The effects of the fur trade on aboriginal households in the middle Fraser region of British Columbia

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THE EFFECTS OF THE FUR TRADE ON ABORIGINAL HOUSEHOLDS IN THE MIDDLE FRASER REGION OF BRITISH COLUMBIA

By

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Dissertation

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ABSTRACT

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The Effects of the Fur Trade on Aboriginal Households in the Middle Fraser Region of British Columbia

Chairperson: Dr. Anna Marie Prentiss

Ethnographic literature of First Nations groups in the Middle Fraser region of British Columbia describe communities that were hierarchically organized with elite, commoner, and slave classes, underwritten by elite ownership of keystone resources, and perpetuated by competitive feasting events used to maintain debt relations, unequal distribution of food and raw materials, and possibly elite control over trade networks. Narratives of the ethnographic present are commonly utilized to describe cultural patterns of the deeper past, despite the fact that we lack knowledge of the effects of European colonialism and the role it may have had in shaping the socioeconomic and political organizations described by early ethnographers. Utilizing household and agency-based theoretical approaches, this study evaluates the effects of the fur trade on aboriginal households in the Mid-Fraser. Ethnographic data are utilized, not as direct interpretive analogy, but rather, in conjunction with archaeological data, ethnohistoric documents, and Native oral traditions, all of which were used to formulate testable hypotheses and archaeological expectations. Results of this research suggest that the ethnographic record is founded upon deeply embedded social memories of the more ancient past, along with later developments during the Fur Trade and other periods in Mid-Fraser history. Participation in regional trade networks and material-based wealth can be traced to the deeper past, while importance placed on hunting roles and use of deer meat as a prestige food were possibly later developments, along with competitive feasting as described ethnographer James Teit. Thus ethnographic data are not always reliable tools for direct interpretive analogy of the more ancient past. Instead they are most effective when used in comparison and contrast with multiple lines of evidence.
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This work is dedicated to the Xwisten Band of St’át’imc Nation. I am forever honored to have been given the opportunity to conduct research at your heritage sites. May the friendships and collaborative relationships we have developed continue to flourish in the future.
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CHAPTER 1

INTRODUCTION

Studies of Native American and European colonial interactions have been of interest to anthropologists since the early part of the twentieth century (e.g. Redfield et al. 1936; Herskovits 1937, 1938), driven by ideals of Manifest Destiny and social Darwinist concepts of the day, which prompted the belief that American Indian populations were on the verge of extinction (Trigger 2006). For decades colonial studies were also underpinned by notions of acculturation, and the view that aboriginal peoples were merely passive recipients of Western practices and values. More recently, anthropologists have begun to evaluate colonialism from Native perspectives, acknowledging that pre-existing conditions and Native agency contributed to the ways in which colonial experiences played out (e.g. Carlson 2006; Lightfoot 2006; Silliman 2004). This approach requires anthropologists to remove the artificial divide of prehistory and history and to view European and Native American contact as part of a larger cultural continuum, bringing to light the fact that aboriginal cultures were fluid and dynamic before the advent of Euro-American colonialism (Lightfoot 1995). It has also influenced archaeologists to realize that ethnographic literature, often used as direct analog for interpreting the more ancient past, may not be exact reflections of social patterns that occurred long ago (Silliman 2004).

Colonial studies undertaken through this research evaluate the effects of the Fur Trade on aboriginal households in the Middle Fraser region of British Columbia. Archaeological investigations of pithouses were conducted at the S7istken and Bridge River sites, two winter
villages located just above the Bridge River and Fraser River confluence, near the current town of Lillooet (Figure 1.1). The two sites reside within the traditional territory of the St’át’imc, an interior Salish speaking First Nation group whose territory spans a large portion of the Middle Fraser Canyon region. Ethnographic research conducted by James Teit (1906) suggest that the St’át’imc had a complex social structure that included inherited and achieved chiefs, commoners, and slaves. The economic structure was tied to extensive trade networks possibly governed by
elites, who used competitive feasting as a means by which to create debt relations and maintain control over important food resources through ownership of fishing platforms (Teit 1906) and possibly deer fences (Teit 1909).

