Genoa Frilled Pottery and the Problem of the Identification of the Wenro in Huronia

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This paper explores the possible link between an unusual pottery type found on mid-seventeenth century southern Ontario Iroquoian sites and a group of refugees reported to have arrived in Huronia in 1639. The primary means of examination are ceramic attribute analysis and Instrumental Neutron Activation Analysis (INAA). The core collections are from the Huron Ossossané site and the Neutral Freelton site, with additional data from several other sites in Ontario and New York State. Interpretation of the attribute analysis is that the unusual pottery from the Huron sites was made by a number of individuals, whereas one artisan could have decorated that from Freelton. Further, comparison with the New York pottery showed that although there were some basic similarities in style, the Ontario pottery is also stylistically different from the late Cayuga and Seneca pottery. INAA results indicate that the pottery from Huronia and Neutralia are basically indistinguishable on the basis of elements with short lived half-lives. However, pottery from New York shows differences from the Ontario vessels in the concentrations of several minor and trace elements. None of the Ontario pottery with unusual decoration had chemistry consistent with the New York State pottery. This suggests that the Ontario frilled pottery was made from local clays. Both the results of the attribute analysis and the results of INAA are consistent with what we would expect from pottery produced by a refugee population. An alternative interpretation is that frilling was a widely adopted 'horizon marker' of the mid-seventeenth century, possibly related to increased contacts and signalling of common identity in the mid-seventeenth century.

Introduction

In 1973, Frank Ridley published a short paper, "The Wenro in Huronia," suggesting that a group of refugees described in the *Jesuit Relations* made pottery that he had found at several western Huron sites (Figure 1) and had identified as Genoa Frilled. This idea resurfaced several times since its first proposal (e.g., Garrad and Steckley 1998; Jackson and Merritt 2003; MacDonald 1991) and there appears to be cautious acceptance on the part of some Ontario archaeologists that there is a link between the Wenro and pottery found in Huronia with projections at the base of the collar (for an alternative view, see Cooper et al. 1993). In this paper, I reconsider the problem based on investigation of ceramics using two analytical methods: attribute analysis of decoration and Instrumental Neutron Activation Analysis (INAA). I provide a short background to the analysis by discussing the references to the Wenro in the *Jesuit Relations* and the attempts that have been made to identify this group on an archaeological basis. If it is possible to associate the Wenro with particular decorative styles of pottery, this could serve as a foundation for examination of the way that refugees were integrated into Huron society during a period of social and physical stress (e.g., Jackson and Merritt 2003).

Throughout the paper, I refer to this unusual pottery as "frilled" rather than by a type name. Use of the term "Genoa Frilled" in reference to Ontario vessels suggests that they are the same type as pots found at Genoa Fort (Figure 1) and other sites in Western New York (MacNeish 1952).

Ethnohistorical References to the Wenro

The *Jesuit Relations* are the only primary sources referring to the Wenro by name. The *Jesuit Relations* contain seven spellings of the name thought to refer to the Wenro nation: Ahouenrochrhonons, 8eanohronons, 8enrôhronons, 8enroronons, Oneronon, A8enrehronon, and Oeronronnons (Thwaites 1896-1901:8:116; 16:252; 17:24, 212;

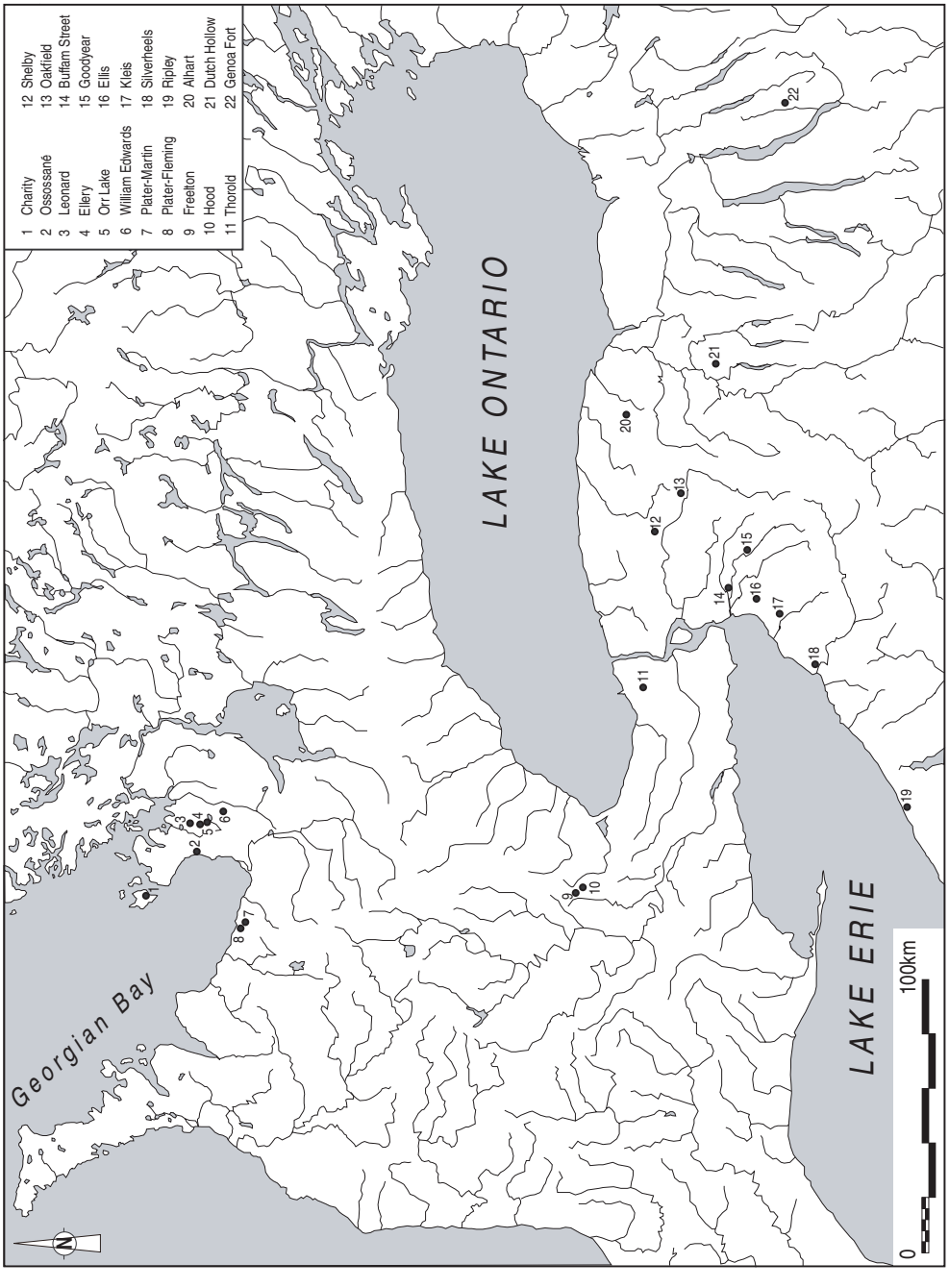

Figure 1. *Ontario and western New York sites mentioned in text.*

18:234; 21:230; 39:138). According to the *Jesuit Relations*, the Wenro were in contact with the English and Dutch (Thwaites 1896-1901:39:141), however, there are no other known primary sources that refer to the group (cf., Bogaert 1988). No extant historical maps of New France name the Wenro. The passages in the *Jesuit Relations* that refer to the Wenro are few and span the years 1635 to 1672 (Thwaites 1896-1901:8:115; 15:159; 16:253; 17: 25-29, 213; 18:235; 21:231; 39:141; 57:197).

According to the *Relations*, the Wenro were an Iroquoian-speaking group politically allied with the Huron (Thwaites 1896-1901:8:115). They were also former allies of the Neutral (Thwaites 1896-1901:16:253), but for reasons that are unknown, the Neutral withdrew their support of the Wenro, leaving them unprotected from Iroquois raiders (Thwaites 1896-1901:17:25-29). This precipitated the Wenro move to Huronia in 1639; however, in 1640-1641 Brebeuf and Chaumonot encountered Wenro refugees at the Neutral village of Khioetoa, where they had seemingly resided for several years (Thwaites 1896-1901:21:231). Apparently not all Wenro moved to Huronia or the migration out of the Wenro homeland may have taken place over the course of some time. Interestingly, although the Neutral had withdrawn support, clearly some Wenro were welcome in their settlements. It is worth considering that some or all Wenro may have resided in the Neutral territory for some time before they migrated to Huronia, and this may have influenced descriptions in the *Jesuit Relations* of the Wenro homeland.

The move was negotiated by deputies to the Huron (Thwaites 1896-1901:17:25-29). Over 600 refugees, many ill, arrived in the village Ossossané in 1639 (Thwaites 1896-1901:15:159). From there, some moved to other villages, but a large number stayed at Ossossané.

There are several references to the place from which the Wenro came. The estimated distance that they travelled to reach Ossossané is 80 leagues (Thwaites 1896-1901:17:25-29). Their homeland is described as bordering the Neutral area, towards the Iroquois (Thwaites 1896-1901:17:25-29), and "beyond the Erie" (Thwaites 1896-1901:21:231). Marian White (1978:411) suggested that the Neutral village Ouaroronon, which Sagard-Théodat (1866:3:804) described as one day's journey from the Iroquois, could be another version of the Wenro name. There are no eye-witness descriptions of the Wenro homeland; therefore, it is prudent to exercise some caution with respect to this information.

