aesthetic remain within the bounds of local sensibilities. The most noteworthy connection seen between the new forms of meals are changes in crafting practices; specifically, the replacement of organic material and dominance of sand tempering with oyster shell during the height of the Atlantic trade. Those recovered in feasting assemblages contain varying amounts of oyster shell temper. The presence of discrete oyster shell layers within these pits also suggests that these were served as part of these events. This difference in both what was served and the aesthetic nature of the ceramics used in these contexts is a reflection of the possible relationship between crafting and diet.

Foodstuffs are often interpreted independent of one another (*i.e.*, botanicals *vs*. fauna) and relegated to experts in our field. This divide is also seen in how we approach the vessels used to prepare and serve the meal, viewing crafting as bound up with expressions of identity independent of other forms of expression. Juffure was at the heart of the Gambia River's Atlantic trading center and prospered as such in the eighteenth century. As a supplier of salt and foodstuffs, food and meals were integral to the Atlantic experience on a commercial as well as social level. The value imparted on certain foodstuffs and use of others to express status is evident in the documentary and archaeological record. As resources shifted throughout the Atlantic trade, the changes seen in meals and ceramics are interpreted here as local responses to global entanglements.

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References

Arnold, D. E. (1985). *Ceramic theory and cultural process*. Cambridge: Cambridge University Press.

Ashley, C. Z. (2010). Towards a socialised archaeology of ceramics in Great Lakes Africa. *African Archaeological Review, 27*, 135–163.

Bauer, R. L. (2008). Social distinctions and animal use in the South Indian Iron Age: Archaeological evidence from Kadebakele, northern Karnataka. *Antiquity (online), 82*(317).

Blitz, J. (1993). Big pots for big shots: Feasting and storage in a Mississippian community. *American Antiquity, 58*, 80–96.

Carney, J., & Rosomoff, N. (2010). *In the shadow of slavery; Africa's botanical legacy in the Atlantic World*. Berkeley: University of California Press.

Chatterjee, B. K. (1975). Comment on 'Ceramic ecology of the Ayacucho basin, Peru: Implications for prehistory' by D.E. Arnold. *Current Anthropology, 16*, 194–195.

Chilton, E. (1998). The cultural origins of technical choice: Unraveling Algonquian and Iroquoian ceramic tradition in the northeast. In M. T. Stark (Ed.), *The archaeology of social boundaries* (pp. 132–160). Washington, DC: Smithsonian Institution Press.

Coelho, F. (1989). *Duas descriçoess Seiscentistas da Guiné. Transl. P.E.H. Hair*. Lisboa: Academia Portuguesa da História.

