Statistical comparison of Spode/Copeland ceramics between historic Metis and European occupations in central Alberta

Timothy Panas

The University of Montana

Follow this and additional works at: https://scholarworks.umt.edu/etd

Let us know how access to this document benefits you.

Recommended Citation


https://scholarworks.umt.edu/etd/3661

This Thesis is brought to you for free and open access by the Graduate School at ScholarWorks at University of Montana. It has been accepted for inclusion in Graduate Student Theses, Dissertations, & Professional Papers by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.
Maureen and Mike
MANSFIELD LIBRARY

The University of MONTANA

Permission is granted by the author to reproduce this material in its entirety, provided that this material is used for scholarly purposes and is properly cited in published works and reports.

** Please check "Yes" or "No" and provide signature **

Yes, I grant permission
No, I do not grant permission

Author's Signature

Date 05/26/99

Any copying for commercial purposes or financial gain may be undertaken only with the author's explicit consent.
A Statistical Comparison of Spode/Copeland Ceramics
Between Historic Métis and European Occupations in
Central Alberta

by
Timothy Panas
B.A. University of Alberta 1995

Submitted in partial fulfillment of the requirements for the Degree
of Master of Arts
University of Montana
1999

Approved By

[Signatures]
Committee Chairman
Dean of Graduate School

5-28-99
Date
A Statistical Comparison of Spode/Copeland Ceramics Between Historic Métis and European Occupations in Central Alberta (69 pp.)

Director: Thomas Foor

This thesis examines the significance of ceramics in Métis households by statistically comparing ceramics in three contemporaneous archaeological sites in Alberta: two Métis (Buffalo Lake - FdPe 1, River Lot #3 - GaPc 20) and one European (Fort Victoria - GaPc 6). The purpose is to determine if these fragile and costly items were of importance to the latter ethnic group in terms of social standing. Significance of the collections will be determined on the basis of variability of patterns and material within each collection, rather than by frequency, as raw counts are influenced by the original disposal pattern, the method of collection, and even the initial size of the artifact. The collections will be compared in terms of stylistic variation as a whole across the entire collection. I hypothesize that the Métis collections will display high pattern variability, with a decreased emphasis on the economics of items. This will show that, despite the material's lack of European cultural context, Métis of the late 19th Century considered the possession of ceramics to be significant in the maintenance of social status and standing within their society. This hypothesis is based upon the historical and ethnographic record for the period and for each group involved, and is tested against the archaeological materials obtained from the respective sites.
Acknowledgments

I wish to thank all those who helped me in the completion of my thesis. Initial acknowledgment must go to Dr. Tom Poor, Committee Chair, whose advice and support was invaluable to the completion of this work. Much thanks also goes to Dr. Greg Campbell and Dr. Harry Fritz, the remainder of my committee, who also provided valuable comments and backing. In addition, acknowledgment is also due to Dr. Heinz Pyszczyk of the Provincial Museum of Alberta, who provided editing advice, and assisted me in arranging the fieldwork for this project. Mr. John Geiger, the current owner of the lot on which Victoria River Lot #3 currently sits, provided assistance through allowing me to excavate on his land, as well as providing background information and the previous landowner's personal artifact collection for the lot. Financial support for this research was generously provided by the Alberta Historical Resources Foundation. Last, but not least, I wish to thank all of the family and friends who provided assistance and support both in the field and in the writing of this work: Charlotte Panas, Michael Panas, Greg Panas, Elizabeth Panas, Cathy Panas, Ken Baker, Andy Plante, Rollie Plante, Sean Beach, Kathleen Walsh, Sheri Holmes, and Jarod Holmes. Of course, any errors or omissions are solely the responsibility of the author.
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>ii</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>iii</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>iv</td>
</tr>
<tr>
<td>List of Figures</td>
<td>v</td>
</tr>
<tr>
<td>List of Tables</td>
<td>vi</td>
</tr>
<tr>
<td>Chapter 1: Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Chapter 2: Métis History and the Role of Cermaics</td>
<td>4</td>
</tr>
<tr>
<td>Chapter 3: The History of the Sites Examined</td>
<td>15</td>
</tr>
<tr>
<td>Chapter 4: Methods and Materials</td>
<td>32</td>
</tr>
<tr>
<td>Chapter 5: Statistical Results and Conclusions</td>
<td>46</td>
</tr>
<tr>
<td>Chapter 6: Thesis Contingencies</td>
<td>55</td>
</tr>
<tr>
<td>References Cited</td>
<td>59</td>
</tr>
</tbody>
</table>
# List of Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1: Map of Fort Victoria</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Figure 2: Map of River Lots at Fort Victoria</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>Figure 3: Provincial Map Showing Location of Buffalo Lake</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>Figure 4: Detail Map of Buffalo Lake</td>
<td></td>
<td>26</td>
</tr>
<tr>
<td>Figure 5: Dendrogram of Cluster Analysis Results</td>
<td></td>
<td>43</td>
</tr>
<tr>
<td>Figure 6: Comparison of Fort Occupation vs. Pattern Variability</td>
<td></td>
<td>49</td>
</tr>
<tr>
<td>Figure 7: Comparison of Fort Occupation vs. Pattern Variability Including Buffalo Lake and Victoria River Lot #3</td>
<td></td>
<td>50</td>
</tr>
</tbody>
</table>
List of Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>Buffalo Lake Cabin Designations</td>
<td>35</td>
</tr>
<tr>
<td>Table 2</td>
<td>Fort Victoria Provenience Designations</td>
<td>35</td>
</tr>
<tr>
<td>Table 3</td>
<td>Ceramic Patterns and Abbreviations</td>
<td>37</td>
</tr>
<tr>
<td>Table 4</td>
<td>Site/Ceramic Data Matrix</td>
<td>39/40</td>
</tr>
<tr>
<td>Table 5</td>
<td>Cluster Analysis Results with Dissimilarity Coefficients</td>
<td>41/42</td>
</tr>
<tr>
<td>Table 6</td>
<td>Cluster Analysis Agglomeration Schedule</td>
<td>42</td>
</tr>
<tr>
<td>Table 7</td>
<td>Factor Analysis Results</td>
<td>44</td>
</tr>
<tr>
<td>Table 8</td>
<td>Factor Analysis Eigenvalues</td>
<td>44</td>
</tr>
<tr>
<td>Table 9</td>
<td>Site Occupation Periods and Pattern Counts</td>
<td>48</td>
</tr>
<tr>
<td>Table 10</td>
<td>French Canadian/Orkneyman Artifact Comparison</td>
<td>48</td>
</tr>
<tr>
<td>Table 11</td>
<td>Factor Summary</td>
<td>48</td>
</tr>
</tbody>
</table>
Chapter 1: Introduction

When examining the Plains Métis, both from a historical and archaeological perspective, one paradox which has emerged is the presence of large amounts of intricate, fragile ceramics associated with this traditionally nomadic hunting group. Even at times of difficulty within the Métis community, when the possession of dishes would seemingly have been one of the least concerns, these items have always been present (Burley, 1989: 100). In an attempt to explain this, David Burley has proposed that ceramics play a historical role in determining female status within the Red River community and, later, with the migration of Métis westward, one of the bases of Métis social interaction among themselves.

Problem Statement and Objectives

This thesis examines the significance of ceramics in Métis households by statistically comparing ceramics in three contemporaneous archaeological sites in Alberta: two Métis (Buffalo Lake - FdPe 1, River Lot #3 - GaPc 20) and one European (Fort Victoria - GaPc 6). The purpose is to determine if these fragile and costly items were of importance to the latter ethnic group in terms of social standing. Significance of the collections will be determined on the basis of variability of patterns and material within each collection, rather than by frequency, as raw counts are influenced by the original disposal pattern, the method of collection, and even the initial size of the artifact. The collections will be compared in terms of stylistic variation as a whole across the entire collection. I hypothesize that the Métis collections will display high pattern variability,
with a decreased emphasis on the economics of items. This will show that, despite the material's lack of European cultural context, Métis of the late 19th Century considered the possession of ceramics to be significant in the maintenance of social status and standing within their society. This hypothesis is based upon the historical and ethnographic record for the period and for each group involved, and is tested against the archaeological materials obtained from the respective sites.

My analysis will focus on the concepts surrounding the emergence of a Métis ethnicity and social distinction within the Canadian fur trade. It will examine the origins and role in which material items played in the determination of social boundaries within Métis society, in particular those items which copied the European based society in which they lived. Ceramics have been chosen, as they have a history both within European and Métis societies. In addition, they can also reflect economic factors, as different qualities of ceramics inherently have different prices.

Theoretical Considerations

The concept of group identity expressed through material items is not new to anthropology. Within archaeological literature, a perspective based in the theory of habitus has been reiterated by David Burley and Siân Jones. This concept examines the subliminal conditioning of an individual within a group. This conditioning lies between the external, physical actions, and the underlying structures of these practices (Burley, Horsfall, and Brandon, 1992: 6). Habitus formation begins at an early age with the socialization of new group members, and is expressed as the "proper behavior" for the community. The basis for this regulation of behavior is determined by the past history,
traditions, and behavior which previous group members have been socialized in. These behaviors, in turn, impact the formation of a group's material culture and, thus, the archaeological record (Burley et. al, 1992: 8 - 10; Jones, 1997: 88 - 90).

Following this approach, historic and ethnographic accounts will be examined, displaying the development of ceramic use in Métis society.

**Thesis Outline**

This thesis is divided into six chapters, with the first of these being this Introduction. Chapter 2 outlines the historical and ethnographic foundation of Métis ceramic acquisition, use, and shared group meaning. Site history is discussed in Chapter 3. Chapter 4 lists the methods and materials used in this study. It provides the bases for site selection, problem formation, and the format taken in laying out the data and subsequent results. Chapter 5 details the results from the statistical analysis, and provides the conclusions on Métis ceramic use provided by these results. Potential sources of error for the presented results is covered in Chapter 6.
Chapter 2: Métis Ethnicity and the Role of Ceramics

On the surface, the role in which ceramics, specifically Spode blue transfer printed wares, played in Métis life is not obvious. Why would a cultural group, largely relegated to the fur trade’s working class, based partially in Native practices, see significance in fragile, European based tableware? The answer to this question can be seen through examining the cultural history of the Métis, and the idea that the ceramics are treated not just as a utilitarian item.

Canadian Métis originated with the arrival of European fur traders to the New World. Establishing trading posts, Europeans relied upon Native women not only for supplies, but also for access to the groups themselves. Before economic relations could be established, a familial connection was often required between the two parties involved, a tradition among some Native communities. To facilitate this, traders and clerks took Native wives, with the union producing "half-breed" children (Foster, 1985: 73 - 75; Harrison, 1985: 10 - 11, 18). Although biologically Métis, the first children of these unions were not necessarily culturally distinct. Rather, many were likely adopted into one of their parent's cultures (Foster, 1985: 80, 86).