Identification of the Wenro Homeland

There have been a number of attempts to pinpoint the Wenro homeland using linguistic, ethnohistoric, and archaeological evidence. Most amusing among these is the early linguistic interpretation of the name Wenro to mean "the people or tribe of the place of floating scum" (Hewitt 1910). Hewitt suggests that this place could be near the town of Cuba, New York, where there is an oil spring. Alternatively, but based on the same translation, White (1978:409) proposed it to be the Oak Orchard Swamp.

Steckley (1982, 1985) interpreted the name differently and, according to his translation, the name could mean that the Wenro belonged to the Turtle Clan. If he is correct, the name Wenro is not useful for determining from where the group came. However, it could explain why the group went to Ossossané rather than to one of the other major Huron villages. Garrad and Steckley (1998) suggest that the Wenro would have been welcomed to Ossossané because members of the Turtle clan lived there.

Based on archaeological evidence and interpretations of the historic record, a number of archaeologists in New York and Ontario have suggested locations for the Wenro homeland. Marian White (1961:37) examined the cartographic and ethnohistoric evidence about the Neutral, Erie, and Wenro and proposed that the Neutral did not occupy the area east of the Niagara River prior to 1630, but did so for a brief period between 1630 and 1645. The Wenro "probably lived in the Niagara Frontier, between the Neutral and the Seneca, but no more definite location can be given" (White 1961:39). She proposed that Shelby could be a Wenro site dating to the historic or contact periods (White 1977:85), while the

other sites in the region could be attributed to the Erie (White 1971:36).

Alternatively, Niemczycki (1984:72, 111) and Bradley (1987:92, 220) proposed that the Alhart site, Monroe County, and other sites west of the Genesee River are Wenro or Wenro-related. George Hamell (personal communication 1992) described Alhart as an agricultural village occupied ca. A.D. 1450-1500 with bundle burials that could indicate an influence from the west. In 1992, Hamell asserted that there are no known sites with European trade goods between the Niagara Frontier and the Genesee River. However, ossuaries with trade goods are known from Niagara County. At this time we can neither confirm nor reject the possibility that the Wenro homeland lay in this part of western New York State.

In Ontario, Frank Ridley (1973) suggested that a Wenro presence at some Huron sites can be identified by the presence of New York pottery types, in particular Genoa Frilled pottery. There are alternative explanations for the presence of New York State pottery at Huron sites, such as increased contact with Western League Iroquois (Latta 1976:136). Additionally, other traits, such as shell tempering, have been proposed as indicative of the Wenro (Lennox 1977). Recent researchers (Bursey, personal communication 2001; MacDonald 1991) tend to support Ridley's original hypothesis, but look further afield for places from which the Wenro may have come.

In general, the archaeological data from Huron sites such as Ossossané are consistent with an influx of potters in the mid-seventeenth century. The proposal that these potters were the Wenro cannot be verified as long as the Wenro homeland is unknown. Identification of sites in New York State as Wenro has been based on the ethnohistoric record and does not make reference to data from Ontario. If sites such as Alhart or Shelby are Wenro, it is unlikely that Wenro refugees produced the frilled pottery in Ontario. These conclusions would need to be re-evaluated in the event that frilled pottery is, in the future, recovered from New York sites identified as Wenro.

The Problem

Both before and since Ridley's (1973) first proposal, which was based on his typological identification of pottery, archaeologists have recovered frilled pottery from sites in Ontario, and in many cases they have typed these vessels as "Genoa Frilled" (Cooper et al.1993; Garrad and Steckley 1998; Jackson and Merritt 2003; Kidd 1950; MacDonald 1991; MacNeish 1952; Wright 1966). In some instances, they have used frilled pottery as the basis for suggesting a Wenro presence (Garrad and Steckley 1998; MacDonald 1991). In light of this, a more detailed examination of the pottery itself and its possible origins in New York State is warranted. In this paper, I use ceramic attribute analysis to examine material from Ontario and compare it with material from New York. Instrumental Neutron Activation Analysis (INAA) is used to determine whether the chemistry of the frilled pottery is consistent with pottery bearing more typical Huron decoration.

Ceramic Attribute Analysis: Methodolgy and Samples

This analysis employs examination of attributes rather than types for two reasons. I wished to examine the variation among sherds that would all be classified as Genoa Frilled, and I was not confident that I would be able to accurately classify sherds that could be New York types (MacNeish 1952) without reference to the type specimens. Preliminary examination of the material from Ossossané showed that basal collar modification was quite variable and that in addition to Genoa Frilled, other types might be present. I use the term "frilled" generally to refer to all pottery with exaggerated collar bases that have been modified to produce projections at regular intervals. I use "notch" to refer to the space between the projections and "frill" to refer to the projections. Notches may have been formed by cutting away clay, or they may result from moulding frills. Frills may have been moulded or they may result from cutting notches.

Several authors have published lists or guides

for carrying out attribute analyses of Ontario pottery, some of which give very detailed treatment to methods of recording decoration (Hurley and Wagner 1972; Marois 1984; Ramsden 1977; Smith 1997). In this case, I chose to use the code developed by Smith (1997) but with modifications. The attributes examined in this analysis relate primarily to form and decoration. These include metric variables of collar dimension, nominal variables of rim form, decorative motif of the upper rim and lip and the inferred method of producing the decoration (Hawkins 1992). The single technological attribute recorded is temper type, and a very simple classification scheme was used (Hawkins 1992; Smith 1997).

Examination of existing analysis systems showed that none was well-suited to description of pottery with basal collar projections—or frilling—because they did not adequately describe decoration occurring in three dimensions. Although it would be useful to record the method of producing frills (i.e., moulding, appliqué or notching), I determined that without sectioning rim sherds, I would only be able to record this attribute in a small number of cases. Therefore, the attributes recorded describe morphology only and two modifications to Smith's (1997) system proved necessary.

In the first instance, four possible attribute values were used to describe the definition of the frill and the notch between the frill (Figure 2). This "Frill" attribute refers to the sharpness of the edges of the notches and frills and possibly reflects the method of manufacture. Collars with undefined notches and undefined frills were probably moulded, whereas those with defined notches were probably formed by cutting away the clay. However, because we are only able to observe the end-product and both notching and moulding may have both been employed in forming frills, I chose to record the observable result. Only three of the four logically possible attribute states occurred in the collections analyzed. Secondly, the decorative motif codes (Smith 1997) were expanded to include "frilling". Detailed description of the general system can be found in Smith (1997) and the modifications are presented in greater detail in Hawkins (1992).

Each sherd was assigned a code consisting of four letters which, reading from left to right, describe the decorative motif in increasing detail. Two additional numbers describe minor variations in the overall decoration. This system allows both for general grouping of all sherds with frills, and for subdivision of sherds based on very specific variation in the shape or direction of the frill. The codes are listed in Table 1 and examples of how they are applied are shown in Figure 3.

Recent work suggests that in some circumstances the social identity of potters may be better

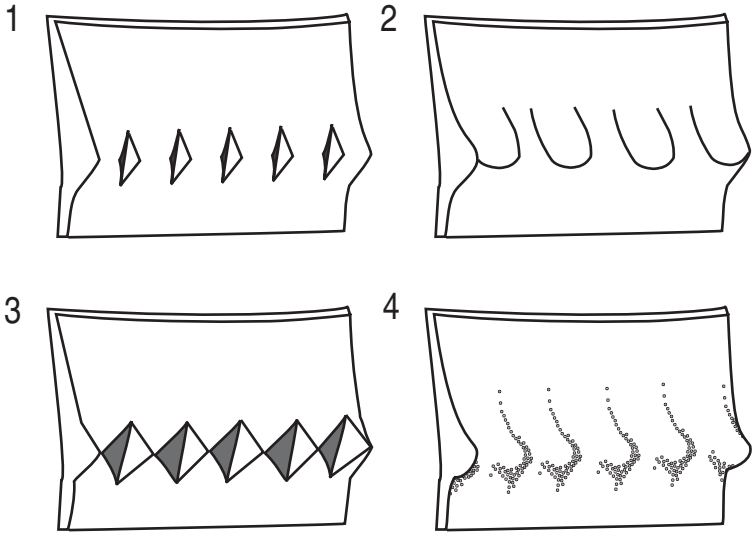

Figure 2. *Values of the attribute "Frill". Notch defined, frill undefined (1); notch undefined, frill defined (2); both defined (3); both undefined (4).*

Table 1. *Modification to Smith's (1997) ceramic coding system to accommodate frilling and related three-dimensional decoration of the rim. This does not include codes for decoration that involve a complicated motif, such as crossed obliques over a frill, but the system does allow for coding such decoration.*

Frilling not combined with any other form of decoration					
B. Simple	D. Notch	A. V-Shaped B. U-Shaped	A. Frill pointed B. Frill>Notch C. Frill=Notch D. Frill<Notch E. Indeterminate	1-. Left 2-. Vertical 3-. Right	1. Low 2. Centred 3. High
Rim above frill decorated (numeric values as above)					
F. Vertical difference: Simple/Simple		J. Linear/Notch	A. Non-horizontal/V-shaped Notch		A. Vertical > BDAA B. Vertical > BDAB C. Vertical > BDAC D. Vertical > BDAD E. Vertical > BDAE F. Oblique Right > BDAA K. Oblique Left > BDAA
			B. Non-horizontal/U-shaped Notch		A. Vertical > BDBA
			C. Horizontal/V-shaped Notch		
			D. Horizontal/U-shaped Notch		