Crone, C. R. (1937). *The voyages of Cadamosto*. London: The Hakluyt Society.
Crosby, A. (1972). *The Columbian exchange: Biological and cultural consequences of 1492*. Westport: Greenwood Publishing Company.
David, N., & Hennig, H. (1972). The ethnography of pottery: A Fulani case seen in archaeological perspective. *Addison Wesley Modular Publications, 21*, 1–29.
de Almada, A. (1984). *Brief treatise on the rivers of Guinea (c.1594). Transl. by P.E.H. Hair*. Liverpool: University of Liverpool.
DeCorse, C. R., Gijanto, L., Roberts, W., & Sanyang, B. (2010). An archaeological appraisal of early European settlement in The Gambia. *Nyame Akuma, 73*, 55–64.
Dietler, M. (2001). Theorizing the feast: Rituals of consumption, commensal politics, and power in African contexts. In M. Dietler & B. Hayden (Eds.), *Feasts: Archaeological and ethnographic perspectives on food, politics, and power* (pp. 65–114). Washington, DC: Smithsonian Institution Press.
Dietler, M., & Hayden, B. (2001a). Digesting the feast: Good to eat, good to drink, good to think. In M. Dietler & B. Hayden (Eds.), *Feasts: Archaeological and ethnographic perspectives on food, politics, and power* (pp. 1–20). Washington, DC: Smithsonian Institution Press.
Dietler, M., & Hayden, B. (Eds.). (2001b). *Feasts: Archaeological and ethnographic perspectives on food, politics, and power*. Washington, DC: Smithsonian Institution Press.
Dobres, M. (2000). *Technology and social agency: Outlining a practice framework for archaeology*. Oxford: Blackwell.
Fisher, J. W. (1995). Bone surface modifications in zooarchaeology. *Journal of Archaeological Method and Theory, 2*(1), 7–68.
Fleisher, J. (2010). Rituals of consumption and the politics of feasting on the Eastern African coast, AD 700–1500. *Journal of World Prehistory, 23*(4), 195–217.
Gallay, A. (2010). Seriation chronologique de la céramique mégalithique Sénégambienne (Sénégal, Gambie), 700 cal BC–1700 cal AD. *Journal of African Archaeology, 8*(1), 99–129.
Gamble, D., & Hair, P. E. H. (Eds.). (1999). *The discovery of the River Gambra (1623) by Richard Jobson*. London: Hakluyt Society.
Gijanto, L. (2011a). Exchange, interaction, and change in local ceramic production in the Niumi commercial center on the Gambia River. *Journal of Social Archaeology, 11*(1), 21–48.
Gijanto, L. (2011b). Socio-economic interaction and ceramic aesthetic: Understanding West African ceramic production and use in context. *Azania, 46*(3), 250–268.
Gijanto, L. (2011c). Personal adornment and expressions of wealth: Beads and the Gambia River's Atlantic trade. *International Journal of Historical Archaeology, 15*(4), 637–668.
Gijanto, L., & Platt, S. (2012). A view outside the center: Preliminary findings from Berefet, the Gambia. *Nyame Akuma, 77*, 37–48.
Gokee, C. (2012). *Daily life in the land of Bambuk: An archaeological study of political economy at Diouboye*. Unpublished PhD dissertation, University of Michigan.
Goody, J. (1982). *Cooking, cuisine and class: A study in comparative sociology*. Cambridge: Cambridge University Press.
Grammer, K. (1996). Systems of power: The function and evolution of social status. In P. Wiessner & W. Schiefenhövel (Eds.), *Food and the status quest: An interdisciplinary perspective* (pp. 69–85). Providence: Berghahn Books.
Gray, J. (1996). *A history of the Gambia*. London: Frank Cass and Co. Ltd.
Hamdun, S., & King, N. (1998). *Ibn Battuta in Black Africa*. Princeton, NJ: Markus Wiener.
Hammond, P. (1966). *Yatenga: Technology in the culture of a West African kingdom*. New York: The Free Press.
Hayden, B. (2001). Fabulous feasts: A prolegomenon to the importance of feasting. In M. Dietler & B. Hayden (Eds.), *Feasts: Archaeological and ethnographic perspectives on food, politics, and power* (pp. 23–64). Washington, DC: Smithsonian Institution Press.
Hegman, M. (2008). Structure and agency in southwest archaeology. In M. D. Varien & J. M. Potter (Eds.), *The social construction of communities: Agency, structure, and identity in the prehispanic southwest* (pp. 217–231). Lanham: Rowman and Littlefield.
Hegmon, M. (1995). *The social dynamics of pottery style in the early Puebloan southwest*. Tucson: Crow Canyon Archaeological Center.
Heinrich, A. (2012). Some comments on the archaeology of slave diets and the importance of taphonomy to historical faunal analyses. *Journal of African Diaspora Archaeology and Heritage, 1*(1), 9–40.
Ingram, G. (1847). Abridged account of an expedition of about 200 miles up the Gambia, by Governor Ingram. *Journal of the Royal Geographical Society of London, 17*, 150–155.
Jobson, R. (1968). *The golden trade*. London: Dawson of Pall Mall.