The identification of a separate Métis culture occurred with the expulsion of French colonial powers from the New World, and with them the French system of fur trading. Previous to the English takeover of New France in 1763, French traders out of Montréal operated a system through which furs were acquired by engaging parties of coureurs de
bois, or "runners of the woods". These groups acted as middlemen, travelling west through the Great Lakes, and making contact with Natives in the eastern interior of Canada (Innis, 1975: 58 - 62). With the fall of the New World colony to England, English merchants began to exert control over the lucrative fur market. Represented by the Hudson's Bay Company, English interests relied upon what has been called "The Sleep By The Frozen Sea", where traders established permanent posts along the western shores of the Hudson's Bay, such as the Churchill and York Factories. This system of trade relied upon Natives making the long journey from the interior to the coast to conduct business (Newman, 1995: 54; Williams, 1983: 35 - 36). Although outmaneuvered by the English, as well as lacking the royal charter possessed by the Hudson's Bay Company to most of Canada, the traders of Montréal were still present within the industry, and soon made their presence known by capitalizing upon the unaggressive position which the English took.

Beginning soon after the fall of New France in 1763, French traders began to send trading expeditions into the western interior, with the hopes of circumventing English influence along the coast. This strategy paid off; as early as 1773, English trade dropped 8,000 made beaver pelts, down from 30,000 made beaver from fifteen years previous (Williams, 1983: 36). In 1779, these Montréal merchants consolidated, and formed the North West Company. This action led to increased economic pressure being placed upon the Hudson's Bay Company, as the newly organized Canadian company was gaining the march inland, both in exploration and the establishment of trading posts, and thus cutting off the vital supply of furs to the Bay (Campbell, 1983: 1 - 2; Newman, 1995: 98 - 105; Williams, 1983: 37). In response to this threat, the Hudson's Bay Company
had little choice but follow suit, and began to move their operations inland to meet the trade with the Natives head on.

This shift in trade operations can be viewed as the chief catalyst in the creation of a Métis identity and, on a lesser historical scale, the role which ceramics play in Métis society. The key to understanding the emergence of a distinct identity is seen through the economic and social shift which occurred for those who would become the Métis after a change in fur trade operational policy. Under the French system of the "runners of the woods", trading parties were sent out to deal with Native tribes in the hinterland west of the Great Lakes area. These parties consisted of laborers, and was headed up by a clerk, who might have had marital ties with the Native community which was being dealt with. This system limited the amount of personal freedom of the party, as they were under the employ of the eastern based merchants; such things as who they did business with, and when, was not in their control. Despite this loss of individuality, the coureur de bois system did allow for an individual to improve their status within the trade party. Regardless of one's racial status, there was the chance for promotion from laborer or servant to that of a commis, or clerk, who led the trading expeditions, or even a bourgeois, or district head, was possible (Foster, 1985: 80 - 81).

With the shift in trading practices, the opportunities available to for the Métis decreased drastically. Under the new English based system of posts spread through the hinterland, the concept of class distinctions was reinforced to a greater degree than that found under the French system. As such, the position which one held in society was largely determined by the skills and wealth which an individual possessed, as well as the ethnic
group to which one belonged. As a result, the upper echelons of the trade were occupied by Europeans, while the Métis found themselves at the lowest levels (Burley, 1989: 102; Hamilton, 1985: 379; Pyszczyk, 1985: 399 - 400). Lacking financial means to get ahead in this system, Métis were relegated to laborers, seldom rising to the positions which they had in the past possessed. Despite this limited upward mobility by Métis men employed in the fur trade, the same could not be said of Métis women, who provided the means through which ceramics would enter their cultural sphere.

With the introduction of European class values to the New World came the issue of race and the spouses of post employees. From the beginning of the fur trade itself, European men had been taking "country" wives in order to establish ties with Native groups, as well as for personal reasons (Peterson, 1978: 46). Despite the fact that the practice of marrying Native women had been frowned upon by the Hudson's Bay Company, many employees continued marrying women "a la façon du pays", or in the fashion of the country (Burley, 1989: 102; Van Kirk, 1980: 4, 28 - 31). With the introduction of more strictly delineated class lines, and the absence of European women in the wilderness, many men turned to Métis women as the source for potential spouses. This is due not only to their partial background and familiarity with accepted European upper class practices, stemming from their cultural background, but also to their general appearance as well. With class being determined by ethnic background, in addition to economic position, women who appeared more "white", and less "Indian", were seen in higher regard (Brown, 1980: 151; Burley, 1989: 102; Jackson, 1996: 197; Peterson, 1978: 45; Van Kirk, 1980: 171 - 172).
Married into the upper fur trade society, Métis women were instructed in the proper behavior of their new station. Towards this end, finishing schools for young girls were established in the larger western settlements, where the mixed blood daughters of prominent traders and Hudson's Bay Company officers were instructed in the "proper" ways of speech, fashion, and etiquette (Brown, 1980: 151 - 152; Van Kirk, 1980: 145 - 152). This attitude of European education towards the Métis was voiced by many high ranking officials in the fur trade, witness by the writings of Alexander Ross: "... taught at an early age some useful trade, (Métis) would doubtless prove an ornament to society" (Ross, 1924: 291). Part of this training would be the introduction of the material goods associated with their station; prominent among these items would be tableware. While utilitarian in nature, these ceramics also served as a marker between the upper and lower classes of the fur trade (Burley, 1989: 102; Pyszczyk, 1985: 403 - 404).

The elevation of Métis women to the upper class of frontier society was not permanent; they were only allowed into affluent circles because white European were banned from living at Hudson's Bay Company posts. The reasons for this restriction can be seen as a combination of economics and the racial attitudes of the day were twofold. Prevalent at the time was the view that European women were incapable of enduring in the challenging environment of the fur trade. Like the men, women were expected to earn their keep at Company posts; employee's wives tailored clothes, cooked, trapped small game, and even cleared the post of snow during the winter months (Foster, 1985: 86 - 87). As Métis women learned these practices from their matri-kin Native lineage, they were able to operate in this capacity with a greater efficiency than European women. Linked to this was the increased cost and dependency which resulted from having
unskilled individuals residing at the posts. Lacking the independence that marks Métis behavior, many European women would be unable to hunt on their own, attend to household duties, or protect themselves in times of crisis. By accommodating for the wives of their employees, the Hudson's Bay Company would see a decrease in their profits. In addition, by allowing a family structure into the posts, the basis for colonial settlement would be created, a prospect which would require the Company to construct such infrastructure as schools, churches, and medical facilities (Brown, 1980: 10). In response, the Company initially allowed some officer's wives to journey to Rupert's Land, provided their husband paid the Company for her living expenses. This practice was stopped in 1687, resulting in all European wives of employees being sent back to England (Foster, 1985: 10 - 11).

This practice remained in place until 1830, when George Simpson and John George McTavish, two of the highest ranking officers in the Hudson's Bay Company, returned from leave in England with European brides. This action was premeditated on the part of the men; in the case of Simpson, before departing, he severed his ties with his country wife, a Clatsop woman named Kilakotah (Van Kirk, 1980: 182 - 185). His actions served as the basis for the admission of European women not only into the frontier of Rupert's Land, but also into the elevated social sphere which was previously occupied exclusively by Métis women. From this point onwards, officers looked to the Old World, and not the enculturated Métis daughters of other traders, for wives that suited their standing within the upper class of Company society (Burley, 1989: 102 - 103; Van Kirk, 1980: 204 - 206). New racial views which had previously only been expressed towards male Métis within the workforce became apparent towards women as well;
contact between Métis and white women only took place as a mistress and maid relationship, and not as equals. Although the attitude that marriage with Native or mixed-blood women was socially unacceptable was present only within the upper levels of Hudson’s Bay Company administration, and waivered over time, it spread through the entire organization sufficiently to affect pre-existing racial and societal attitudes (Van Kirk, 1980: 203 - 215).

With this social repositioning, Métis women became dispossessed from the social sphere which many had been educated and trained to perform in. Although relegated back to the lower ranks of fur trade society with Métis men, many still possessed upper class knowledge, skills, and tastes. As such, status and its markers was still considered significant, and useful in the efforts of Métis women to reclaim their higher standing. One option still available to Métis women to achieve status was the acquisition of stylish European ceramics, which operated in both a utilitarian aspect and as a social marker (Brown, 1980: 212 - 213; Burley, 1989: 103 - 104). Rather than die out, the practice was integrated into the social behavior which can be considered as "Métis".

With the roots of their cultural development being found in the history of the fur trade, as well as their employment, it is no surprise that the attitudes and hierarchy of the trade are mirrored within the societal structures and attitudes of the Métis. Originating with the head office in London, lesser degrees of power filtered down through the Company structure. Within the labor levels of this structure, where the Métis were most prevalent, this structure was mirrored. Although having little or no say in the operations of the Company, the concepts of status, leadership, and strong central figures was key to daily operation. Through group concensus, Métis brigade leaders were
chosen; these individuals led the party during trading expeditions, as well as defending the brigade's honour during seasonal meetings (Foster, 1985: 82 - 83; Foster, 1995: 423).

Acquisition and reflection of this status was presented within the realm of the tangible, just as it was in upper class European society. By tangible, it is meant here those things which can be reflected physically; for the Métis, this meant such things as physical deeds, and proof of strength and endurance on trading voyages. Also part of this sphere were material goods, such as their clothing and Red River carts, to the point where some with little status in Métis society sought potentially social enhancing goods as a means of improving their position (Harrison, 1985: 27 - 31). Although theoretically based on the male world of the fur trade, women and their ceramic use can easily incorporate themselves within the Métis hierarchical system, as this system is based upon the class conscious model of European behavior; the role in which transfer printed dishware played for women was equal to that which pack size or a fight record did for men. When those Métis individuals who were integrated into the upper classes found themselves isolated from it, they found a suitable environment among the lower class men, and women to a degree, of their ethnic group for the continuation expansion of their learned social practices.

Also of significance to the acceptance of European ceramics was the role of socialization in the Métis community. Finding origins among the brigades of the fur trade, Métis adopted the joie de vivre and social openness characteristic of the voyageur (Cowie, 1913: 177; Harrison, 1985: 20 - 21). Historical accounts of this behavior are
numerous; few encountered the Métis without commenting on their exhaustive celebrations or their need to socialize with one another. It is within this sphere of intra-group relations that ceramics obtain meaning beyond that of a utilitarian object. Rather, they provided a basis, or forum, through which Métis women interacted. At any social gathering, gossip session, or receiving of visitors, full formal tea sets were brought out and presented, not just to display status or wealth, but to provide the sphere through which formal social interaction could take place. Again, historical reference can be found enforcing the role in which ceramics and tea service played. As early as 1749, in a Governor General's report, the significance of socialization in Métis society is evident. Reporting on the Michilimackinac area, Michel Chartier de Lotbinière describes the practices of the local Métis population; the men's "sole occupation" appeared to be "strolling around the fort's parade ground, from morn till night, smoking", while the women were "putting on airs" and "going from house to house for a cup of coffee or chocolate" (Peterson, 1985: 47). Similar comments are made by H.M. Robinson, who travelled in western Canada during the late 19th century: "At home, . . . the half-breed smokes and drinks tea. His . . . libations of tea would do no discredit. . . ." (Robinson, 1879: 49 - 50). These accounts are substantiated with the records of Alexander Ross, who, in 1840, describes the residents of the Red River colony in much the same manner. Although a century later than de Lotbinière, behaviors remained the same, with women gathering over tea or coffee to discuss the news of the community:

"The men are great tobacco-smokers, the women as great tea-drinkers . . . Debts may accumulate, creditors may press, the labourer may go without hire, the children run naked, but the tea-kettle and tobacco pipe are indispensable. We have already observed that they are passionately fond of roving about, visiting, card-playing, and making up gossiping parties. To render this possible, they must of course be equally hospitable in return; and, in fact, all comers and goers are welcome guests at their board" (Ross, 1957: 192 - 193).
This extreme towards hospitality, at the expense of other needs, is not an exaggeration on the part of the author. Later in his narrative, Ross describes a starving Métis hunting which he had encountered:

"Provisions were scarce; scarcely a child I met but was crying with hunger, scarcely a family but complained they had no food. . . . The state of the families in the camp revealed to me the true state of things; the one half of them were literally starving! Some I did see with a little tea, and cups and saucers too—rather fragile ware for such a mode of life. . . ." (Ross, 1957: 253).