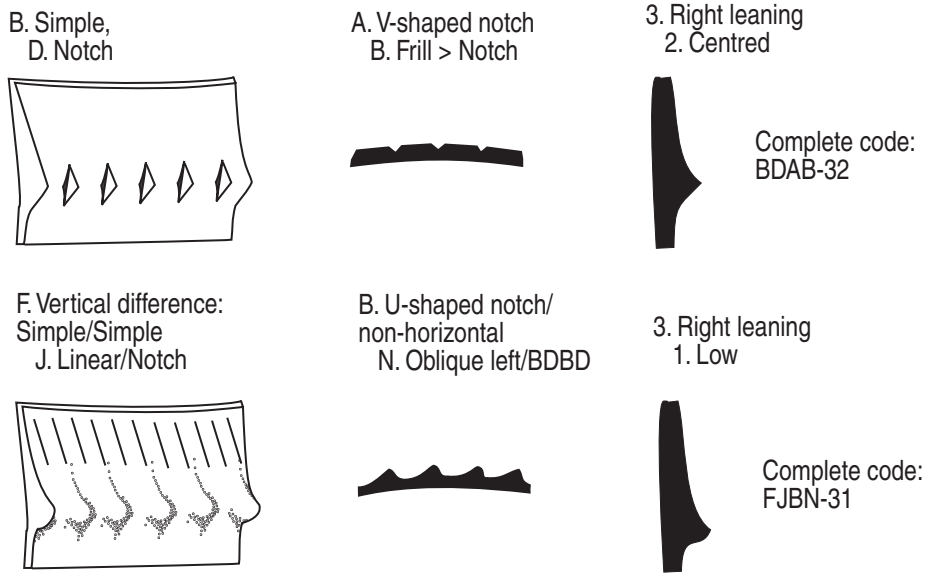

Figure 3. *Examples of the modification to Smith's (1997) ceramic code and the application to frilled sherds.*

examined using technological instead of stylistic attributes. Chilton (1998, 1999a, 1999b), for example, found that attributes such as wall thickness, temper type and density were better identifiers of ethnicity than decoration. She asserts that variation in these attributes arise from differing technical requirements of pots, mobility patterns, group size and scale of production. Arguing from more theoretical grounds, one may assert that technical attributes are reflective of the *châine opératoire*. Ceramic production constitutes a learned behaviour and in many circumstances close relatives teach new potters the craft. While adult potters may alter some aspects of the *châine opératoire* depending on the specific circumstances in which pottery is produced, other

aspects may be retained (Gosselain 1998). While attributes relating to the technology of ceramic production may be good indicators of social identity, in this study the temper types recorded were too general to be useful.

Ossossané and Freelton

Samples from two sites, Ossossané (BeGx-25) and Freelton (AiHa-14), form the basis of this analysis. In both cases, documentation about intrasite artifact distribution and settlement patterns is minimal. The site that Frank Ridley identified as Ossossané II and excavated in the 1960s is located on Lot 16, Concession 7 of Tiny Township, adjacent to Nottawasaga Bay (Ridley 1964). Ridley's identification of the site has not been universally accepted, and Heidenreich (1971) suggests that the site could be Ossossané I, which was abandoned in 1635. Ridley excavated four separate areas (Figure 4). I was able to determine the provenance of most sherds based on the labels.

Freelton is located in West Flamborough Township on a knoll east of the Beverley Swamp. It was unknown to archaeologists until 1983 when it was assessed as the "last example of an undisturbed Neutral village site" (MacDonald 1989:82). Shortly after archaeologists discovered Freelton, it was extensively looted. The artifacts analyzed here were confiscated from the looters. Based on the presence of a "Wenro rim sherd" MacDonald (1989:89) suggested that Freelton could be the Neutral village Khioetoa or St. Michel, where Brebeuf and Chaumonot described meeting Wenro refugees (Thwaites 1896-1901:21:231).

The unit of analysis selected is the vessel. The method used to group rim sherds into vessels entailed an initial sort of rims by decoration, then comparison of the metric attributes and paste of all sherds with the same decoration. Non-mending rim sherds with the same decoration, temper type, temper density and rim dimensions were considered an analytical vessel. The analyzed sample from Ossossané totals 262, while that from Freelton includes only 85 vessels. The sample from Ossossané may be considered

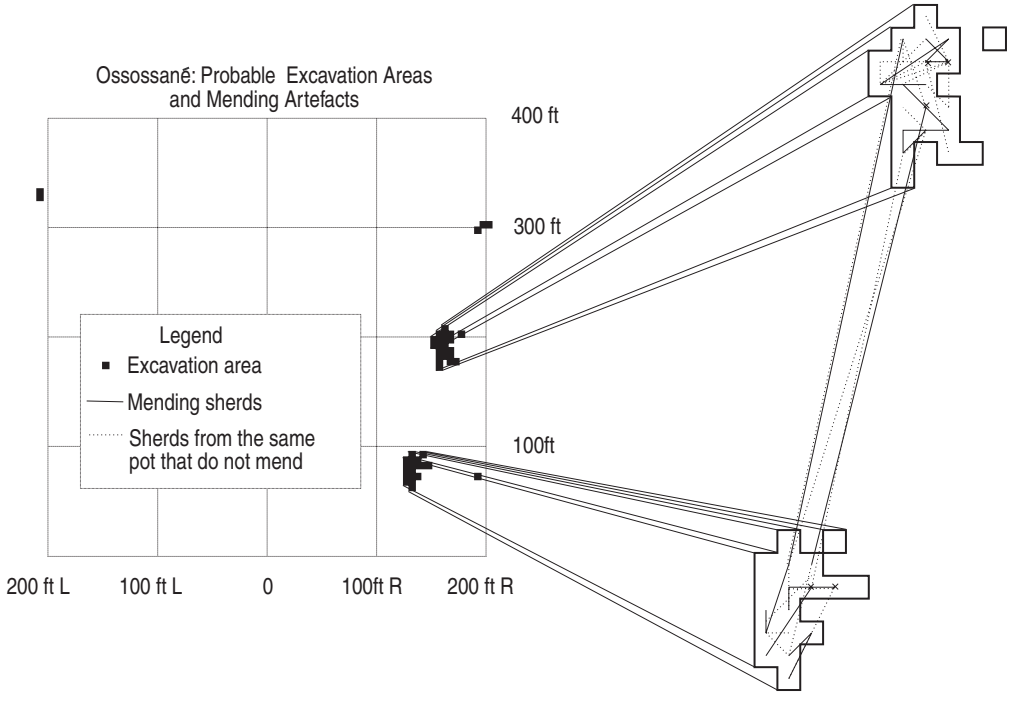

Figure 4. *Map of the excavated area at Ossossané based on the labels on analyzed rim sherds. North is not indicated, but may be to the top of the map. The basic excavation unit was a five-foot square.*

representative of material found in middens, but that from Freelton may not be. The looters apparently had some knowledge of archaeology (Fox 1985:10), and it is possible that they selected pottery for size or unusual decoration.

The main results of the analysis are:

1. Only 9 percent of the vessels from Freelton are frilled, compared with 22 percent from Ossossané.
2. Frill forms are variable in the sample from Ossossané, but are remarkably similar for all vessels in the Freelton sample (Table 2).
3. Frilled sherds from Freelton show only one rim motif, as coded using the system described above. This motif is FJBI, meaning the rims have oblique right lines above frills. Frills are separated by U-shaped notches, and the notches are wider than the frills. By contrast, there are 43 different frilled rim motifs from Ossossané, including ten different "Simple" motifs (BD—), seven "Simple over simple" motifs (FJ—) and one "Horizontal difference over Simple" motif (IA—).
4. Within the single motif shown in the Freelton sample, the sherds only showed one "variety", FJBI-11, meaning that the frills were centred low on the collar and pointed left. Five vessels from Ossossané were classified as FJBI and these show four different varieties, with the variety of one vessel being classified as indeterminate.

The ceramics from Ossossané are more heterogeneous in basal collar treatment both at a macro-level, as is evinced by the variability in frill form and rim motif, and at the micro-level, as shown by the differences in varieties in the ceramics of the same motif (Figure 5). The Ossossané sherds have furrows in different directions, frills with slightly different shapes and which point in different directions. The Freelton sherds vary only in size (Figure 6). Figure 7, a plot of collar height to collar base thickness shows that there is variation among the vessels, but that there is a strong linear relationship between these two variables in the Freelton sample ($r=0.95$). There is also a linear relationship between these variables in the Ossossané sample, but the relationship is weaker ($r=0.76$). This suggests that the maker(s) of the frilled pots from Freelton had clear ideas about appropriate proportions of the frills relative to the overall size of the vessel. Variables such as volume or diameter would demonstrate this better, but the sherds were too fragmentary to permit accurate measurement of such attributes.

It is possible that small sample size contributes to the lack of diversity in the Freelton sample: generally small samples are likely to be less diverse than large ones (Banning 2000:110). Sample size renders impossible use of chi-square to test the probability that the distribution of frill types is the same in the populations from which these samples were drawn. However, Fisher's exact test supports the hypothesis that the distributions are different (defined vs. undefined notches $\alpha=0.001$, defined vs. undefined frills $\alpha=0.043$).