Teit’s (1900, 1906, 1909) ethnographies have been extremely influential to archaeological research in the Mid-Fraser, and are often used for interpreting the economic and political structures of the past (e.g. Hayden 2000b). Indeed archaeologists suggest evidence for social ranking and material-based wealth (Hayden 2000b, 1997a; Hayden et al.), and participation in extensive trade networks (Hayden and Schulting 1997) was established in the Mid-Fraser after sometime after 2600 BP (Hayden et al. 1995; Prentiss et al. 2005). Due to the assumption of relative cultural stability through time, the reliability of the ethnographic present as being accurate representation of the deeper past has never been challenged; therefore the degree to which colonialism affected the sociopolitical structure of the St’át’imc people during the early contact years—prior to Teit’s ethnographic fieldwork—has been minimally explored through archaeological research. This study does just that by using ethnographic data not as “direct historic” analogy, but rather, in conjunction with multiple lines of evidence, comparing and contrasting it with archaeological data, ethnohistoric literature, and Native oral traditions. Through this approach, variations and similarities between pre-contact and ethnographic periods become more clarified, making it possible to address culture change and continuity through multiple lines of evidence (Heizer 1941; Lightfoot 1995; Stahl 1994; Wylie 1982, 1988).

Research Objectives

This research tests two hypotheses that focus on the socioeconomic structures of late pre-contact and early contact period households. Both make statements about the socioeconomic
nature of households in winter villages in the terminal portion of the late prehistoric period, and subsequent changes resulting from participation in the Fur Trade economy. Although previous research suggests that inequality existed prior to the major village abandonment that started around 1200 BP (e.g. Prentiss et al. 2011), this study assesses the possibility that some of the socioeconomic and political structure described in Teit’s (1906) ethnographies may actually be a historical contingency of the colonial experience, not a remnant of the deeper past.

The two hypotheses developed for this research are rooted in the historical context of the pre-contact period established by previous researchers, which suggests that after 1000 years of occupation, by approximately 900 BP large winter villages of the Middle-Fraser region were largely abandoned, possibly due to depletion of key anadromous salmon resources. Competing hypotheses explaining the crash of local salmon fisheries include climate change that created a suboptimal spawning environment or a landslide that blocked the migration route (Hayden and Ryder 1991; Prentiss et al. 2007). Prior to abandonment, during peak occupation, people maintained a collector-based subsistence economy rooted in intensive harvest of salmon, made possible through development of new fishing and storage technologies. At this time there was also distinct evidence of emergent inequality, marked with population packing, increased inter and intra-household competition, unequal distribution of important subsistence and trade items, emergence of a suite of status marking prestige items, and possibly, competitive feasting (Hayden 1997a; Hayden and Schulting 1996; Prentiss et al. 2007, 2008, 2011).

Research into socio-economic organization of the St’át’imc people after the abandonment of large villages is limited, though it is likely that they remained in the area and became more mobile, shifting to broad-spectrum, opportunistic hunting and gathering. Then by the late prehistoric period (referred as the late period in the Mid-Fraser), at about 600 BP, villages began
to reemerge, though this time population densities were much lower (Prentiss et al. 2008). Little archaeological research of the past 500 years has been conducted, though we do have some information from Simon Fraser’s journals (Lamb 1960). In 1809 Fraser became the first Westerner to have direct contact with the St’át’imc in their territory when he was sent through the area on a scouting mission for the Northwestern Fur Trade Company. At the time he documented the St’át’imc as occupying a fortified village, and in possession of European trade items, including a copper tea kettle. Indeed the St’át’imc had been experiencing increased warfare due to recent incursions of Chilcotin and Shuswap people into the area, and had long been involved in regional trade networks.

The following section describes the two hypotheses tested through this study. Both make statements about the socioeconomic and political nature of households after the reestablishment of winter villages during the late period, and ensuing changes that occurred as a result of the Fur Trade. Previous research suggests that wealth-based social inequality developed by 1200-1300 BP, one to two centuries before abandonment of the aggregated villages (e.g. Prentiss et al 2011). As mentioned previously, this research explores the possibility that some socioeconomic and political structures described in Teit’s (1906) ethnographies may actually be a historical contingency of Western colonialism.