These accounts underscore the significance which ceramics played in Métis life and social practices. Over the span of almost a century, three separate sources give almost identical descriptions of Métis social interaction. In all narratives, the behaviors which take place around ceramics are deemed significant enough to warrant description in the individual’s personal records and government reports, respectively. In addition, Ross also adds information to the social function of these goods by commenting on the condition of the Métis groups which he encountered. In the first account, he underscores the significant role which hospitality plays within Métis society; regardless of financial or employment conditions, the requirement was always present for warm receptions to be provided to any who crossed the threshold. As a part of the open attitude, the tea kettle, and thus the ceramic wares needed for service, was always at the ready. The significance of ceramics in daily Métis life also is illustrated in the second account, perhaps to a greater extreme than in the first. Encountering a brigade of hunters and their families on the brink of starvation, Ross takes note of the fact that even here, delicate ceramics are present within group activities. Conceivably, under situations of extreme duress such as this, a group would discard or attempt to sell off such out of place luxury items.
as these. However, in this case, the dishes were not only kept, but were still in use with whatever food the group still had. These actions display that, despite the obvious, ceramic goods have more than just a utilitarian purpose among the Métis.
Chapter 3: The History of the Sites Examined

Fort Victoria and River Lot #3

Settlement History and The Establishment of Ft. Victoria

The history of the Victoria Settlement, or Pakan as it is now known, is an extensive one. Within its lineage are periods which exemplify the development of Alberta and the region: the Fur Trade, Missionary expansion, the Métis rebellion, and the settlement of the West. Although significant within itself, this historical range is too broad for the purposes of this study. As such, only the period concerning the Hudson's Bay Company trading fort and River Lot #3 will be examined.

Located 110 kilometres east of Edmonton, Alberta, along the north banks of the North Saskatchewan River, Victoria Settlement has played a varied and distinguished role in the history of missionaries, traders, and settlers within western Canada (Figure 1). During prehistoric times, the area was known as the "Hairy Bag", due to the abundance of feeding buffalo along the river valley grasslands. As a result of this game and the fishing along the river, a number of trails converged to link the area to the southern plains. At present, the oldest occupation date to emerge from the site is approximately 6000B.P. (McDougall, 1896: 63, 104; Melnycky, 1997: 6). Historic occupation at Victoria began in 1862 with the establishment of the Victoria Methodist Mission, which was moved from a nearby area to be nearer Native groups (Doyle, 1988: 7-8; Fryer, 1976: 112; Geiger, 1996: 15-16; Hurt, 1979: 6-8). These groups were engaged in
Figure 1: Map of Fort Victoria

From *The Victoria Settlement*; Leslie J. Hurt;
Historic Site Services, Alberta Culture, Occasional Paper
No. 7, 1979
trapping, as fur bearing animals were more abundant along the river. In addition, the move would not jeopardize the main goal of the Methodist missionaries at the time; that of combating both the rum trade and hunger that was in the area. If left unchecked, these problems could result in the movement of potential Cree converts south, to the Catholic missions (Hurt, 1979: 6).

Construction on the Mission did not begin until 1863, with the arrival of its head, the Reverend George McDougall. By 1864, the settlement boasted a small log cabin, an eight room residence for the McDougall family, a small church for services, a stable, icehouse, school, a garden and barley field, and several outbuildings (Hurt, 1979: 15-16; McDougall, 1896: 52, 64-65, 125-126, 182-183; Melnycky, 1997: 10). With these facilities in place, it was now possible for the missionaries to practice their work among the nearby Cree and Stoney Indians. Towards this end, they were highly successful; accounts record in access of one hundred lodges being established at the Mission at one time. Even during the early years of the Mission, when only crude and temporary buildings were present, Natives frequently visited (McDougall, 1896: 23-24, 51, 66, 74, 92, 111, 130-131, 188).

This large migration of Natives to the Mission is one of the reasons why the Hudson's Bay Company became interested in the area. Also a factor was competition from independent free traders, resulting in a loss of business for the Company. In addition, two other factors, also related to location, made the Victoria area ideal for Hudson's Bay Company purposes. First, was the North Saskatchewan River, providing easy access for the York boats and, later, steam boats to the area. At most, the journey from Edmonton could be
made by canoe or York boat in three days (Zinovich, 1992: 87). Secondly, there was the
cart trail between the Mission and Fort Edmonton, the primary fort for the district
(Kane, 1971: 83; McDougall, 1896: 11 - 12; Pyszczyk, n.d.a: 1-2). The existence of
this overland route provided an alternate route for traders to obtain supplies or
assistance, as well as for the delivery of furs to be shipped back east. Seeing the
opportunity for economic expansion, the Hudson's Bay Company authorized the
construction of a post at the Mission in 1864, and Fort Victoria was in operation by
September of that year, under the supervision of George Flett (Forsman, 1978: 72;

In 1869, the Mission and Fort were witness to circumstances which almost ended
settlement in the area, and involved an item sacred to many Plains tribes, the Manito
Stone. The Stone itself is a meteorite which was originally in south eastern Alberta.
Among Plains groups, it was considered a sacred object, and frequently left offerings at
the site. In the above year, the stone was moved from it's original location to the
Mission's yard. This action caused a great deal of distress among local Native groups;
many expressed their concern to McDougall that war, famine, and disease would plague
the settlement in retaliation for the sacrilegious act of moving the Stone. In 1870, this
prediction came true in part; two separate smallpox epidemics hit Rupert's Land,
causing the death rate of 40-50% among some Native groups (Doll, Kidd, and Day,
1988: 14 - 16; Howard, 1994: 252). The catastrophic results from this disease did
not leave the European population of Victoria untouched. In addition to fifty Natives and
Métis who either lived at or frequented the settlement, three children of Reverend
McDougall died as a result of the epidemic. Although personally devastating to
McDougall, who left the area for Edmonton in 1871, the deaths of his children possibly prevented the settlement from being destroyed by suspicious members of the surrounding tribes (Howard, 1994: 252 - 253, Melnycky, 1997: 12 - 13).

Although small in its beginnings, Fort Victoria soon expanded. By 1874, it boasted, in addition to the Clerk's quarters, a stable, men's house, forge, trading shop and fur press room, provisioning shop, a dairy, and a palisade measuring between 12 and 25 feet high surrounding the entire complex. Business at the post was ample enough to have a full time clerk, blacksmith, and a small group of laborers. This expansion occurred due to such problems as the shortage of provisions, harassment from the Blackfoot, and the infringement of free traders into the area (Fryer, 1976: 112; Hurt, 1979: 68). After the mid 1870's, fur returns from the fort diminished, due to the increasing reliance of local Natives on the government as a means of support, as well as a decrease in fur bearing animals in the area. Trappers who traditionally traded with Fort Victoria turned to agriculture as a means of earning a living. This decline led to the post's closure by the Hudson's Bay Company in 1883, although it was used as a base of operations for trading parties from Fort Edmonton until 1887. In that year, Fort Victoria reopened for business, although now an outpost under the jurisdiction of the Lac La Biche post. Providing some returns, the profits never equalled those during the mid-1870's, and resulted in a high employee turnover rate. This declining pattern resulted in losses for the post, which led to its eventual closure in 1897 or 1898 (Forsman, 1978: 72; Hurt, 1979: 76-79; Melnycky, 1997: 21).

After closure, most fort structures were razed, with the dates of this activity presently
unknown. Of notable exception to this destruction are the trading shop and clerk's quarters. The shop was left intact, and was used as a store for the settlement, renamed Pakan, until the 1920's, at which time it was bisected and moved to a different location. The clerk's quarters still stand today; after the fort's closure, they were renovated into a private residence, and remained so until it was purchased by the Provincial Government of Alberta in 1960. Today, it stands as the only historic structure at the Fort Victoria Provincial Historic Site (Hurt, 1979: 94-97).

The History of River Lot #3 and the Métis in Victoria

The establishment of the river lot system at Victoria settlement began soon after the erection of Fort Victoria. This system of land tenure is based off of the traditional French system which was employed by the early habitants of Québec. Differing from the English based square lots seen today, river lots are rectangular plots situated along river banks, measuring 800 metres wide by two miles long, and possibly extending back as much as twenty miles (Harrison, 1985; Rasky, 1967: 201). Generally, they follow a set width/length ratio, such as 1 x 10 or 1 x 100; the lots at the Victoria Settlement vary from 3 to 1 to 18 to 1 (Doyle, 1988: 3; Ironside and Tomasky, 1976: 12). Situated side by side, each plot, along one narrow end, has access to the river as well as a road which follows the waterway. This method of land tenure migrated west with Métis groups from the Red River colony. Although used by the Métis, the river lot system cannot be attributed solely to their connection with the early French settlers of New France. The use of the river lot also expresses the shared value system and sense of community which existed within this group, similar to the ceramics focused upon in this paper. By allowing for all to have access to one road linking the settlement, which would
have not been possible under the English system of land tenure, one obtains easy access to one’s neighbors. This sense of loosely defined boundaries fits with the Métis trait of integrated socialization and a close knit community (Burley, 1989: 103-105; Doyle, 1988: 4 - 5; Ironside and Tomasky, 1976: 3 - 6).

Métis settlement in the area began in 1864 east of the newly established Hudson’s Bay Company post (Geiger, 1996: 16). This migration cannot be seen as a mere coincidence, given that the fort opened for business that same year; at the time, the fur trade was still highly active, and the buffalo herds still numerous. Although establishing themselves on traditional French farming lots, the Métis living there still worked as suppliers and tripsmen for the traders. Agriculture in the area did not develop until 1864. Previously, the Mission had the Hudson’s Bay Company act as supplier; when costs grew too high for the Company to continue this practice, Reverend McDougall was forced to make the trip to Fort Edmonton or Fort Garry (Hurt, 1979: 18 - 19; Ironside and Tomasky, 1976: 4 - 6). In time, both the Mission and the surrounding Métis supported themselves with agriculture. This new lifestyle was forced on the Métis, due to the declining buffalo herds on the Plains (Ironside and Tomasky, 1976: 9 - 10, 14 - 15).