I interpret the lack of variability in the decorative motif and frill forms and the linear consistency in dimensions as suggestive that one individual produced the Freelton material. By contrast, the

Table 2. *Distribution of different frill forms from Ossossané and Freelton.*

	Ossossané		Freelton	
	n	**%***	**n**	**%***
1. Notch defined, frill undefined	14	24	—	—
2. Notch undefined, frill defined	—	—	—	—
3. Both defined	19	32	—	—
4. Both undefined	21	36	8	100
5. Indeterminate	5	9	—	—
Total	59	101	8	100

*Rounded to nearest percent.

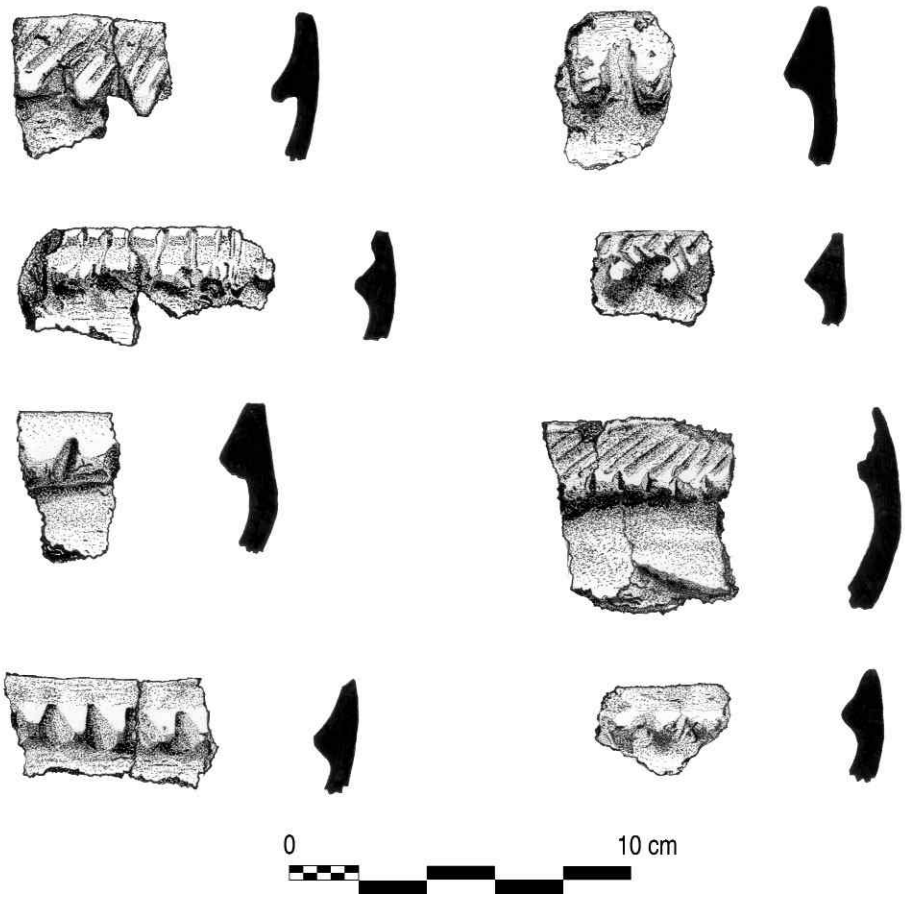

Figure 5. *Frilled sherds from Ossossané.*

Ossossané material shows variability that is consistent with production by a number of individuals. This hypothesis could be further tested using methodology Martelle (2002) outlines for the identification of individual potters.

Two other pieces of information may have bearing on the identity of the makers of frilled pottery. Association between location of recovery of pottery within sites and the location of manufacture and use is problematic (Plog 1978), however spatial data may be examined for patterning. For the Ossossané material, the first concern was to determine whether the distribution of sherds was strongly affected by ploughing. Ridley concentrated excavations at Ossossané on two areas separated by about 25 metres (75 feet). Figure 4 shows that although there are some mends between excavation areas, the majority of mends are between sherds recovered from within the same area, suggesting minimal post-depositional scattering. Following from this, we may ask whether there is patterning in the distribution of frilled sherds at Ossossané. A chi-squared test showed that there is no significant difference in the relative proportion of frilled sherds recovered from the two locations (α=0.28). If disposal areas can be linked to habitation areas, this could indicate that the makers and users of this pottery were well integrated into the village. However, at this time only limited excavations have been made, and further work may show that there are intrasite differences. Jackson and Merritt (2003) found a different pattern at the Charity site. There, 28 percent of the rims recovered from

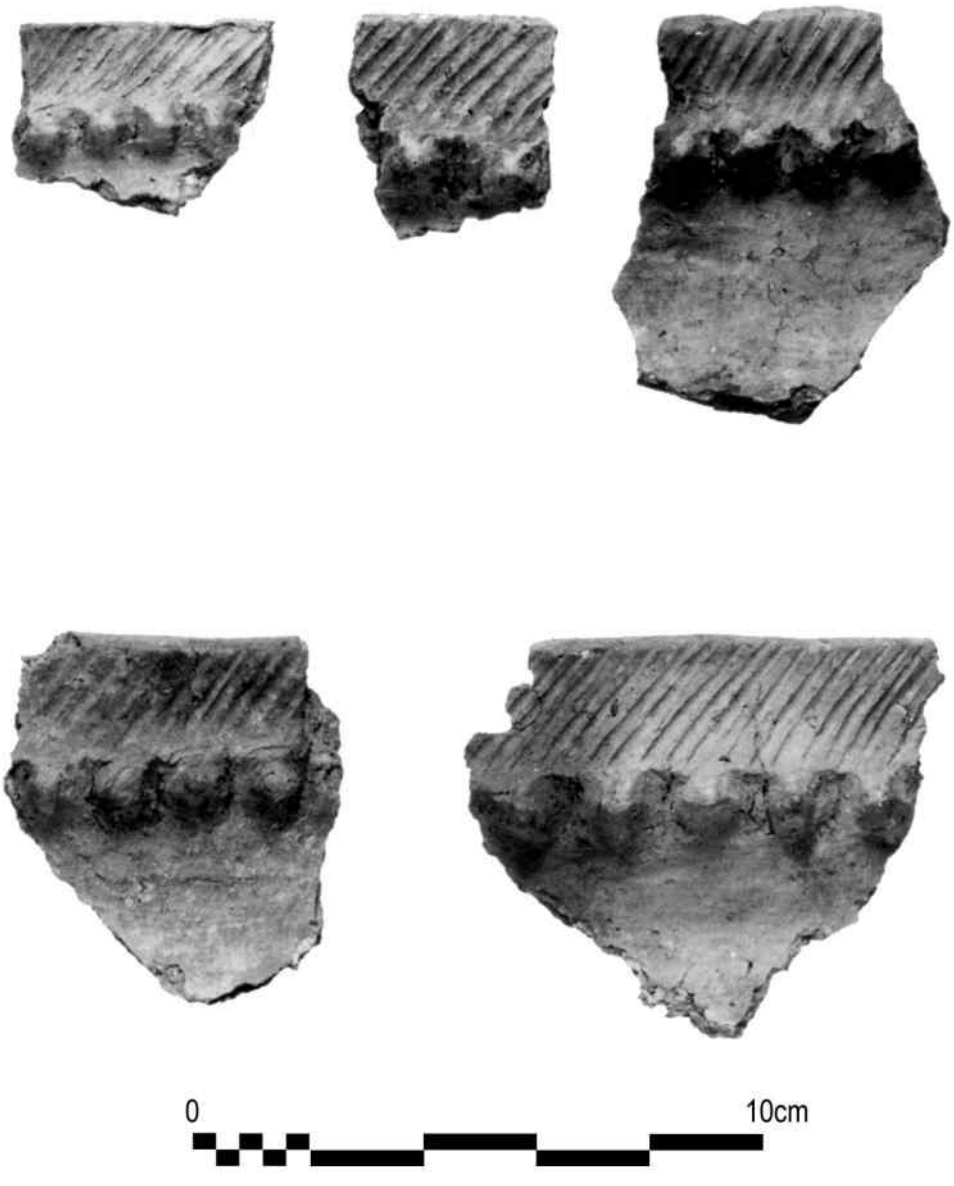

Figure 6. *Frilled sherds from Freelton.*

House C are frilled, while only 2 percent of the rims recovered from House A are frilled. No frilled rims were recovered from the third house (House B) exposed at the site. Detailed interpretation of this finding must await an examination of site formation processes and quantitative analysis on the vessel rather than sherd level.