**Hypotheses**

**Cultural Change:** The first hypothesis states that cultural change resulted from early European contact. It has been documented that colonialism had profound effects on indigenous societies throughout the Americas and no less in the Pacific Northwest region (Cusick 1998; Fisher 1992; Fitzhugh 1985; Lightfoot 1995). Historian Robin Fisher (1992), in his study of coastal groups in
British Columbia, noted extreme consolidation of wealth and increased status of individuals who became trading partners with European fur traders, along with florescence of art and competitive feasting. At the same time, groups with little access to the trade economy, such as some Coast Salish, actually lost status as a whole. Andrew Martindale (2003), in his research of the Tsimshian, concludes that they may have developed a paramount chiefdom after European contact, around the year 1787. Historic documents describe that Ligeex emerged as Tsimshian chieftain due to his role as middle man in the distribution of commodity furs. Ligeex not only acquired elite status, he accumulated great wealth, had tight control over indigenous trade through alliance networks, and had vast influence over the regional Euro-American trade economy (Martindale 2003:48). Kent Lightfoot (2005), in his research of Californian native populations during the missionary and merchant periods also found evidence for cultural change. Results were variable across the region, though indigenous groups removed from their native homelands underwent most extreme social change, often including complete breakdown of polities, and newly developed social relationships and identities. Hypothesis one describes a scenario in which extreme changes in household socioeconomic organization took place during the Fur Trade Period.

**Hypothesis 1:** Upon re-establishment of winter villages during the late period, households comprised of single and multifamily units were relatively economically independent and egalitarian, with limited wealth differentiation, and status based primarily on gender, age, and achievement distinctions. European contact brought about a qualitative transformation of household socioeconomics and village relationships. Trade networks once functioning to move important subsistence items and lithic raw materials transitioned into supporting the new trade
economy. As trade items poured into the region and households actively participated in the Fur Trade, individuals and houses consolidated their power, taking over trade and other resources. This resulted in development of achieved and hereditary ranking status, increasing intra-household competition, sharp wealth differentiation, and the start of competitive feasting outlined in ethnographic literature (Teit 1900, 1906, 1909). Intra-village and household competition resulted not only in differential access to trade items, but also to important food resources.

**Expected Supporting Evidence**

- During the pre-contact period individual family units within households will have similar domestic activity areas reflecting everyday economic activities. There will be little evidence of wealth distinctions between family groups. After contact, activity areas of family units will have evidence for rising wealth distinctions resulting from differential success in the trade economy.
- Recovery of trade items from contact period occupations indicating direct and indirect contact and participation in trade. Trade items will be disproportionally represented in activity areas of select wealthier families.
- Increase during the contact period in fur-bearing animals such as beaver and muskrat, along with hide production tools, such as scrapers, all reflecting participation in the Fur Trade economy. Hide production gear should be disproportionally represented in activity areas and houses of wealthier families.
- Activity areas during the contact period suggesting production and use of nephrite tools in association with more affluent households or household members.
Unequal distribution of high-ranked subsistence resources (e.g. Chinook salmon, deer, mountain goat) will be associated with emergent inequality during the contact period.

There will be intra-household variability in bone processing during the contact period occupation because of differential access to resources. Less affluent people had limited access to large prey resources, so were required to process bones more severely to remove marrow and grease. More affluent people, with full access to large prey resources, had little need to intensively process bones.

There would have been florescence of competitive feasting during the contact period, recognized through increase in cache pit volume used to store amassed surplus, increase in food processing and preparation, and increase in elite trade items. Ceremonial use of dogs may be evident through inclusion in refuse contexts of non-consumable elements such as lower limbs, skulls, and other bones.

**Cultural Continuity:** The second hypothesis states that there was relative cultural continuity of household socioeconomic and political structure during the early contact period. Although culture change was inevitable in many situations, certain degrees of cultural continuity are evident as well. Fienup-Riordan has done extensive research of the Yup’ik Eskimos (1990) of Western Alaska. She argues that the lack of natural resources (of interest to early European groups) in the area, coupled with their relative isolation, allowed them to continue the majority of their traditional cultural practices during the contact period. Litecky (2011) also conducted research of the Yup’ik, and she describes that they continued to rely on shamans for healing even when faced with horrific effects of introduced European diseases. Kent Lightfoot (2005) maintains that indigenous California populations living in mission hinterlands were able to
preserve traditional political structures, social relationships, and identities, due to, what he believes, was continued occupation of their native homelands and “aggressive posturing” of local leaders in their dealings with mission affiliates (Lightfoot 2005:208). Hypothesis two describes a scenario, under which the Fur Trade had little effect on aboriginal households in the Mid-Fraser.