The first three residents of River Lot #3, Andrew Spence, George Spence, and Joseph Favel, moved to the area at the time of the fort’s establishment (Figure 2). Of the three, the least is known of the two brothers, Andrew and George Spence. The two were possibly the grandchildren of James Spence Senior, who was employed with the Hudson’s Bay Company in York Factory, and at the time of his death was factor of Buckingham
Figure 2: Map of River Lots at Fort Victoria

From The Victoria Settlement; Leslie J. Hurt; Historic Site Services, Alberta Culture, Occasional Paper No. 7, 1979
House in eastern Alberta (Geiger, 1996: 16; Hudson's Bay Archives, a, b, c, d, e, f). Likewise, their father, George Spence, also served with the Company, both in the York and Saskatchewan fur trade districts, before moving to the Red River Colony in 1824 (Hudson's Bay Archives, g, h, i, j, k). It is after this move that record of the brothers is found in the form of baptism dates: Andrew on 6 February, 1837, and George on 2 October 1827 (Hudson's Bay Archives, l, m). Like his father and grandfather, Andrew was a freighter with the Hudson's Bay Company, starting in 1878. He is listed in the Edmonton Bulletin as having died after a long illness on 12 December, 1880, leaving a wife and six children (Edmonton Bulletin, 1881). Less is known about George Spence, who is buried in Victoria Park cemetery, the graveyard for the settlement. The inscription on his grave marker, however, is curious, as it lists him as dying in 1906, at the age of 57 years (Geiger, 1996: 16). This age would put his birth year at 1848 or 1849, which stands in contrast to the baptismal date of 1827 given in the Hudson's Bay Company records. This discrepancy can be addressed through two different explanations: 1) the age given on the stone may be the result of an estimation on the part of those who buried George Spence, and did not know his actual birth date; 2) there is the possibility that the George Spence buried at Victoria Park is not the brother of Andrew Spence, but his nephew or son. In either case, the Spence family was active in the area for some time.

In contrast to the Spence brothers, vastly more information is known about Joseph Favel. He began his service with the Hudson's Bay Company in 1859, as a steersman at Fort Garry. In 1864, he was working at Edmonton, where he remained until 1870, when he signed on at Fort Victoria in 1870, as a guide and trader. From this time until
1876, he migrated, mostly between Edmonton and Victoria, serving in the same capacity. In 1876, he was appointed clerk of the Victoria post, a position which he held for one outfit year (Hudson's Bay Company Archives, n, o; Sprague and Frye, 1983: 237). In 1880, he began a career as a steamboat captain for the Hudson's Bay Company, piloting such craft as the North-West, Grahame, Northcote, and Marquis. He continued as a pilot at least until 1893, when he was mentioned in an inspection report as being "careful and economical" (Geiger, 1996: 17 - 18; Hudson's Bay Archives, p). In 1897, he is listed as a resident of the Lobstick Settlement (Geiger, 1996: 19).

Métis tenure at River Lot #3 did not last through to the 20th century. Beginning in 1882, land speculators entered the area, and began purchasing Métis lots along the river. The Spence and Favel homesteads remained in Victoria at least until 1884, when they were recorded in the Kains land survey. In 1887, the land was purchased by George Abery, a land surveyor, from the Widow Spence, as well as Joseph Favel Senior and Junior (Geiger, 1996: 18 - 19). After this date, no further record of the Métis cabins exists, and it is assumed that the structures were destroyed to make way for farmland, pasture, and new dwellings.

The Buffalo Lake Métis Site

The Buffalo Lake site, a seasonal hivernant settlement, is located approximately 190 kilometres southeast of Edmonton, Alberta, on the east shore of Buffalo Lake (Figures 3, 4). Unlike the Victoria lots, Buffalo Lake was a seasonal Métis occupation. Hivernant Métis were semi-nomadic buffalo hunters and trappers who supplied surrounding forts
Figure 3: Provincial Map Showing Location of Buffalo Lake
From The Buffalo Lake Métis Site: Maurice Doll et. al.; Provincial Museum of Alberta Human History Occasional Paper No. 4, 1988
Figure 4: Detail Map of Buffalo Lake

From The Buffalo Lake Métis Site; Maunce Doll et. al.; Provincial Museum of Alberta Human History Occasional Paper No. 4, 1988
and posts with supplies, furs, and buffalo robes. In order to obtain these articles, they followed the buffalo herds out onto the northern plains, where the animals were able to take advantage of the abundant food sources, as well as the isolation from potential conflict between the Blackfoot and Cree (Giraud, 1986a: 15-16). Although possible to maintain a nomadic existence during the summers, the Métis found it difficult to do so during the harsh prairie winters; a permanent residence was required. Unlike the summer camps, which consisted of tents, winter residences were permanent cabin structures located near food, fuel, and other necessary resources (Doll, et al., 1988: 22). Beginning in June, these structures were shut up for the summer while the Métis hunted, returning only when the first snowfall arrived, usually around October (Giraud, 1986b: 140). 

The history of Buffalo Lake extends back into the prehistoric period, due to the site's location along waterfowl migration routes, as well as the close proximity to fuel and water (Doll, et al., 1988: 18). Native occupation continued into the protohistoric and historic periods, and are documented within several records of traders and missionaries present within the area. As early as the 1820's, reports have indicated that Cree, Stony, and Blackfoot Indians were encamped around the Buffalo Lake area, although their exact position unknown. Historic occupation at the site is began around 1861, when Abraham Salois and the Salois and Dumont families built the first dwellings. In 1868, the Catholic Church established a mission in the settlement in a pre-existing building (Doll, et al., 1988: 19-20). The site for the settlement was chosen due to it's location along one of the main trails between the plains to the east and Fort Edmonton, as well as the nearby amenities listed above. Thus, it was ideal for both hunters and traders to
establish themselves at Buffalo Lake (Doll, et. al., 1988: 20). Population expansion
began in 1870, with the smallpox plague hitting the northern plains. Seeking treatment
and refuge, many travelled to Fort Edmonton along the trail leading past Buffalo Lake;
subsequently, some of those individuals settled in the area (Doll, et al., 1988: 20-21).
Despite this influx, Buffalo Lake was not highly populated during this early historic
period. Records show that the area only had a recorded population of 126 individuals as
late as 1871. It is not until the next year, 1872, that the site truly becomes a Métis
hivernant settlement (Doll, et al., 1988: 20-24). This recognition is due to the
population expansion which took place at Buffalo Lake. As in 1870, this upsurge was due
to disaster hitting the area. The winter of 1872 was fierce; seeking safety in numbers,
Métis from St. Albert and the plains made the arduous journey to Buffalo Lake. Arriving
in two definable waves of migration, we can see the dramatic effect which this migration
had on the settlement: with the first incoming group, the population jumped from 126 to
157 individuals. By November of 1872, after the second wave had arrived, the
settlement population was approximately 320 individuals (Doll, et al., 1988: 29-31).

By 1873, Buffalo Lake was already a significant commercial and habitation site. Métis
who migrated to the area to avoid the harsh winter chose to remain, and established
themselves as either hivernant hunters or traders. Traders met the Métis brigades, who
carried both buffalo meat and hides, coming off the plains, as well as local Blackfoot and
Stoney Indians (Doll, et al., 1988: 32). In addition, agriculture began to be developed
within the area, and contributed to the growth. This expansion was accelerated due to
two separate factors: first, there was the climate. Like in 1872, the winters up to
1878 proved to be harsh, and were a contributing factor to food shortages and starvation
on the northern plains. During this period, Buffalo Lake served as a refuge for some Métis, due to the settlement's location near water and fuel, as well as the supplies which it had built up from hunting and trade (Doll, et al., 1988: 52-67). Secondly, the Hudson's Bay Company was changing its policies. As a cost cutting measure, during the 1870's, many employees were discharged as trade routes were consolidated. In addition, term service contracts for lower level employees were abolished. Thus, many Métis guides, tripsmen, and laborers found themselves unemployed (Doll, et al., 1988: 39-41; Innis, 1970: 342). Seeking a forum where they would be able to ply their old trade, many moved to Buffalo Lake to trap, hunt, and trade for the Hudson's Bay Company. By early 1875, the site's population was estimated at about 300-400 Métis (Doll, et al., 1988: 45).

This influx of new people by 1875 led to the establishment of the Tail Creek settlement. Although first mentioned in 1875, there first date of occupation may be as early as 1870 (Doll, et al., 1988: 53-54; Fryer, 1976: 100-101). Like Buffalo Lake, the Métis at Tail Creek depended on hunting and trading opportunities in the area.

Fed by families from St. Albert and Lac St. Anne escaping the starvation in those areas, this boom continued for several years. By 1876, there were approximately 800 Métis at the original Buffalo Lake Settlement (Doll, et al., 1988: 64). In that same year, Samuel Benfield Steele of the North West Mounted Police, then a Sergeant-Major, was sent with a party of men to curtail whisky traders in the area. Arriving at the settlement in the middle of the night, he described a large community of over 400 cabins whose inhabitants were healthy, and celebrating a local wedding in flamboyant style.
(Doll, et al., 1988: 32-33; Fryer, 1976: 106-107; Steele, 1915: 86). Although modern histories discount this high number of dwellings to poor visibility and exaggeration on the part of Steele, the account does attest to the overall size and growth of Buffalo Lake.

Beginning in the spring of 1877, the population of Buffalo Lake began decreasing, as individuals moved to exploit economic opportunities in other areas. This move can be attributed to two factors, first among them the dwindling buffalo herds. Estimated at about 60 million head during the 1600’s, the number of these animals dropped to approximately 1 million head in 1875 (Newman, 1987: 162-164). Although sheltered from the starvation occurring in other area, due to the scarcity of buffalo and harsh winter weather, the Buffalo Lake settlement could not stave off the inevitable; the buffalo hunt finally collapsed totally in 1879. With the buffalo hunt and trade as the main means of support for many Métis in the area, the loss of the buffalo forced households to migrate to other areas in search of better hunting or a new field of opportunity (Doll, et al., 1988: 71-73).

Secondly, greater economic diversification occurred on the northern plains after the sale of Rupert’s Land to the Canadian Government in 1870 (Williams, 1983: 81). With the influx of European settlers to the traditional trapping lands came other industries, such as farming and timber, which drew individuals to work both within and to support them. With mills developing in other areas, and better farmland in other areas, coupled with the decrease in the trade of buffalo hides and meat, many Buffalo Lake Métis became farmers, traders, or laborers in the grist and saw mills (Doll, et al., 1988: 72).
The results on Buffalo Lake were devastating. Once a thriving center, the Buffalo Lake settlement soon emptied; the last recorded date of occupation for the site is listed as 31 July, 1879 in the Codex Historicus de St. Albert. Some minor seasonal occupation did occur until the early 1880's, but did not closely approach the levels seen even in earlier years. Final abandonment of the site finally occurred in 1883, when rising water levels in Buffalo Lake left some cabins in several feet of water. The last chapter of the Buffalo Lake settlement was written in 1910, when forest fires swept the area, destroying all of the free standing structures (Doll, et al.; 5, 73-74; Fryer, 1976: 107). Following the blazes, the land was not developed, and with time returned to it's original parkland vegetation.
Chapter 4: Methods and Materials

The purpose of this thesis is to examine the consumption patterns of earthenware ceramics in order to determine their significance to historic Métis life. This shall be accomplished through the statistical comparison of data obtained from three separate historic archaeological sites: one European and two Métis. These sites are broken down into fourteen separate intra-site proveniences (e.g.: Buffalo Lake Cabin #1, Clerk's Quarters, etc.) in order to examine the different economic contexts from which different ceramic types originate. Using the statistical program SPSS 8.0, these assemblages are compared using two different methods: cluster analysis and factor analysis.