The other point worth noting is that one of the Freelton frilled vessels is shell tempered. In the Ossossané assemblage, shell tempering is rare (less than one percent) and does not co-occur with frilling. By contrast, 34 percent of the vessels from Freelton are shell tempered. Shell tempering is known from the Hood site, where

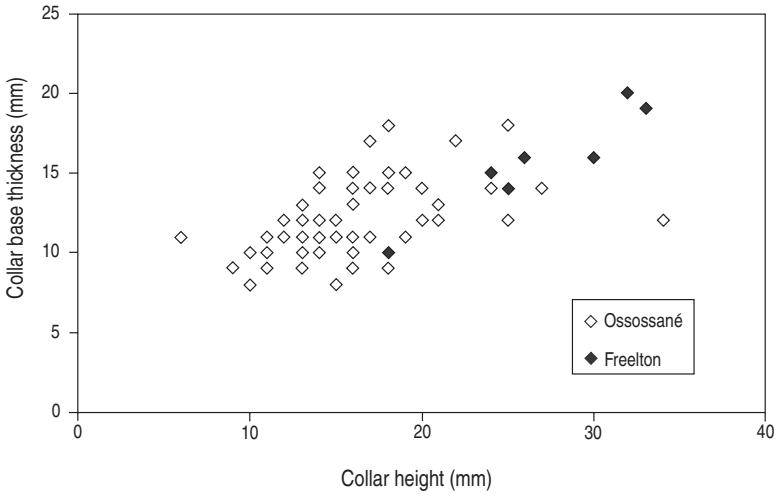

Figure 7. *Distribution of collar height vs. collar base width of "frilled" sherds from Freelton and Ossossané. There is a stronger linear relationship between these variables in the Freelton sample than the Ossossané sample.*

about 25 percent of vessels show this type of tempering (Lennox 1984). Other unusual traits in the pottery from the Spencer-Bronte group of Neutral sites include cording, the use of appliqué strips and large triangular plat decorative motifs (Lennox 1981). Such attributes may be associated with the Algonquian Fire Nation (Lennox and Fitzgerald 1990: 418). If the shell tempered frilled pot was not imported and the potter was not Neutral, this indicates one of two things: either shell tempering was employed in the homeland of the maker of this pot, or the potter integrated local technical knowledge into vessel manufacture, while retaining use of a non-local style of decoration.

In the Freelton sample, cording co-occurs with shell tempering: 26 percent of shell tempered vessels are also corded, whereas only one percent of grit tempered vessels are corded. This suggests that there are connections between the Freelton site and the other sites in the Spencer-Bronte group, possibly relating to the presence of Fire Nation people.

Other Sites in Huronia

In addition to the samples from Ossossané and Freelton, I examined samples from several other sites in Ontario, including the Huron Leonard (BeGx-22), Ellery (BdGx-8), William Edwards and Orr Lake sites; the Petun Plater Martin (BdHb-1) and Plater Fleming (BdHb-2) sites; and the Charity site (BeHb-4) on Christian Island (Figure 1). In most of these cases I examined only the sherds that other analysts had determined were "frilled." In all cases I found that, as at Ossossané, the frilled sherds showed considerable variability in the shape of the frill and in the decoration on the rim above the frill.

The dates and locations of sites with frilled pottery provide other avenues of investigation. If the pottery was made by Wenro refugees, we would expect that sites with such pottery would have relatively late dates, all of them showing some evidence for occupation after 1638. Most sites can be dated on the basis of glass beads, and Glass Bead Period III (GBPIII) only brackets the years 1632 to 1651 (Fitzgerald 1983). Both tubular and round red beads are present at William Edwards (Ridley 1974:17), suggesting a date of GBPIII (Kenyon and Fitzgerald 1986). The unpublished catalogue from the Leonard site on file at Trent University includes glass beads typed Ia1, Ia15, IVa5 and IVa7, all also indicative of GBPIII (Kenyon and Fitzgerald 1986). Fitzgerald (1983:22) classifies a village site he refers to as "Ossossané II" as GBPIII, while Kenyon and Kenyon (1983:74) classify "Ossossané" as GBPIIIb (post-A.D. 1640). Ellery is almost certainly very late, with beads dating to both GBPI-II and GBPIIIb (Cooper et al.1993:17) and a radiocarbon date of A.D. 1640±10 (one sigma) (Yu et al. 2000). Only pottery is published from

Orr Lake (Kidd 1950), and the dating of this site remains an open question: Kidd (1950) and Cooper et al. (1993) infer an early seventeenth century date on the basis of poor defensibility, while Wright (1966:76) suggested a later date based on the assumption that the site was that of the A.D. 1642-1649 Jesuit mission of St. Michel. Avocational archaeologists collected iron artifacts from Orr Lake in addition to pottery, but the settlement pattern and range of materials from the site is unknown. In sum, all of the sites in Huronia with substantial proportions of frilled pottery and where glass beads were recovered also have evidence for post A.D. 1632 occupation.

The three sites from outside of Huronia where frilled pottery was found, Plater Martin, Plater Fleming, and Charity have been identified as historically documented villages. According to Garrad and Steckley (1998), Plater Martin and Plater Fleming are the sites where the Huron fleeing Ossossané took refuge in March 1649. Garrad and Steckley (1998) and Jackson and Merritt (2003) argue that refugees then moved to the Charity site on Christian Island later that spring. Plater Martin and Plater Fleming both date to GBPIIIb (Kenyon and Kenyon 1983: 74). Jackson and Merritt (2003) note that the beads recovered from Charity are mostly GBPIII.

As outlined above, according to the *Relations*, refugees arrived in Ossossané and moved to other settlements from there. How would this be expressed in material culture? If Steckley and Garrad (1998) are correct in their reasoning that the Wenro moved to western Huronia because of tribal affiliations, one may also reason that they were particularly welcome in the other villages of the Attignaouantan and that only sites in westernmost Huronia would show appreciable amounts of frilled pottery. Alternatively, it is possible that other nations integrated some refugees into their communities, thereby distributing the responsibility of integrating new people into the community during a period of stress. Sites with frilled pottery appear to be concentrated in western Huronia. However, while Ossossané and William Edwards are located within the estimated territory of the Attignaouantan, Orr Lake and Ellery lie within Tahontaenrat territory, and Leonard falls in Ataronchronnon territory (Cooper et al. 1993; Heidenreich 1971; Ridley 1974). Cooper et al. (1993) suggest that the frilled pottery from Ellery and Orr Lake relates to the Tahontaenrat identity of the inhabitants of these sites: "In terms of the artifactual material recovered from [Ellery], the high frequency of Genoa Frilled type ceramics suggests that the linguistic distinctiveness of the *Tahontaenrat*…may also be reflected by this group's material culture" (Cooper et al. 1993:31). However, frilled pottery also occurs, sometimes in higher proportions, at Huron sites outside Tahontaenrat territory. Further, if making frilled pottery was a distinctive attribute of this nation, apparently the last to join the Huron confederacy, one wonders why such pottery is also found at Attignaouantan and Ataronchronnon sites.

In sum, a number of sites in western Huronia show evidence for both mid-seventeenth century occupation and for frilled pottery. That sites fall within the estimated areas of three different Huron nations may indicate either that communities from several nations integrated refugees, that the estimated boundary of the Attignaouantan is problematic, or that frilling is not related to the Wenro migration. Although it is possible that frilling was a decorative innovation peculiar to potters in western Huronia, one wonders why it occurs without local antecedents and in such high proportions at some sites.

New York State Sites

The long-standing assertion that the Wenro came from Western New York State led me to examine collections for similarities to the material from Ontario. I looked at two sets of collections: material from the Niagara Peninsula-southeast Lake Erie shore area, which Marian White suggested was the Wenro homeland, and material from the Finger Lakes area, in the Seneca and Cayuga territories.

Cursory examination of the pottery and/or documentation from the following sites showed none with appreciable amounts of frilled pottery, although some had small numbers of sherds with basal collar treatment: Shelby, Ripley, Simmons, Oakfield, Goodyear, and Buffam Street.

Engelbrecht (1984) reports frequencies of Genoa Frilled and Seneca Barbed combined ranging from 13 percent to 25 percent for Ellis, Kleis and Silverheels. If the Wenro came from this region and joined established Huron communities, and the migrants made frilled pottery in low proportions, one would expect that the proportions on Huron sites would be even lower than they are at sites in New York, unless they increasingly used frilling after arriving in Huronia. At Ossossané, frilled vessels account for 22 percent of the sample, at Orr Lake 17 percent of the sherds are frilled and Ridley (1973) reports that over 90 percent of the sherds from William Edwards can be classified as New York types. For this reason, I believe it is unlikely that the makers of frilled pottery in Huronia came from the Niagara peninsula region.

In contrast, the pottery from the Genoa Fort site and from Dutch Hollow showed extensive working of the collar base. However, the modification I observed was quite different from that seen on the Ontario pottery. Differences include a higher incidence of complex designs above the collar base on the Genoa Fort and Dutch Hollow vessels and larger spaces between the frills or notches on the New York vessels. Moreover, many of the New York pots showed a form of basal collar decoration—one that could be described as nocked—which I did not observe in Ontario collections.

Based on these brief examinations of material from New York State, it is unlikely that the makers of frilled pottery or the frilling motif arrived in Ontario from western New York State. If this is indeed the homeland of the Wenro, other explanations should be sought for the presence of frilled pottery in Ontario.

Instrumental Neutron Activation Analysis

The composition of pottery from several sites in Ontario was compared to determine whether pots with frilling were chemically different from pots with typical Huron or Neutral decoration. Comparisons were also made with sherds from the New York Genoa Fort site to establish that there are chemical differences between Ontario and New York pottery.