**Hypothesis 2:** Upon reemergence of winter villages during the late pre-historic period, achieved and hereditary ranking already existed, having been maintained even after major village abandonment phase that started around 1100 BP. Thus European contact brought about little structural change to household socioeconomics and political relationships, the main difference being incorporation of new trade opportunities into the existing socio-economy.

*Expected Supporting Evidence*

- Activity areas will reflect intra-household variability in access to wealth items during the precontact and contact periods. The main difference will be European trade items associated with more affluent household members during the contact period.

- Differential access to highest ranked food resources (e.g. Chinook salmon, deer, mountain goat) will continue across the boundary between late prehistoric and early contact periods. Those lacking access to these foods had to supplement their diet with lower ranked resources, such as small-sized mammals (e.g. rabbit, squirrel, etc.).

- Traditional feasting practices will continue unchanged other than, perhaps, in scale, across the transition. Access to European goods could have led to an intensification of
existing traditions of feasting and associated ceremonies like potlatching (e.g. Kennedy and Bouchard 1978) similar to that which occurred in many coastal groups (Fisher 1992).

**Intellectual Merit of the Study**

Although the effects of colonialism on Mid-Fraser households are widely unknown, archaeological research of emergent complexity during the late prehistoric period continues to be informed by ethnographic data. This research provides opportunity to tease out characteristics of the political and socioeconomic structures that possibly developed after village reestablishment due to emergence of the Fur Trade economy, allowing for more fine-grained understanding of emergent complexity during both the late prehistoric and historic periods. Moreover, the work adds to discussions of the viability of using ethnographic literature as a tool for direct historic analogy and also to discussions of possible alternative approaches for utilizing historical narratives for interpreting archaeological data (Hertzer 1941; Lightfoot 1995; Stahl 1993; Wylie 1982, 1988). Ethnographic literature is helpful in creating a more nuanced interpretation of the past, though it often forces researchers to assume that indigenous cultures remained static prior to the advent of European contact (Hertzer 1941; Lightfoot 1995; Stahl 1993; Wylie 1982, 1988). In this research ethnographic literature is applied more vigorously, testing methods suggested by other researchers (e.g. Lightfoot 1995), which compares and contrasts it with additional forms of evidence, including archaeological data, ethnohistoric literature, and native oral traditions (Carlson 2006; Lightfoot 1995; Silliman 2001a, 2001b). In using this approach this research sheds light on similarities and differences in complex hunter-gatherer households during the late prehistoric and early contact periods, resulting in a more dynamic narrative and clearer understanding of the past.
Since most research in the Mid-Fraser is focused on late-prehistoric winter villages (e.g. Hayden 2000a, 2000b; Prentiss et al. 2003, 2007, 2008, 2011), archaeological investigations of the late period and Fur Trade Period in the Mid-Fraser are minimal at best (e.g. Carlson 2006; Hayden and Adams 2004; Muir et al. 2006; Prentiss 2013). As for late period studies, most of the research focuses on identifying secret societies (Hayden and Adams 2004), and with such a narrow agenda, we have very limited knowledge of things as general as socioeconomic organization, thus this research contributes greatly to our understanding of basic cultural patterns of that time. Like late period studies, Fur Trade Period investigations are in their infancy. Currently, research of the Fur Trade in the Mid-Fraser is underway by Prentiss (2013), and this research contributes to the discussion by comparing and contrasting Fur Trade Period data with that of the late period, allowing us to potentially understand the effects of the Fur Trade Period on a more fine-grained level.

**Dissertation Outline**

This study, which evaluates the effects of the Euro-American Fur Trade on aboriginal households in the Mid-Fraser, is described in the chapters that follow. Chapter 2 provides a discussion about the history of colonial studies in North America and their underpinning theoretical frameworks, followed by a discussion about household and agency-based approaches utilized for this study. Chapter 3 includes narratives about the environmental and cultural backgrounds of the Mid-Fraser, and the last section of this chapter provides descriptions of previous archaeological research. Chapter 4 presents the laboratory and analytic methods utilized for this research; and Chapter 5 presents descriptions of the Bridge River and S7istken villages, which are the two study sites included in this study. Chapter 6 describes results of
hypothesis testing and interpretations of intra-household and inter-village data. Chapter 7 provides a discussion and conclusion of the study, followed by a discussion about future research.
CHAPTER 2
THEORETICAL FRAMEWORKS