Different ceramic patterns, produced by Spode/Copeland, form the basic units of analysis. This firm is selected, as it was the chief supplier of tableware, under a number of company names, to the Hudson's Bay Company from 1842 to the 1880's (Burley, 1989: 99; Sussman, 1979b: 9; Whiter, 1978: 73). The difference between this analysis and Burley's study is that he only used the raw counts of ceramic sherds from different Métis sites, while I will compare the assemblages of both Métis and European sites. It is believed that by observing pattern variety found at these sites, rather than pattern frequency in relation to sherd counts, that a more accurate portrait of the consumption patterns of the two groups involved will be obtained. As highlighted by Burley, sherd size is problematic in analysis of historic ceramics. It cannot be assumed that, if highly fragmented, one sherd represents one vessel. Numerous cultural and natural transforms can affect the in situ ceramic assemblage, the result being that
the artifact quantities recovered do not fully represent the amount of material that entered the system originally. Thus, by analyzing raw counts of sherds, and using this figure to obtain the minimum number of vessels present, erroneous results may be produced. This problem is alleviated by observing identifiable patterns; unlike vessel form, patterning can be assumed to be a discrete identity, regardless of the number of items the sherds represent.

For this analysis, two Métis and one European site were selected: Buffalo Lake, River Lot #3, and Fort Victoria. These three sites were selected for a number of reasons. First, there is their context, both geographically and historically. All three are located within east central Alberta during the same time period; between 1860 and 1897. By being in the same area, the three sites were also under the influence of the same economic and social factors, which may have had an effect on their occupants. In addition, settlement size was roughly equal. Both Fort Victoria and River Lot #3 were small, comprising only a few cabins, while Buffalo Lake is estimated to be a large site, although only conservatively tested.

Another significant factor in site selection is the amount of information available on each site. All had been surveyed and tested within the past twenty years, with the results being published in the cases of Buffalo Lake and Fort Victoria. Included with these reports are well researched histories of both sites, which provide such essential material as occupation dates and building proveniences. The third site, River Lot #3, was only excavated in 1997 by myself. As of this time of writing, the site report for this work is currently unfinished. Despite this, extensive data on the excavations is
available, in addition to numerous published articles on the history of the area and the tenure of the river lot itself. Indeed, it is possible to trace the ownership of the plot from the original Métis inhabitants to the present owner. Supplementing this is the records of the Hudson's Bay Company, which provide greater detail on the background of the Métis working for the Company.

Availability of information for each site played a large role in its selection for this analysis. To be selected, the cultural affiliation for the site had to be known, as well as the approximate dates of occupation. In addition, proveniences for all Spode/Copeland ceramics had to be known, placing them in distinctive areas within the settlement. The identification of the artifacts was required, as the study is based on the identification of different ceramic patterns.

Geography also played a role in site selection. To be considered, a site had to be near the other sites in the study. By ignoring this, the analysis would lose context, and a new source of error, namely regional differences within the Hudson's Bay Company goods distribution. Also under consideration was the period of occupation for the site. As above, error would be introduced if locales from a wide range of time were compared.

After the three sites were selected, they were divided, where possible, into smaller household units. These proveniences were determined by the structure or structures retrieved artifacts were associated with in situ. At Buffalo Lake, eleven separate cabin sites were found, and are represented in Table 1, with the cabin designation correlating with those found within Doll, Kidd, and Day (1988).
Table 1: Buffalo Lake Cabin Designations

- Buffalo #1-Cabin 3
- Buffalo #2-Cabin 1
- Buffalo #3-Cabin 2
- Buffalo #4-Cabin 4
- Buffalo #5-Cabin 5
- Buffalo #6-Cabin6
- Buffalo #7-Cabin7
- Buffalo #8-Cabins 9&10
- Buffalo #9-Cabin 11
- Buffalo #10-Cabin 12

Table 2: Fort Victoria Provenience Designations

- Clerk's Areas- Clerk's House, Clerk's House Trash Pits
- Men's Areas- Men's House, Men's House Trash Pits
- Common Areas (where both groups had access)- Trade Store, Trade Store Cellar, Press Room, Shed, Dairy, General Midden/Trash Pits, Palisade, Gates, Warehouse, Blacksmith Shop, Privy, General Compound
Cabins 9 and 10 are combined within Buffalo #8, as the ceramics from these locales are a mixed sample. Cabin 8 was not used, due to agricultural disturbance, and a subsequent lack of data. The assemblages from Fort Victoria are divided up along the lines of economic groups. Specifically, the proveniences reflect which class of individual mostly used or inhabited the area. The summary for this data can be found in Table 2.

The third site, River Lot #3, consisted of three separate Métis homesteads on one plot of land. Unfortunately, agricultural development destroyed the original proveniences of the artifacts to the degree that assignments to specific cabins was not possible. For this reason, and the fact that the Métis residents inhabited the lot at the same time period, the material from this location will be treated as one collection.

Spode/Copeland patterns used in this study can be found in Table 3, with the name abbreviations found in the data set given in parentheses. Patterns Broseley and Temple are grouped together, as they share the same border design. In addition, no sherds from the center of the plate, where a motif distinguishing the two, are present. A similar problem arises with patterns Pagoda and Macaw. In this case, however, designs from the center of the plate are available; as no distinctive designs from Macaw were found, the pattern was not included in this study.

These ceramic patterns and proveniences are laid out in a contingency table, with patterns along the X axis and sites along the Y axis. A simple binary system is used to code the data, with a 1 representing the presence of a pattern at a location, and a 0 its absence (Table 4). From this table, multivariate analyses can be performed.
Table 3: Ceramic Patterns and Abbreviations

- Pagoda (pagoda)
- Continental Views (cont)
- Willow (willow)
- Turco (turco)
- Honeysuckle (honey)
- Bramble (bramble)
- Pearls (pearls)
- Coronal (coronal)
- Shamrock (shamrock)
- Pergola (pergola)
- Thistle (thistle)
- Sardinia (sardinia)
- Beverley (beverley)
- Pekin (pekin)
- Strawberry (strawby)
- Passion Flower (pflower)
- Warwick Groups (warwickg)
- B700 (b700)
- Ivy (ivy)
- Tuscan (tuscan)
- Flower Vase (fvase)
- B772 (b772)
- Ruins (ruins)
- Rural Scenes (rscenes)
- Grapevine (gpvine)
- Osborne (osborne)
- British Flowers (bflower)
- Broseley/ Temple (brostemp)
- India Tree (itree)
- Roman Beads (rbeads)
- Violet (violet)
- Meander (meander)
- Alhambra (alhambra)
- Corinthian (corin)
- Seasons (seasons)
- Gem (gem)
The first quantitative operation I performed on this data set is a cluster analysis. A Q-mode analysis, it is typically used to group assemblages, or objects, on the basis of the common possession of attributes; in this case, the different ceramic patterns (Bailey, 1994: 38). Table 4 presents the data entered for analysis. A coefficient of dissimilarity was used to express the degree to which the ceramic assemblages resemble one another. Table 5 shows the dissimilarity coefficients for each possible pair of assemblages with a larger number signifying a greater dissimilarity.

The cluster analysis program searches the dissimilarity coefficients for the most similar assemblages, or the pair with the lowest coefficient. In this case, it is numbers 6 (Buffalo Lake #5) and 8 (Buffalo Lake #7), with the lowest coefficient of 1.00. These two are grouped into a single class; following this, the program selects the next lowest coefficient. In my case, this would be numbers 6 (Buffalo Lake #5 and #7) and eleven (Buffalo Lake # 10). The program continues until all assemblages have been grouped (Table 6), with the results presented graphically in a dendrogram (Figure 5).

Also performed on the data set is a factor analysis. Used as a Q-mode analysis, it seeks patterns of covariance between assemblages. In my case, it assigned each site, on the basis of covariance in the material present within it, into separate groups, or factors. Table 7 presents the factor loadings for each assemblage on each of the factors, or components. The factor loadings can be interpreted as the degree to which each assemblage is related with every factor. Table 8 presents the total variance explained by the factors determined by SPSS. The importance each factor plays in explaining the amount of variation present within the data set is depicted through how high the
<table>
<thead>
<tr>
<th>Site</th>
<th>warwick</th>
<th>b700</th>
<th>ivy</th>
<th>tuscan</th>
<th>fvaser</th>
<th>b772</th>
<th>ruins</th>
<th>rscenesc</th>
<th>gwpine</th>
<th>osborne</th>
<th>bflower</th>
<th>brostem</th>
<th>tree</th>
<th>beads</th>
<th>violet</th>
<th>meander</th>
<th>alhambra</th>
</tr>
</thead>
<tbody>
<tr>
<td>RL#3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Buf#2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#3</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Buf#4</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Buf#8</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Buf#9</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>V-ma</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>V-ga</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>V-ca</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 4: Site/Ceramic Data Matrix
<table>
<thead>
<tr>
<th>Site</th>
<th>pagoda</th>
<th>cont</th>
<th>willow</th>
<th>turco</th>
<th>honey</th>
<th>bramble</th>
<th>pearls</th>
<th>coronal</th>
<th>shamrock</th>
<th>pergola</th>
<th>thistle</th>
<th>sardinia</th>
<th>beverley</th>
<th>pekin</th>
<th>strawby</th>
<th>pflower</th>
</tr>
</thead>
<tbody>
<tr>
<td>RL#3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Buf#1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#4</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#5</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#6</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#7</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#8</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#9</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>V-ma</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>V-ga</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>V-ca</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Site</th>
<th>corin</th>
<th>seasons</th>
<th>germ</th>
</tr>
</thead>
<tbody>
<tr>
<td>RL#3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#6</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#7</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#8</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#9</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Buf#10</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>V-ma</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>V-ga</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>V-ca</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 4 Continued
This is a dissimilarity matrix

Table 5: Cluster Analysis Results with Dissimilarity Coefficients
### Proximity Matrix