Sherds were subjected to Instrumental Neutron Activation Analysis at the Slowpoke Reactor Facility at the University of Toronto. The analyses were made over a period of several years and comparisons have been made to ascertain that differences observed do not arise from the different analytical episodes. The samples analyzed are summarized in Table 3. Samples of approximately 200 grams were removed from sherds using a chisel. They were scraped to remove the exterior, but no attempt was made to separate the matrix from the temper. Tests to determine whether chips were representative of pots and whether there was more variability between pots than within pots are outlined in Hawkins (1992). Most of the samples were analyzed for elements with short-lived half-lives, but a small group was also analyzed for elements with longer half-lives.

The first analytical sample came from the Leonard site and was composed of sherds with typical decoration, frills, exotic or otherwise unusual decoration and plain body sherds. All were grit tempered. Elemental concentrations are found in Table 4 and examination of Figure 8 shows that the sherds that are most unusual are not the frilled sherds. Rather, two high collared sherds, one identified as Lalonde High Collared and the other as possibly Susquehannock, are the outliers. The temper of the Susquehannock sherd is highly micaceous and this could account for the different chemistry. The difference between the Lalonde sherd and the others could be related to weathering, whereby in the older sherd the resistant element aluminum (Al) remains while other elements have leached.

Larger samples were analyzed from Freelton and Ossossané. These included both grit and shell tempered pieces, and frilled and non-frilled vessels. All of the samples were analyzed at one of two sessions for elements with short-lived radioisotopes: uranium (U), dysprosium (Dy), barium (Ba), titanium (Ti), magnesium (Mg), sodium (Na), vanadium (V), aluminum (Al), chlorine (Cl), calcium (Ca), and potassium (K). The concentrations of Cl and U were calculated, but for the majority of samples the concentrations of these elements were below the detection limit, and they were not used in further analyses.

Table 3. *Sherds analysed by INAA.*

	Huron/Neutral		Frilled/Notched		Other Foreign		Body Sherds	
	Shell	Grit	Shell	Grit	Shell	Grit	Shell	Grit
Leonard	—	7	—	5	—	4	—	5
Ossossane	—	22	—	12	1	5	—	—
Freelton	8	20	1	5	4	1	—	—
Genoa Fort	—	—	—	—	—	—	—	12

Table 4. *Elemental Concentrations of Sherds from the Leonard Site. Concentrations of Al, Ca, K, Mg, and Na are in percent, all others are in parts per million (ppm).*

	U	Dy	Ba	Ti	Mg	Na	V	K	Al	Mn	Cl	Ca
Huron decoration	3.63	3.58	657	4180	0.96	1.73	86	2.46	8.56	550	139	1.54
	4.93	3.11	1052	5525	1.17	1.53	74	2.73	9.31	657	45	1.63
	3.29	4.08	772	4138	1.04	2	72	1.92	8.55	581	139	1.39
	5.02	2.72	640	4203	0.82	2.29	94	1.67	9.69	746	260	2.25
	2.28	3.09	667	3633	0.65	1.27	73	3.19	8.44	331	129	0.91
	3.68	4.12	841	4758	1.42	1.51	123	2.55	8.31	674	226	2.08
	2.65	3.55	62	5457	1.88	1.43	162	2.17	8.8	720	182	3.01
Frilled	2.76	3.88	682	5373	1.17	1.61	114	2.06	8.63	779	362	2.19
	3.02	3.42	705	4634	0.8	1.81	102	2.6	9.2	441	271	2.15
	2.06	2.4	656	4492	0.57	1.08	90	2.15	8.48	477	240	1.3
	3.57	3.4	786	4014	0.57	1.88	61	1.68	8.67	537	139	1.92
	6.05	6.48	704	4834	1.34	1.25	132	2.44	10.63	735	206	2.38
Other: Black Necked	2.78	2.86	1044	4354	0.47	1.58	78	2.8	8.82	439	205	1.23
	3.37	2.99	554	4386	0.75	1.74	69	3.52	8.38	942	205	1.24
Lalonde	3.97	3.05	838	5523	0.13	1.29	106	2.54	11.58	393	253	1.06
Susquehannock	4.23	3.64	573	6508	2.59	1.67	139	1.69	8.48	931	898	4.76
Body sherds	2.52	3.2	1859	3820	0.93	1.36	73	4.14	8.69	557	285	1.16
	3.36	4.71	647	5186	1.15	2.05	73	2.75	8.96	667	67	1.92
	3.72	2.56	839	4842	1.15	1.79	135	2.5	9.36	574	383	2.94
	2.63	2.76	914	4426	0.39	1.25	90	2.77	8.56	347	40	0.94
	4.25	2.49	1293	3743	0.87	1.68	68	3.67	8.67	564	133	1.33

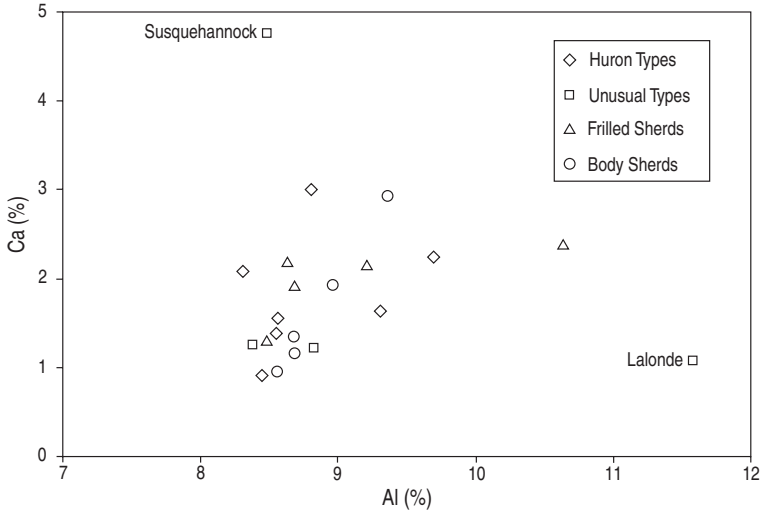

Figure 8. *Concentrations of Aluminum versus Calcium for sherds from the Leonard site.*

The concentrations of elements with short-lived half-lives are shown in Tables 5 and 6. These show that there are clear differences in the chemistry of shell tempered versus grit tempered sherds (Figure 9). However, based on the elements with short-lived radioisotopes, the chemistry of grit tempered pottery from Ossossané and Freelton appears to be generally similar.

Twelve plain body sherds from Genoa Fort in New York were irradiated in a separate session. There are general differences between Ontario and New York pottery in the concentrations of the same suite of elements. However, as shown in Figure 10, there is some overlap in the chemistry of the pottery from the two areas. The two sherds from Freelton that have chemistry most similar to the New York pottery were typed as Sidey Notched and Lawson Incised. The grit tempered frilled pottery from Ossossané and Freelton fall in the cluster of grit tempered pottery from the Ontario sites (Figure 11). Although it is clear that the New York and Ontario pottery cannot be completely separated, the chemistry of the frilled sherds is more similar to that of the pottery

Table 5. *Concentrations of elements with short-lived isotopes in sherds from Ossossané.*

	U	Dy	Ba	Ti	Mg	Na	V	K	Al	Mn	Cl	Ca
Huron decoration,	0.00	2.66	905	4486	3.0	1.31	104	0.8	9.94	607	301	2.33
grit temper	0.00	2.22	741	4972	3.5	1.28	117	0.8	9.89	575	0	2.80
	0.00	2.10	1011	5220	3.0	1.11	121	0.8	9.65	509	382	2.07
	0.00	4.39	883	4718	2.7	1.52	112	0.8	9.45	804	303	2.60
	0.00	2.09	1058	6130	2.6	1.24	114	0.8	9.83	555	291	1.42
	0.00	3.88	961	6070	2.8	1.28	162	1.0	9.59	991	235	2.30
	0.00	4.40	942	5457	2.7	1.33	84	0.9	9.84	620	0	2.21
	0.00	2.74	1040	4358	2.2	1.29	85	0.8	9.03	409	0	1.74
	0.00	2.86	903	4187	2.0	1.88	86	0.9	9.35	510	306	2.58
	0.00	3.69	1130	4228	2.0	1.23	88	1.3	9.00	1038	0	2.21
	1.69	4.31	1160	5580	3.3	1.15	134	0.8	9.99	901	0	2.36
	2.81	4.22	833	6470	2.6	1.35	162	0.7	8.60	854	0	2.18
	0.00	3.95	873	4830	2.5	1.52	91	0.8	9.53	660	225	1.69
	0.00	3.58	1002	4456	2.5	1.64	103	0.7	9.06	672	0	3.00
	1.99	3.75	1226	5671	2.5	1.51	111	0.8	10.32	463	0	1.79
	0.00	2.75	984	4618	2.4	1.12	100	1.0	9.50	397	238	1.91
	0.00	4.04	867	3110	2.7	1.32	98	1.0	9.38	752	0	1.37
	0.00	3.23	990	4754	2.6	1.23	128	0.8	10.22	484	0	1.78
	1.92	4.93	844	4575	3.0	1.45	125	0.7	10.31	883	221	2.18
	0.00	4.72	954	3524	1.9	1.56	65	1.1	9.12	319	0	1.92
	1.67	4.26	1232	3988	2.4	1.34	92	1.1	10.33	378	0	1.60
	0.00	3.19	959	5101	2.4	1.20	142	1.2	9.24	913	206	2.10
Frilled, grit temper	0.00	3.49	827	4343	2.4	1.67	62	1.1	9.48	422	0	1.88
	0.00	2.64	791	4487	2.5	1.74	103	0.8	9.64	601	204	2.73
	0.00	2.73	558	5222	2.1	1.84	110	0.7	8.12	613	323	2.70
	0.00	3.79	981	3632	2.3	1.70	103	1.0	9.55	749	0	2.64
	0.00	3.22	814	6288	3.0	1.34	124	0.5	8.79	809	736	3.65
	0.00	3.52	866	4066	2.8	1.44	130	0.8	9.06	611	239	2.44
	0.00	3.56	886	4859	2.8	1.51	122	0.7	9.21	652	0	2.79
	0.00	4.20	886	3947	2.4	1.58	100	0.9	9.46	481	0	1.95
	0.00	2.40	1037	4087	2.8	1.50	133	1.2	10.12	109	457	2.98
	0.00	3.23	1068	5270	2.5	1.04	133	0.7	9.89	595	0	3.61
	2.42	3.46	1077	5876	2.3	1.35	115	1.0	9.07	503	278	1.77
	0.00	2.91	959	4545	2.3	1.70	86	0.7	9.16	480	0	2.21
Seneca, Cayuga,	0.00	3.13	1209	4278	2.3	1.76	74	0.7	10.42	619	0	3.03
grit temper	1.48	4.78	972	4524	2.4	1.58	102	0.7	8.62	573	351	2.18
	0.00	3.45	570	4833	2.8	1.70	148	0.7	8.55	487	471	2.91
Erie, grit temper	0.00	2.91	817	6549	3.6	1.61	90	0.7	8.85	782	0	3.06
	0.00	2.02	1004	4147	2.2	1.52	71	0.6	11.42	315	0	2.94
shell temper	2.60	3.33	972	4218	1.8	1.15	73	0.9	8.01	557	0	8.18