Joyner, L. (2007). Cooking pots as indicators of cultural change: A petrographic study of Byzantine and Frankish cooking wares from Corinth. *Hesperia, 76*(1), 183–227.
Junker, L. (2001). The evolution of ritual feasting systems in Prehispanic Philippine chiefdoms. In M. Dietler & B. Hayden (Eds.), *Feasts: Archaeological and ethnographic perspectives on food, politics, and power* (pp. 267–310). Washington, DC: Smithsonian Institution Press.
Klarich, E. (Ed.). (2010). *Inside ancient kitchens: New directions in the study of daily meals and feasts*. Boulder: University Press of Colorado.
Lawson, A. (2003). *Megaliths and Mande states: Sociopolitical change in the Gambia valley over the past two millennia*. Unpublished PhD dissertation, University of Michigan.
LeCount, L. (2001). Like water for chocolate: Feasting and political ritual among the Late Classic Maya at Xunantunich, Belize. *American Anthropologist, 103*(4), 935–953.
Lewicki, T. (1974). *West African food in the Middle Ages: According to Arabic sources*. New York: Cambridge University Press.
Linares de Sapir, O. (1969). Diola pottery of the Fogny and the Kasa. *Expedition, 11*(3), 2–11.
Logan, A. L. (2012). *A history of food without history: Food, trade, and environment in west-central Ghana in the second millennium AD*. Unpublished PhD dissertation, University of Michigan
Lupton, K. (1979). *Mungo Park, the African traveler*. New York: Oxford University Press.
McCafferty, G. (2008). Domestic practice in Postclassic Santa Isabel Nicaragua. *Latin American Antiquity, 19*(1), 64–82.
McCann, J. (2001). Maize and grace: History, corn, and Africa's new landscapes, 1500–1999. *Comparative Studies in Society and History, 43*, 246–272.
McIntosh, S. K. (1995). Pottery. In S. K. McIntosh (Ed.), *Excavations at Jenne-jeno, Hambarketolo, and Kaniana (Inland Niger Delta, Mali), the 1981 season* (pp. 114–145). Berkeley: University of California Press.
McIntosh, S. K., & Bocoum, H. (2000). New perspectives on Sincu Bara, a first millennium site in the Senegal Valley. *African Archaeological Review, 17*(1), 1–43.
Mills, B. (Ed.). (2004). *Identity, feasting, and the archaeology of the greater Southwest*. Boulder: University Press of Colorado.
Miracle, M. P. (1965). The introduction and spread of maize in Africa. *Journal of African History, 6*(1), 39–55.
Moore, F. (1738). *Travels into the inland parts of Africa*. London: Edward Cave.
National Research Council. (2006). *Lost crops of Africa, Vol II: Vegetables*. Washington, DC: National Academy Press.
Papousek, D. (1974). Manufactura de alfaría: En Temascalcingo, México, 1967. *America Indigena, 34*(4), 1009–1046.
Paris, F. (2001). *Voyage to the coast of Africa, named Guinea, and to the Isles of America, made in the years 1682 and 1683. Transl. A. Caron*. Madison: University of Wisconsin-Madison.
Park, M. (1807). *Travels in the interior districts of Africa*. London: W. Bulmer and Co.
Potter, J. (2000). Pots, parties, and politics: Communal feasting in the American southwest. *American Antiquity, 63*(3), 471–492.
Richard, F. (2007). *From cosaan to colony: Exploring archaeological landscape formations and socio-political complexity in the Siin (Senegal), AD 500–1900,* Unpublished PhD dissertation, Syracuse University
Rosenswig, R. (2007). Beyond identifying elites: Feasting as a means to understand Early Middle Formative society on the Pacific coast of Mexico. *Journal of Anthropological Archaeology, 26*, 1–27.
Sewell, W. (2005). *Logics of history: Social theory and social transformation*. Chicago: University of Chicago Press.
Thiaw, I. (1999). *Archaeological investigation of long-term culture change in the Lower Falemme (Upper Senegal region) AD* 500–1900. Unpublished PhD dissertation, Rice University.
van Keuren, S. (2004). Crafting feasts in the prehispanic Southwest: An introductory review. In B. Mills (Ed.), *Identity, feasting, and the archaeology of the Greater Southwest* (pp. 192–209). University Press of Colorado: Boulder.
Walshaw, S. (2010). Converting to rice: Urbanization, Islamization and crops on Pemba Island, Tanzania, AD 700–1500. *World Archaeology, 42*(1), 137–154.
Welch, P., & Scarry, C. M. (1995). Status-related variation in foodways in the Moundville chiefdom. *American Antiquity, 60*(3), 397–419.
Wiessner, P., & Schiefenhövel, W. (Eds.). (1996). *Food and the status quest: An interdisciplinary perspective*. Providence: Berghahn Books.
Wright, D. (1977). *The early history of Niumi: Settlement and foundation of a Mandinka state on the Gambia River*. Athens: Ohio University Center for International Studies African Program.
Wright, D. (2004). *The world and a very small place in Africa* (2nd ed.). New York: M.E. Sharpe.

The Gambian National Archives, Banjul, The Gambia

CO 1/1: Dispatches- Extracts from Sierra Leone Series Correspondence 1814 onwards.

The British National Archives, Kew London

T70 Series: Company of Royal Adventurers of England Trading with Africa and successors: Records 1669–1833. The Gambia journals begin at T55, while there are several ledgers that contain letters from the Royal Africa Company to all their holdings on the coast. There are several journals written in London that have been derived from letters and books sent to the company from James Fort. The journals have account details for all posts on the Gambia that were to report to James Fort as the central office including Juffure.

T70/4: Extracts of Letters June 20, 1720 to May 1, 1746.

T70/19: Abstract of Letters received by the Royal African Company of England so far as relate to the Committee of Accounts no.2 from November 3 1714 to August 4 1719.

T70/30: Letters from the Coast of Africa to the Committee of Merchants Trading in Africa 1753–1758.

T70/52: Copies of Letters sent by the Royal Africa Company of England to the Coast of from Sept 7 1703 to June 17 1715.

T70/55: Copies of letters sent by the Royal African Company of England to the Gambia, Dec 1 1720 to May 19 1737.

T70/56: Copies of Letters Sent by the Royal African Company of England to Gambia No.2. Sept 29th 1737 to 1751.

T70/561: Gambia Journal G. From Jan 1 1734 to June 30 1734. Received in Accountants Office July 28 1735 (In Gambia called journal F).

T70/563: Gambia Journal I, Jan 1, 1735 to June 30, 1735. Received Feb 16, 1736/7.

T70/565: Gambia Journal L, From Jan 1 1736 to June 30 1736.

T70/574: Journal of the Gambia U. From July 1 1740 to Dec 31 1740.

T70/575: Journal of the Gambia From Jan 1 1741 to June 30 1741.

T70 576: Gambia Journal From July 1 1741 to Dec 31 1741.

T70 847: Gambia Ledger G. From Jan 1st 1734 to June 30th 1734. Received in the Accounts Office July 28, 1735. (J in Gambia).