<table>
<thead>
<tr>
<th>Case</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>23.000</td>
<td>24.000</td>
<td>27.000</td>
<td>15.000</td>
<td>9.000</td>
<td>12.000</td>
</tr>
<tr>
<td>2</td>
<td>8.000</td>
<td>5.000</td>
<td>6.000</td>
<td>16.000</td>
<td>18.000</td>
<td>17.000</td>
</tr>
<tr>
<td>3</td>
<td>11.000</td>
<td>6.000</td>
<td>5.000</td>
<td>15.000</td>
<td>19.000</td>
<td>18.000</td>
</tr>
<tr>
<td>4</td>
<td>9.000</td>
<td>4.000</td>
<td>5.000</td>
<td>15.000</td>
<td>19.000</td>
<td>16.000</td>
</tr>
<tr>
<td>5</td>
<td>8.000</td>
<td>3.000</td>
<td>4.000</td>
<td>16.000</td>
<td>18.000</td>
<td>17.000</td>
</tr>
<tr>
<td>6</td>
<td>8.000</td>
<td>3.000</td>
<td>2.000</td>
<td>16.000</td>
<td>20.000</td>
<td>17.000</td>
</tr>
<tr>
<td>7</td>
<td>109.000</td>
<td>106.000</td>
<td>107.000</td>
<td>91.000</td>
<td>95.000</td>
<td>96.000</td>
</tr>
<tr>
<td>8</td>
<td>9.000</td>
<td>4.000</td>
<td>3.000</td>
<td>17.000</td>
<td>21.000</td>
<td>18.000</td>
</tr>
<tr>
<td>9</td>
<td>7.000</td>
<td>10.000</td>
<td>14.000</td>
<td>18.000</td>
<td>17.000</td>
<td>19.000</td>
</tr>
<tr>
<td>10</td>
<td>7.000</td>
<td>3.000</td>
<td>15.000</td>
<td>19.000</td>
<td>16.000</td>
<td>19.000</td>
</tr>
<tr>
<td>11</td>
<td>10.000</td>
<td>3.000</td>
<td>18.000</td>
<td>22.000</td>
<td>19.000</td>
<td>19.000</td>
</tr>
<tr>
<td>12</td>
<td>14.000</td>
<td>15.000</td>
<td>18.000</td>
<td>8.000</td>
<td>7.000</td>
<td>19.000</td>
</tr>
<tr>
<td>13</td>
<td>18.000</td>
<td>19.000</td>
<td>22.000</td>
<td>8.000</td>
<td>9.000</td>
<td>19.000</td>
</tr>
<tr>
<td>14</td>
<td>17.000</td>
<td>16.000</td>
<td>19.000</td>
<td>7.000</td>
<td>9.000</td>
<td>19.000</td>
</tr>
</tbody>
</table>

This is a dissimilarity matrix

### Table 5 Continued

<table>
<thead>
<tr>
<th>Stage</th>
<th>Cluster Combined</th>
<th>Coefficients</th>
<th>Stage Cluster First Appears</th>
<th>Next Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cluster 1</td>
<td>Cluster 2</td>
<td></td>
<td>Cluster 1</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>8</td>
<td>1.000</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>11</td>
<td>2.500</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>10</td>
<td>3.000</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>6</td>
<td>3.833</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>5</td>
<td>4.600</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>4</td>
<td>5.833</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>3</td>
<td>6.286</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>12</td>
<td>14</td>
<td>7.000</td>
<td>0</td>
</tr>
<tr>
<td>9</td>
<td>12</td>
<td>13</td>
<td>8.500</td>
<td>8</td>
</tr>
<tr>
<td>10</td>
<td>2</td>
<td>9</td>
<td>8.750</td>
<td>7</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>12</td>
<td>12.000</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>2</td>
<td>19.111</td>
<td>11</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>7</td>
<td>100.538</td>
<td>12</td>
</tr>
</tbody>
</table>

Table 6: Cluster Analysis Agglomeration Schedule
Figure 5: Dendrogram of Cluster Analysis Results
**Factor Matrix**

<table>
<thead>
<tr>
<th>Factor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAR001</td>
<td>.481</td>
<td>-.165</td>
<td>-.337</td>
<td>-.213</td>
<td>-.176</td>
<td>-.498</td>
</tr>
<tr>
<td>VAR002</td>
<td>.454</td>
<td>.261</td>
<td>482</td>
<td>.322</td>
<td>.408</td>
<td>-4.619E-02</td>
</tr>
<tr>
<td>VAR003</td>
<td>.284</td>
<td>.305</td>
<td>-.362</td>
<td>.641</td>
<td>.291</td>
<td>-.214</td>
</tr>
<tr>
<td>VAR004</td>
<td>.302</td>
<td>.313</td>
<td>122</td>
<td>-4.418E-02</td>
<td>.809</td>
<td>228</td>
</tr>
<tr>
<td>VAR005</td>
<td>464</td>
<td>-5.162E-02</td>
<td>.599</td>
<td>.177</td>
<td>-8.939E-02</td>
<td>.222</td>
</tr>
<tr>
<td>VAR006</td>
<td>145</td>
<td>.809</td>
<td>-.197</td>
<td>.200</td>
<td>-.380</td>
<td>8.666E-03</td>
</tr>
<tr>
<td>VAR007</td>
<td>.664</td>
<td>-.336</td>
<td>-.162</td>
<td>471</td>
<td>1.673E-02</td>
<td>105</td>
</tr>
<tr>
<td>VAR008</td>
<td>-2.186E-02</td>
<td>.864</td>
<td>-7.591E-02</td>
<td>.269</td>
<td>7.223E-03</td>
<td>-159</td>
</tr>
<tr>
<td>VAR009</td>
<td>.463</td>
<td>.337</td>
<td>495</td>
<td>.263</td>
<td>-4.865E-02</td>
<td>6.519E-02</td>
</tr>
<tr>
<td>VAR010</td>
<td>.538</td>
<td>6.148E-02</td>
<td>.495</td>
<td>-.213</td>
<td>.231</td>
<td>4.734E-02</td>
</tr>
<tr>
<td>VAR011</td>
<td>.324</td>
<td>-3.865E-02</td>
<td>.217</td>
<td>198</td>
<td>163</td>
<td>573</td>
</tr>
<tr>
<td>VAR012</td>
<td>.704</td>
<td>8.676E-02</td>
<td>-.303</td>
<td>-3.907E-02</td>
<td>105</td>
<td>442</td>
</tr>
<tr>
<td>VAR013</td>
<td>.672</td>
<td>-5.416E-03</td>
<td>-.231</td>
<td>-.199</td>
<td>-.143</td>
<td>173</td>
</tr>
<tr>
<td>VAR014</td>
<td>.612</td>
<td>-.337</td>
<td>-.312</td>
<td>-.406</td>
<td>3.201E-03</td>
<td>198</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

a. 6 components extracted.

**Table 7: Factor Analysis Results**

**Total Variance Explained**

<table>
<thead>
<tr>
<th>Component</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
</tr>
<tr>
<td>1</td>
<td>3.218</td>
<td>22.986</td>
</tr>
<tr>
<td>2</td>
<td>1.947</td>
<td>13.908</td>
</tr>
<tr>
<td>3</td>
<td>1.703</td>
<td>12.163</td>
</tr>
<tr>
<td>4</td>
<td>1.287</td>
<td>9.192</td>
</tr>
<tr>
<td>5</td>
<td>1.202</td>
<td>8.584</td>
</tr>
<tr>
<td>6</td>
<td>1.033</td>
<td>7.377</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

**Table 8: Factor Analysis Eigenvalues**
eigenvalue is. As a general rule of thumb, any value below 1.0 can be seen to be not relevant in determining the degree of explained variance.

These two particular analyses are selected due to their ability to compare and contrast the different archaeological assemblages. One particular method was not more weight than the other. By adopting only one method, the chance for links between the sites being obscured by formation processes and other factors increases. In the same light, by using two separate tests, a greater foundation for the acceptance of any positive results, or a null hypothesis, is provided.

For this study, a positive result will be obtained if a link between Métis and European ceramic assemblages can be found in the statistical data. A null hypothesis would be found if the quantitative data does not show any non-random relationship between Métis and European ceramic collections.
Chapter 5. Statistical Results and Conclusions

Based on these two statistical operations, what can be said about Métis ceramic consumption, in comparison with that found at comparable European sites? From the results of both types of multivariate analysis, we can see distinct patterns occurring in the distribution of ceramics between the separate proveniences. The first evidence of a pattern emerging can be found within the results from the cluster analysis, in the form of the agglomeration schedule and resulting dendrogram (Table 6 and Figure 4). From these results, it appears that the provenience correlations break down not along ethnic lines, but on the basis of which site they originated from. By following the agglomeration schedule, we see that the three sites do not have any similarity until the twelfth stage, where Fort Victoria and River Lot #3 cluster together. Due to such a low stage position, this correlation cannot by itself be seen as evidence of similar behavior between Europeans and Métis. The distribution, however, does point towards a distinct patterning in the archaeological record: the effect which occupation duration has on artifact assemblages.

Numerous works (Pyszczyk 1983, 1989; etc.) on the formation of archaeological sites have brought to light how the occupation period affects what material is found at an archaeological site. In this case, the affected factor is the variability which exists within a class of artifacts. By comparing the artifacts from sites of the same ethnic group and time period, it has been shown that variability within one class of artifacts increases with time; thus, a site occupied for fifteen years will have a greater stylistic
variation within one artifact class than a site only occupied for five years. By adopting this perspective, we can see that the results from the cluster analysis fall into context. Of the three sites, Fort Victoria was occupied for the longest period, followed by River Lot #3 and Buffalo Lake. Placed up in comparison with the number of different patterns found at each site, we see that variation increases with the length of time a group stays at one particular location (Table 9). A model for this behavior can be found in an unpublished paper by Pyszczyk, who did research into variability with fur trade posts, including Fort Victoria, from the period looked at here (Pyszczyk, n.d.b.: 8 - 9). His regression analysis clearly shows the effect on variability which occupation period has (Figure 6). By using the analysis as a model, and plotting the two Métis sites on the chart, we see that this trend is not upset (Figure 7). In this figure, it should be noted that Buffalo Lake is illustrated twice (A and B in Figure 6) to display the seasonal occupation of the site; although in use for ten years, the potential exists that it may only have been in use for half of that time in respect to actual calendar days. River Lot #3 is displayed as C in Figure 6, with an occupation period of 20 years.