Table 6. *Concentrations of elements with short-lived isotopes in sherds from Freelton.*

	U	Dy	Ba	Ti	Mg	Na	V	K	Al	Mn	Cl	Ca
Neutral decoration,	0.00	4.34	1238	4304	2.3	1.24	69	0.7	9.81	959	0	2.48
grit temper	0.00	3.49	938	3870	2.5	0.84	107	1.2	10.43	307	121	0.97
	0.00	7.03	1039	3348	2.2	1.86	72	1.4	9.89	277	218	1.33
	0.00	2.41	819	3457	1.9	1.67	69	0.5	8.89	545	0	1.98
	0.00	3.18	603	3495	1.9	1.95	75	0.7	9.28	655	0	2.00
	0.00	3.37	575	2914	1.9	1.64	57	1.0	8.64	342	0	0.57
	0.00	4.45	1987	4264	2.7	1.13	105	0.9	9.32	712	219	2.12
	0.00	2.91	476	4335	3.4	1.01	105	0.8	11.16	759	0	5.13
	0.00	3.68	822	4186	2.4	1.10	92	1.1	10.04	244	0	1.39
	0.00	3.59	1043	3182	2.0	1.54	78	2.7	8.99	841	209	0.88
	0.00	3.44	307	3787	2.2	1.59	71	1.3	8.58	639	0	1.74
	1.58	4.58	996	4138	2.3	1.64	87	1.4	10.98	330	268	1.24
	2.06	4.07	1109	4829	2.6	1.23	108	0.8	9.77	477	252	1.35
	0.00	4.66	1338	5954	2.1	1.05	111	0.7	9.90	467	234	1.79
	2.11	5.20	1010	5313	2.2	0.42	142	0.9	11.58	1461	0	1.33
Huron decoration,	0.00	3.72	833	3705	2.1	1.54	90	1.0	8.95	673	143	1.73
grit temper	0.00	4.39	839	5422	2.2	0.96	105	1.0	9.94	360	0	2.07
	0.00	3.51	1277	5022	3.0	1.19	171	0.6	10.57	852	686	4.06
	0.00	4.82	1184	4690	2.6	1.20	114	0.8	10.97	1275	0	2.65
	2.57	7.74	508	5209	2.4	1.37	122	0.7	10.76	774	0	1.71
Neutral decoration,	0.00	3.80	807	5808	2.3	0.61	156	0.7	16.37	666	0	6.38
shell temper	0.00	3.17	610	3725	2.2	0.88	93	0.9	8.51	604	0	3.78
	0.00	4.15	601	3422	2.3	0.44	111	0.8	8.82	496	0	6.26
	0.00	3.73	1243	4653	2.5	0.48	99	0.8	8.87	525	196	9.41
	3.34	4.28	712	3817	2.0	0.58	91	0.7	8.00	487	158	7.10
	3.03	4.03	739	4077	2.4	0.52	115	0.7	9.21	552	0	5.16
	0.00	3.18	1292	3822	2.2	0.48	119	0.5	9.68	613	206	8.72
	4.72	3.28	516	2882	1.7	0.96	71	0.6	7.24	599	186	8.23
Frilled, grit temper	0.00	4.28	767	4056	2.4	0.77	106	0.8	10.12	415	124	0.99
	0.00	5.75	630	5406	2.4	0.73	122	0.8	10.13	462	0	1.67
	0.00	4.48	866	4046	2.3	0.67	113	0.9	9.65	395	0	1.06
	0.00	3.76	753	3333	2.0	2.05	73	0.8	10.34	979	0	1.33
	0.00	2.91	652	3260	2.5	1.37	101	0.8	9.55	852	0	1.57
Shell tempered	0.00	3.77	691	4457	2.1	0.66	105	0.7	9.43	392	0	6.97
Erie, grit temper	0.00	2.92	304	2512	1.8	0.17	78	0.7	7.51	695	0	17.44
	0.00	4.30	644	4299	2.6	0.57	124	0.8	10.28	540	0	5.07
	0.00	3.42	538	3142	2.1	0.44	107	0.6	8.21	454	152	8.48
	1.63	3.60	729	2434	1.8	0.27	92	0.6	7.02	687	0	14.69
Non-Iroq. shell temper	0.00	4.46	952	4522	2.3	1.05	107	1.2	10.31	300	192	1.27

from Ontario sites than from Genoa Fort. I interpret this to indicate that the frilled pots were made locally and not imported from New York, or if they were imported, it was from an area with clays similar to those found in Ontario.

A few sherds were also analyzed for elements with longer lived half-lives. These include trace elements that may have very local variation and may be more useful for "fingerprinting" than the minor elements discussed above. Figure 12 shows that sherds from different sites may be easier to distinguish based on the concentrations of trace elements than minor elements.

The INAA results indicate that it is possible to distinguish between pottery from New York and Ontario based on the concentrations of minor elements, although this distinction is not perfect. The Ontario frilled sherds have a chemistry that is more consistent with the other pottery from Ontario, suggesting that the pottery was made locally. The possibility that it was made outside of Ontario from clays similar to Ontario clays cannot be excluded, but is considered unlikely.

Interpretations and Conclusions

The results of this study suggest that, in the early to mid-seventeenth century, a number of potters

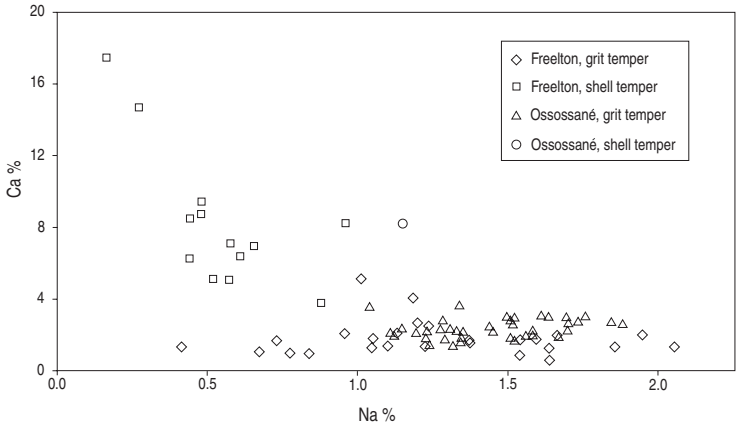

Figure 9. *Concentrations of Calcium versus Sodium from Ossossané and Freelton.*

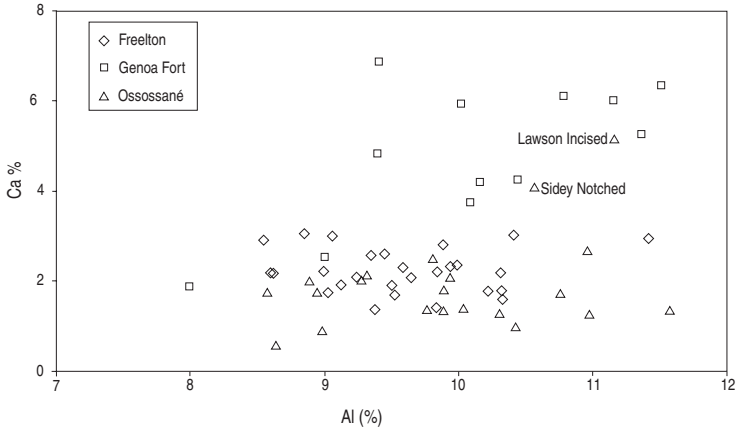

Figure 10. *Concentrations of Calcium versus Aluminum from Ossossané, Freelton and Genoa Fort, frilled sherds excluded.*