With this established, it now appears that these results tell us nothing of Métis ceramic consumption; all that is provided is more data on the formation of archaeological sites. However, before dismissing this analysis as useless to our cause, we must first look at the context of the studies from which we have derived the above conclusion. In these works, a distinct assumption is being made with regards to the material culture that was selected for analysis: the goods were deemed significant enough to the group that they were collected in sufficient quantities over a long period of time to become apparent in the archaeological record. In the analysis mentioned above, all of the sites viewed were
Table 9: Site Occupation Periods and Pattern Counts

<table>
<thead>
<tr>
<th>Site</th>
<th>Occupation Period</th>
<th>Number of Patterns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fort Victoria</td>
<td>34</td>
<td>27</td>
</tr>
<tr>
<td>Buffalo Lake</td>
<td>10</td>
<td>18</td>
</tr>
<tr>
<td>River Lot #3</td>
<td>20</td>
<td>26</td>
</tr>
</tbody>
</table>

Table 10: French Canadian/Orkneyman Artifact Comparison

<table>
<thead>
<tr>
<th>Article</th>
<th>French Canadian</th>
<th>Orkneyman</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gunparts</td>
<td>Present</td>
<td>Absent</td>
</tr>
<tr>
<td>Punch</td>
<td>Present</td>
<td>Absent</td>
</tr>
<tr>
<td>Bone Gaming Pieces</td>
<td>Present</td>
<td>Absent</td>
</tr>
<tr>
<td>Stone Pipes</td>
<td>Present</td>
<td>Absent</td>
</tr>
<tr>
<td>Silver Pendant</td>
<td>Present</td>
<td>Absent</td>
</tr>
<tr>
<td>Straight Razor</td>
<td>Present</td>
<td>Absent</td>
</tr>
<tr>
<td>Mirrors</td>
<td>Present</td>
<td>Absent</td>
</tr>
<tr>
<td>Combs</td>
<td>Present</td>
<td>Absent</td>
</tr>
<tr>
<td>Turlington's Balsam of Life</td>
<td>Present</td>
<td>Absent</td>
</tr>
<tr>
<td>Silver Crosses</td>
<td>Present</td>
<td>Absent</td>
</tr>
<tr>
<td>Cowrie Shells</td>
<td>Present</td>
<td>Absent</td>
</tr>
<tr>
<td>Bone Harpoon</td>
<td>Present</td>
<td>Absent</td>
</tr>
<tr>
<td>Bone Awls</td>
<td>Present</td>
<td>Absent</td>
</tr>
<tr>
<td>Worked Antler/Bone</td>
<td>Present</td>
<td>Absent</td>
</tr>
</tbody>
</table>


Table 11: Factor Summary

Factor 1: River Lot #3, Buffalo Lake Cabins 6 and 11, Fort Victoria men's areas, general areas, and clerk's areas
Factor 2: Buffalo Lake Cabins 5 and 7
Factor 3: Buffalo Lake Cabins 3, 4, and 9/10
Factor 4: Buffalo Lake Cabin 1
Factor 5: Buffalo Lake Cabin 2
Factor 6: Buffalo Lake Cabin 12
Figure 6: Comparison of Fort Occupation vs. Pattern Variability

From *Factors Governing Archaeological Assemblage Diversity*; Heinz Pyszczyk; Unpublished Manuscript on File, Provincial Museum of Alberta, Edmonton, Alberta
Figure 7: Comparison of Fort Occupation vs Pattern Variability Including Buffalo Lake and Victoria River Lot #3

\[ y = 7.514 + 0.463x \quad r = 0.91 \]
of European origin. Knowing this, why would two Métis sites fit the constructed pattern? Is there a correlation between the acquisition practices of Europeans and Métis, or does the habitation period of a site transcend the effect which ethnicity has on the archaeological record? To test this question, we must examine other examples of non-native material being found with Fur Trade period cultural groups.

For this analysis, data on different artifact frequencies among Hudson's Bay and North West Company posts, found in Pyszczyk's 1989 paper will be used (Table 10). Due to the hiring practices of the two companies, ethnic boundaries can be drawn, with the Hudson's Bay posts representing Scottish Orkneymen, and the North West Company posts French Canadians and some Natives (Pyszczyk, 1989: 220 - 221). With respect to occupation periods, the HBC post, Fort Victoria, was inhabited for 34 years, while the NWC post, Buckingham House, operated for 8 years (Nicks, 1969: 16 - 26; Pyszczyk, n.d.b.: 36). From the data in Table 10, we can see that any type of statistical analysis in this case would be unnecessary, due to the complete absence of the listed material from Fort Victoria, despite the extended period of time it was occupied in comparison with Buckingham House. This disparity in goods then can be seen as not a function of how long a group was situated at a site, but which group or groups occupied the site. Artifact types, such as bone tools, shells, and stone pipes are absent from Fort Victoria, as these items did not have any role or significance in the Orkney way of life; the origins for these items arise from the Native employees who worked along with the French Canadians at Buckingham House. Similarly, the presence of crosses at Buckingham House can be explained by the religious practices of each cultural group examined. These items play a more significant role among the Roman Catholic French and converted
Native workers of the NWC than they would among the Anglican or Protestant employes of the HBC (Pyszczyk, 1989: 231 - 232). In this case, it would not matter how long one site was occupied in comparison with another: if the group using the site had no perceived need for an item, it would appear less frequently than at a site occupied for less by a different group who saw the item as essential.

With this issue addressed, we can now view the cluster analysis in a new light. The two Métis sites reflect this European habitation period model because of the parity in ceramic acquisition between the two cultural groups. This fit into the model can be seen through calculating the Standard Deviation (s.d.=11.76) for the regression line, and comparing these figures with those of the Métis ceramic counts (Figure 6). Even in the case of the possible five year occupation at Buffalo Lake, all three figures fall within the first Standard Deviation; as the distribution of measurements is not mound-shaped, Chebyshev's Rule for the interpretation of a Standard Deviation must be used. It states that it is possible that very few measurements will fall within one Standard Deviation, but at least three quarters will fall within two, and eight ninths within three (McClave and Dietrich II, 1992: 61). As all but one of the European sites also fall within one Standard Deviation, we can view the Métis sites as being very similar to them in terms of content and the behavioral processes which occurred in creating them.

Supporting evidence for the above findings are discovered in the results from the factor analysis. Like the above, each provenience is assigned to groups, but differs in that each provenience retains it's own correlation coefficient to other groups; a new figure is not calculated based upon the other members of the groupings. The data for this analysis can
be found in Table 7, with a summary of each respective factor found in Table 11.

From this information, a definite trend can be found. Of the fourteen proveniences, six are found in Factor One, with another two being significant, based upon their highest values in other Factors. The remaining eight proveniences are split among the other five Factors, none of which number more than three members. The importance of this data, in light of the results from the cluster analysis, lies in which groups were placed together. If the ceramic variation present was due to occupation length, it would be expected that the proveniences would be grouped on the basis of the sites they came from. In this fashion, Buffalo Lake would be separate from both Fort Victoria and River Lot #3, as the latter two sites were occupied for similar durations. However, this is not the case.

Within Factor One, a mix of proveniences from all three sites are found. In addition to River Lot #3, and all three proveniences from Fort Victoria, are Buffalo Lake Cabins #6 and 11. In addition, Cabins 3 and 9/10 show a high degree of correlation with Factor One, although grouped in another Factor. In the case of Cabins 9/10, this can be seen as the result of the two household assemblages being mixed; it does not, however, explain the trend displayed by the other three cabin sites. Nor can it be explained by the occupation period, as all of the cabins at Buffalo Lake were occupied for roughly the same period. One factor which would appear to be significant is the quantity of an artifact versus its variability. It has been shown that the larger a collection of artifacts, the greater the variability present (Pyszczyk, n.d.b.: 12 - 13). However, this linear relationship has within it the same assumption as the one regarding variability and
occupation length: it is only applicable when speaking of an artifact type that is deemed essential to the group, and is collected with enough regularity for this pattern to be evident. In comparing the artifact frequencies between Buffalo Lake and the two Victoria sites, this linear relationship also holds true, with the hivernant Métis sites producing at most just over one hundred sherds, and the river lot Métis and European sites hundreds of transfer printed sherds. Given that Buffalo Lake was used one fifth of the time that the other two sites were, a deficiency in sherd frequencies can be expected. Also contributing to a degree is the semi nomadic nature of the hivernants, as seen by Ross; travelling with their dishware, the chance for breakage and disposal along the cart trail is high. As a result, what is viewed at Buffalo Lake can be seen as the remains of winter occupations. Given time, I hypothesize that the sherd frequency, and pattern variability, would have increased if Buffalo Lake was occupied for a longer duration of time.

From this evidence, I believe that the original hypothesis of this thesis has held true. By taking into account both the cultural and natural transforms inacted on the ceramic assemblages, a correlation can be found between Métis and European ceramic acquisition patterns. As there is consistency between the results from the two statistical examinations, the null hypothesis can be discounted. Despite cultural differences, and the uni-ethnic origins of Spode/Copeland transfer printed wares, Métis on the Canadian Plains saw their acquisition significant enough to acquire dishwares with a frequency which matched the European traders from which the items originated.
Chapter 6: Thesis Contingencies

Despite the fact that a strong case is presented for intensive Métis ceramic consumption and use, there are still several potential sources for error. The purpose for this chapter is to address these issues and put them to rest. The first issue to be addressed is that of site content, and the possibility for material from other ethnic groups contaminating the two Métis sites used in this study. Of the two Métis proveniences, River Lot #3 presents the most difficulties. Although much is known of the site, the area has been greatly disturbed for almost the past century by farming activities. The assemblage for this site was acquired through both archaeological investigations, as well as the private collection of the landowner. Of the two sources, the provenience for the private collection could not be exactly determined; the possibility that material not associated with the Métis entered the collection. To minimize this risk, the analysis was limited to Spode transfer printed earthenwares, on which there is a great deal of research (Copeland, 1980; Hamilton, 1982; Sussman, 1979b; Whiter, 1978). By narrowing the research focus to these items, tighter controls on the time span examined could also be obtained, as the main source of these items in the area was Fort Victoria, which closed in 1897; any Spode material present at sites within the area would have had to be purchased previous to this date.

In addition, information is available on the collection techniques which indicates that the material gathered originated from the plowed areas where the formal surveys took place, and not from other areas of the property. Interviews with the current landowner, who
gathered information from the previous landowner who performed the collecting, shows that specimens were retrieved after each rainfall or plowing. This would suggest that collection took place in disturbed areas, such as the field, and not in the area of personal residence, which is grassed in and landscaped. With this information, the chance of contamination decreases. Also decreasing this risk is the examination of only pattern styles, and not the frequency of sherds. By concentrating on the presence or absence of a particular fashion of ceramic, the risk of material left by later inhabitants skewing results is virtually eliminated; regardless of how many sherds of Métis origin are present, all data will be given equal weighting in the final analysis, since artifact quantity does not play a role in determining significance.

A similar problem of cultural contamination arises at Buffalo Lake, despite the fact that the site is quite well preserved. Present at the settlement was a Catholic mission, which was established in a preexisting structure (Doll, et al., 1988: 20). Run by a European missionary, this religious presence brings forth the possibility that one of the cabins used in this study was not occupied by a Métis hivernant. The chance for this, however, is slim. Out of the ten different proveniences used from Buffalo Lake, only Cabin 3 possessed any religious material, in the form of a rosary and a medal. If this structure was the chapel, a greater variety and frequency of religiously associated artifacts would be expected, such as altar furnishings. In addition, stone tools were found in abundance at the location, as well as faunal remains with butchering patterns similar to that associated with the Métis (Doll, et al., 1988: 115 - 119; Kooeyman, 1988: 346 - 349). Given this information, the assumed size of the settlement, and the conclusions on the part of the principal investigators of the site that the chapel is still unidentified, we
can assume with a great deal of certainty that all of the cabin sites are of Métis origin.