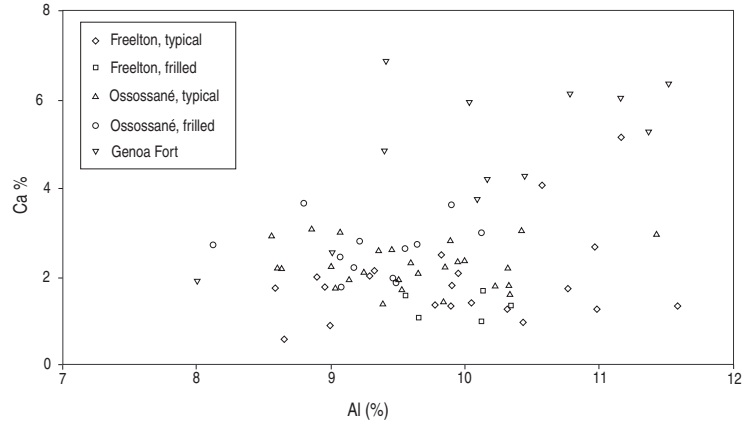

Figure 11. *Concentrations of Calcium versus Aluminum from Ossossané, Freelton and Genoa Fort, frilled sherds included.*

in western Huronia produced frilled pottery from local clays. The form of these frills is similar to, but not identical with, the form of basal collar treatment of pottery from Cayuga and Seneca sites. The proportions in which frilling occurs in Huronia is higher than would be expected if people occupying sites such as Kleis migrated to Huronia and joined existing com-

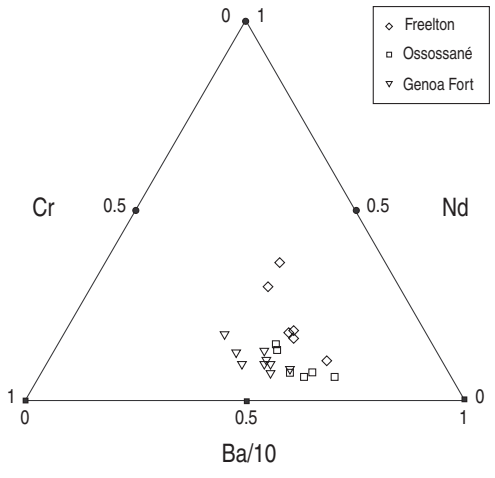

Figure 12. *Ternary diagram showing the proportional concentrations of Ba/10, Nd and Cr.*

munities—unless there was a fluorescence in this decorative style after refugees arrived in Ontario. This scenario differs somewhat from that interpreted for Neutralia. Frilled pottery is reported for only two Neutral sites: Freelton and Thorold (Noble 1980). Based on this analysis, I assert that a single individual, using local clays, likely produced the frilled pottery from Freelton, and that this potter shared technical knowledge with the makers of corded pottery at the site. I have not examined the Thorold sample and Noble (1980: 52) describes it simply as a "sizeable quantity of Genoa Frilled pottery."

How can these conclusions be interpreted in light of the Wenro hypothesis? If we take a narrow view and look only at the data from Ontario, the hypothesis appears well supported: the sites with frilled pottery are of the correct time period, a number of individuals appear to have made the pots, and the geographic distribution of sites with frilled pottery approximates what we would expect based on the ethnohistoric record. However, there are a number of vectors, in addition to migration, by which pottery of an unusual decoration may occur in an archaeological assemblage. Engelbrecht (1984) outlines several: trade, diffusion, production by "captive brides", lineage fission and/or production by brides practicing virilocal post-marital residence. Some of these can be easily discounted, while others need more careful consideration. The possibility that frilled pots were traded into Ontario can be excluded based on the quantity of pots at Ossossané and the William Edwards site and the similarity of the chemistry of the frilled pots to local pots.

The captive bride hypothesis has cropped up from time to time as an explanation of foreign motifs in Iroquoian ceramic assemblages (Fitzgerald 1982:98; Lennox 1981:361; MacNeish 1952). Although this possibility should be considered for the material from Freelton, I do not believe the captive bride explanation works well for the Ossossané material. Firstly, the amount of frilled pottery at some Huron sites is very high—so high that, as Ridley (1973) pointed out, William Edwards "would have been nearly totally inhabited by captive women." Secondly, a weaker reason is that if a prisoner survived capture and was adopted into the community, he or she tended to become loyal to the adoptive community (Trigger 1976:72). If Iroquoian pottery decoration is a form of emblemic style signalling group membership, then loyalty to one's new group would be expressed by copying the decoration of one's captors. There is, however, increasing evidence that potters in the Northeast manipulated the decoration on pottery in complex ways, expressing social identity on different levels (Johnson 1999; Lizee et al. 1995).

Lineage fission and migration are documented in the historic literature (Engelbrecht 1984:335). Archaeologically, these two phenomena may be difficult to distinguish because both involve the movement of a large number of people covering the entire demographic spectrum of the community. There are some differences, however. In most circumstances, lineage fission is a response to stresses inside the community and the move that results is likely to be a short-distance migration. By contrast, long-distance migration, which may involve the movement of an entire settlement or a section thereof, may result from stresses outside the community in addition to perceived attractiveness of a new location. This type of migration may involve leap-frogging, the use of scouts in advance of the migrating group, and

it may proceed as a stream (Anthony 1990). Archaeologically the differences may be subtle, apart from the difference in distance between the homeland and new settlement. If we assume that pottery making was learned from one's close female relatives, the case of lineage fission might be expressed in a greater degree of homogeneity within the foreign ceramics than if the foreign potters in a community belonged to a number of different lineages. Long-distance migrations might be identified by examination of unusual aspects of material culture on a regional scale.

The diffusion model proposes that potters saw a decorative motif and copied it. Engelbrecht (1984:334) argues against this model on the basis that it is unlikely that Iroquoian women would have been present on inter-tribal trading missions, where they would have the opportunity to see these "foreign" ceramics. However, Bogaert (1988:6, 36) encountered unaccompanied women travelling to trade salmon, suggesting that our ideas about sexual division of labour may be in error. Diffusion cannot, then, be wholly ruled out.

It may be useful, when examining these possibilities, to consider changes in Huron ceramic decorative styles in the larger context of pottery decoration in the Northeast in the mid-seventeenth century. As Lizee (1995) has pointed out, frilling is a motif that occurs widely in the region at this time. He asserts that Onondaga, Saint Lawrence, Susquehannock, Mohegan and Narragansett pots show frilling. This list may need some adjustment: frilling is known for Cayuga and Seneca pottery and no appreciable amount of frilling has been documented for Saint Lawrence pottery. Nevertheless, the phenomenon is widespread in the northeast in the mid-seventeenth century, and occurs in both Iroquoian and Algonquian assemblages.

Both detailed examination of the ceramics and examination on a region level may help to clarify this. First, it is clear that although frilling, notching, and other innovations in decoration are widespread (Lizee 1995), significant regional differences apparently exist. As described above, Seneca and Cayuga pottery differs from the frilled pottery found in Ontario. Secondly, compared with earlier ceramic decorative motifs in Ontario, the changes in decoration in the mid-seventeenth century may be considered elaborations. These could take many forms, but as Lizee (1995) points out, a restricted set of decorative innovations occurs. One possible explanation is that with increased warfare and trade in the seventeenth century, potters moved more frequently and further they had previously and in doing so new styles of decoration were widely distributed. This explanation ignores the significant regional differences in expression of these elaborated motifs, and it ignores the scale on which some unusual styles occur (e.g., William Edwards). The general similarities, together with specific differences in basal collar modification, may suggest indirect communication about stylistic production, i.e., that potters were aware of the decorative motifs other potters used through either seeing or hearing about decoration, but that they were not formally trained to produce these motifs.

Another avenue for examination of this problem is through study of micro-variation in ceramic decoration. Recent work by Martelle (2002) suggests that individual Iroquoian potters might be identified based on micro-variation in application of decoration. If this is the case, one might compare trailing and stamping above frills with trailing and stamping on non-frilled pottery to determine whether the makers of typical Huron pottery also produced frilled pottery. A second way in which the study of microvariables could help to clarify this issue relates to variability. As discussed above, many different forms of frills occur in the Ossossané sample. I interpreted this to indicate production by a number of individuals. A second interpretation would be that potters were experimenting with a new motif. In this case, we might expect variability both in form and in production—possibly more variation in frilling that in typical Huron decoration.

At this time, the issue of the identity of the makers of frilled pottery in Huronia remains unresolved. A plausible argument can be made for production by Wenro refugees, the main shortcoming being that we have not identified their homeland on the basis of appropriate pottery types. On the other hand, regional comparisons

provide tantalizing suggestions that the appearance of frilled pottery may relate to the changing political and social circumstances of the seventeenth century. Johnson (1999) argues that the unusual decoration on Shantok pottery was an intentional signifier of Mohegan identity, and that pottery is an excellent medium for sending such messages. Goodby (1998) also argues that ceramic decoration was a method by which women expressed social identity, although his analysis suggests that women used ceramic decoration to reinforce connections between communities. Future research directions should include the possibility that pottery decoration was intentionally used to signify identity—whether this was at a community level or at a much broader one. The lack of frilling in western Huronia should be addressed, and examination of technological attributes and stylistic micro-variables may lead to new insights.

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