Another potential source of error is the misidentification of ceramic patterns. Although possible in all three sites, the chance of this happening occurs most with Fort Victoria, due to the time period when it was investigated. Prior to the publication of Lynn Sussman's *Spode/Copeland and Transfer-Printed Patterns Found at 20 Hudson's Bay Company Sites* in 1979, hardly any information was available to assist in identifying specific Spode patterns. Instead, each pattern was broken down and described by its individual elements (see Sussman, 1979a). As such, the descriptions of ceramics from Fort Victoria, excavated between 1974 and 1978 (see Losey, 1977a, 1977b, 1977c; Forsman, 1985), are at times ambiguous, and change from site report to site report. Identification of specific patterns is accomplished by examining these descriptions in relation with the photographs provided with each report. Although not as efficient as handling the actual material, this method did prove successful for the bulk of the material. To further reduce error, specific proveniences, such as the palisade and men's quarters, are grouped together by which class of individual most frequented them. By doing so, the risk of altering the results of the analysis through missing a particular pattern at a particular provenience will be eliminated, as the identification of the pattern at another provenience in the group will account for its positive reading in the group statistics.

Lastly, there is the issue of the other types of ceramics found at each site. Not all of the collection consisted of Spode earthenwares; other types, such as stonewares, Portneuf sponge printed earthenware, and non-Spode transfer printed ware was found. Their
exclusion from this study stems from two different factors: first, there is their representation in the collections. Although present, these items make up the minority of the ceramics found. Secondly, there is the lack of information currently available on the makers and proveniences of these materials. Unlike the Spode patterns, few, if any, pattern books, historical references, or records of the dishware's use in the fur trade exist. As mentioned above, it is only recently that in depth research into the identification and use of ceramics in the fur trade, and the role they played in Métis society, has developed. In addition, some of the material, such as the undecorated earthenware and stoneware, would be impossible to define with regards to this study. Given the limited quantity and variability of these ceramics, their exclusion from this work would produce a negligible change in the results presented here; despite this fact, further work resulting in their inclusion in a study such as this will only add to the present volume of information currently available on the Métis.
References Cited

Baily, Kenneth
1994 *Typologies and Taxonomies: An Introduction to Classification Techniques*;
Series: Quantitative Approaches in the Social Sciences #102, Sage Publications

Brown, Jennifer
1980 *Strangers in Blood*; University of British Columbia Press

Burley, David

Burley, David, Gayel Horsfall, and John Brandon
1992 *Structural Considerations of Métis Ethnicity*; University of South Dakota Press

Campbell, Marjorie Wilkins
1983 *The North West Company*; Douglas and McIntyre

Copeland, Robert
1980 *Spode’s Willow Pattern and Other Designs After the Chinese*; Studio
Vista/Christie's, London

Cowie, Isaac

1913 *The Company of Adventurers*; William Briggs, Toronto

Doll, Maurice, Robert Kidd, and John Day

1988 *The Buffalo Lake Métis Site: A Late Nineteenth Century Settlement in the Parkland of Central Alberta*; Provincial Museum of Alberta, Human History Occasional Paper No.4

Doyle, W. Brian

1988 *The Victoria (Pakan) River Lot Settlement Survey*; Unpublished manuscript, Alberta Land Surveyors' Association

Edmonton Bulletin

1881 10 January Edition

Forsman, Michael R.A.


1985 *The Archaeology of Victoria Post 1864-1897*: Archaeological Survey of Alberta, Manuscript Series No.6
Foster, John


Fryer, Harold

1976 *Ghost Towns of Alberta*; Stagecoach Publishing Company Ltd., Langley, British Columbia

Geiger, John


Giraud, Marcel

1986a *The Métis in the Canadian West, Volume 1*; Translated by George Woodcock; The University of Alberta Press

1986b *The Métis in the Canadian West, Volume 2*; Translated by George Woodcock; The University of Alberta Press

Hamilton, Jennifer F. A.

1982 *Ceramics Destined for York Factory: An Examination of Hudson's Bay*
Company Archival Sources; Material History Bulletin, 16:47 - 68

Hamilton, Scott

1985 The Social Organization of the Hudson's Bay Company: The Brandon House Case, Status, Structure, and Stratification: Current Archaeological Reconstructions; M. Thompson, M. T. Garcia, and F. Kense, editors, pp. 379 - 386; The Archaological Association of the University of Calgary

Harrison, Julia D.

1985 Metis; The Glenbow-Alberta Institute, in association with Douglas & McIntyre

Howard, Joseph Kinsey

1994 Strange Empire; Minnesota Historical Society Press

Hudson's Bay Archives

a Manuscript Reference #A.16/32,fo.134 in Hudson's Bay Company Archives, Provincial Archives of Manitoba, Winnipeg, Canada

b Manuscript Reference #A.16-33,fo.46 in Hudson's Bay Company Archives, Provincial Archives of Manitoba, Winnipeg, Canada

c Manuscript Reference #A.30/1-3 in Hudson's Bay Company Archives, Provincial Archives of Manitoba, Winnipeg, Canada

d Manuscript Reference #A.32/1,fo.90,156 in Hudson's Bay Company Archives, Provincial Archives of Manitoba, Winnipeg, Canada
Manuscript Reference #A.32/4, fo.148 in Hudson's Bay Company Archives, Provincial Archives of Manitoba, Winnipeg, Canada

Manuscript Reference #B.24/a/3, fo.1 in Hudson's Bay Company Archives, Provincial Archives of Manitoba, Winnipeg, Canada

Manuscript Reference #A.16/34, fo.32 in Hudson's Bay Company Archives, Provincial Archives of Manitoba, Winnipeg, Canada

Manuscript Reference #A.16/35, fo.32 in Hudson's Bay Company Archives, Provincial Archives of Manitoba, Winnipeg, Canada

Manuscript Reference #A.16/15, fo.49 in Hudson's Bay Company Archives, Provincial Archives of Manitoba, Winnipeg, Canada

Manuscript Reference #A.30/15 #266 in Hudson's Bay Company Archives, Provincial Archives of Manitoba, Winnipeg, Canada

Manuscript Reference #B.239/g/4 in Hudson's Bay Company Archives, Provincial Archives of Manitoba, Winnipeg, Canada

Manuscript Reference #E.4/1a, fo.137d in Hudson's Bay Company Archives, Provincial Archives of Manitoba, Winnipeg, Canada

Manuscript Reference #E.4/1a, fo.66d in Hudson's Bay Company Archives, Provincial Archives of Manitoba, Winnipeg, Canada

Manuscript Reference #B.239/u/2,#645 in Hudson's Bay Company Archives, Provincial Archives of Manitoba, Winnipeg, Canada

Manuscript Reference #B.239/u/3,#606 in Hudson's Bay Company Archives, Provincial Archives of Manitoba, Winnipeg, Canada

Manuscript Reference #D.25/17, fo.321 in Hudson's Bay Company Archives, Provincial Archives of Manitoba, Winnipeg, Canada
Hurt, Leslie J.

1979 *The Victoria Settlement: 1862-1922;* Historic Site Services of Alberta, Occasional Paper No.7

Innis, Harold A.

1970 *The Fur Trade in Canada;* University of Toronto Press

Ironside, R.G. and E. Tomasky

1976 *Agriculture and River Lot Settlement in Western Canada: The Case of Pakan (Victoria), Alberta,* Prairie Forum; (1)1, pp. 3-18

Jackson, John C.

1996 *Children of the Fur Trade;* Mountain Press Publishing Company

Jones, Siân

1997 *The Archaeology of Ethnicity;* Routledge

Kane, Paul

1971 *Wanderings of an Artist among the Indians of North America, Paul Kane's Frontier,* J Russell Harper, editor; University of Texas Press, pp. 51 - 157

Kooeyman, Brian

1988 *Faunal Remains at the Buffalo Lake Metis Site, The Buffalo Lake Métis*
Site: A Late Nineteenth Century Settlement in the Parkland of Central Alberta;
Provincial Museum of Alberta, Human History Occasional Paper No.4, pp. 341 -357

Losey, Timothy

1977a Archaeological Investigations: Fort Victoria, 1974; Historic Site Services of Alberta, Occasional Paper No.2

1977b Archaeological Investigations: Fort Victoria, 1975; Historic Site Services of Alberta, Occasional Paper No.3

1977c 1976 Archaeological Investigations at Fort Victoria, Alberta: A Preliminary Report; Manuscript on file, Historic Site Services of Alberta

McClave, James and Frank Dietrich II

1992 A First Course in Statistics; Dellan/MacMillan, New York

McDougall, John

1896 Saddle, Sled, and Snowshoe; William Briggs, Toronto

Melnycky, Peter

1997 A Veritable Canaan: Alberta's Victoria Settlement; Friends of the Fort Victoria Historical Society, Edmonton

Newman, Peter C.

1987 Caesars of the Wilderness, Volume II; Viking

1995 An Illustrated History of the Hudson's Bay Company; Viking Studio/Madison
Nicks, Gertrude

1969 *The Archaeology of Two Hudson's Bay Posts: Buckingham House (1792 - 1800) and Edmonton House III (1810 - 1813)*: Thesis on file, Department of Anthropology, University of Alberta

Peterson, Jacqueline


Prager, Gabriella


Pyszczyk, Heinz

n.d.b. Factors Governing Archaeological Assemblage Diversity: Dealing With Variable Ecological/Settlement Parameters and Diversity Measures; Unpublished Manuscript, Provincial Museum of Alberta, Department of Community Development

1983 Site Occupation Length as a Factor in Artifact Assemblage Variability and Frequency; Archaeology in Alberta 1983, compiled by David Burley; Archaeological Survey of Alberta Occasional Paper No. 23, pp. 60 - 76

1985 The Role of Material Culture in the Structure of the Fur Trade, Status, Structure, and Stratification: Current Archaeological Reconstructions, M. Thompson, M.T. Garcia, and F. Kense, editors, pp. 399 - 406; The Archaeological Association of the University of Calgary

1989 Consumption and Ethnicity: An Example from the Fur Trade in Western Canada, Journal of Anthropological Archaeology; 8, pp. 213 - 249

Rasky, Frank

1967 The Taming of the Canadian West; McClelland and Stewart Limited

Robinson, H.M.

1879 The Great Fur Land; G.P. Putnam's Sons, New York

Ross, Alexander

1924 The Fur Hunters of the Far West; The Lakeside Press, Chicago

1957 The Red River Settlement: It's Rise, Progress, and Present State; Ross and Haines Inc., Minneapolis
Schiffer, Michael
1991 *Formation Processes of the Archaeological Record*; University of New Mexico Press

Sprague, D.N., and R.P. Frye

Steele, Samuel Benfield
1915 *Forty Years in Canada*; Dodd, Mead & Company, New York

Sussman, Lynne
1979a *The Ceramics of Lower Fort Garry: Operations 1 to 31*; National Historic Parks and Sites Branch History and Archaeology Paper 24

1979b *Spode/Copeland and Transfer-Printed Patterns Found at 20 Hudson's Bay Company Sites*; Canadian Historic Sites Occasional Papers in Archaeology and History No.22, Parks Canada, Ottawa

Van Kirk, Sylvia
1980 *Many Tender Ties: Women in Fur Trade Society, 1670-1870*; Watson and Dwyer, Winnipeg
Whiter, Leonard


Williams, Glyndwr


Zinovich, Jordan

1992 *Battling the Bay*; Lone Pine Publishing