This chapter outlines theoretical frameworks used to conduct culture contact studies in the Mid-Fraser during the Fur Trade Period. It draws from household and agency theory, and from the latter I utilize the concept of practice heralded by Marx (1963) and Engels (Marx and Engels 1970), and reformulated by Giddens (1982, 1984) and Bourdieu (1977), in which they focus on the dialectic of social structures and human behaviors. Utilizing archaeological data supplemented by ethnohistoric, ethnographic, and colonial texts, and native oral traditions, this study evaluates the day-to-day activities of household occupants in the Mid-Fraser to assess the extent to which the Fur Trade affected the local socioeconomy. A top-to-bottom and bottom to top approach described by Silliman (2001a) is also utilized for this study. In his investigations of the mission and rancho periods of California he establishes the intended structural impositions of colonial powers based upon colonial texts and journals. Then through combination of archaeological data, native texts, and native oral tradition he determines the actual impositions, describing how aboriginal people navigated within the system. Although the colonial situation of California was quite different than that of colonial British Columbia this approach is easily modified and appropriate for the study at hand because it allows the Fur Trade to be analyzed from the aboriginal perspective rather than solely from the viewpoint of the colonial powers.

The first section of this chapter provides an overview of previous theoretical applications in colonial studies. It starts with a description of acculturation models, followed by discussions of world system theory and core-periphery models. Scholarly critiques of the three approaches
are included in the discussions. The most relevant, presented by Alexander (1998), is that “culture contact” under these models is so narrowly defined that they do not allow for broad ranges of colonial situations. She describes three main types of culture contact situations identified as *colonialism*, *cultural entanglements*, and *symmetrical exchange*. I examine this case study in light of the three types and determine it is best described as cultural entanglements, a term which implies change not intentionally directed by outside sources. As such, in following discussions I explain why research that focuses on native households and individual agency is most appropriate for this investigation. This section also includes an outline of household and agency approaches in context of existing larger theoretical paradigms.

**Colonial Period Studies in the Context of Recent Theoretical Frameworks**

Colonial studies began in North America during the first half of the twentieth century under the rubric of “acculturation,” informed widely by existing paradigms under which American attitudes towards Native people and perception of culture and culture change were established (e.g. Redfield et al. 1936; Herskovits 1937, 1938; Foster 1960; Linton [ed.] 1940; Spicer [ed.] 1961). Reaction to acculturation studies resulted in widely diversified approaches utilizing various analytical scales and definitions of culture and culture change (see Schortman and Urban 1998; Wilson and Rogers 1993a, 1993b; Alexander 1998). Today there still lacks a unified approach to colonial studies though much of it is moving in the direction of micro-scale analyses and post-processual concepts of culture and culture change (e.g. Carlson 2006; Lightfoot 1995, 2005; Lightfoot et al. 1993; Lightfoot and Martinez 1995; Silliman 2001a, 2001b).
Acculturation Studies

Analyzing culture change and continuity through material remains, particularly under pluralistic or multi-ethnic settings, is a major challenge for archaeology scholars. The first theoretical framework for culture contact studies was acculturation, which eventually became the predominant paradigm in cultural anthropology from the late 1930s through the 1950s (Deagan 1998). Like other paradigms such as processual or post-processual theory, acculturation is not a unified concept (Cusick 1998a), though it is united by influences of colonial ideals and anti-immigration sentiment that existed in the Americas during the nineteenth century (Cusick 1998a; McNickle 1957; Spicer [ed.] 1961). From then and into the first quarter of the twentieth century there existed formal organizations, religious and governmental, for the sole purpose of integrating immigrants and American Indians into “the folds of progress” (Cusick 1998a:128). Scholars assumed that due to imposed social and economic structures indigenous traditions would disappear entirely. So, from 1900 to 1945 social scientists embarked on intensive studies of the “vanishing Americans” in which research was approached from a reconnaissance standpoint to gather as much information as possible on the soon-to-be-extinct people (Cusick 1998a:128).

Dichotomies of Euro-American versus Indian and modern versus primitive embedded in the melting pot idea of the time no doubt had lasting effects on the social sciences and greatly influenced acculturation studies during the first half of the twentieth century. Of its many definitions prevailing concepts falling under the rubric of acculturation include: loss of indigenous traditions (Cusick 1998a:128) replaced by Western traditions (Barnett 1940:22; Cusick 1998a:128); cultural change due to direct contact of people from different ethnic backgrounds (Redfield et al. 1936); and the adoption of Western concepts and material items into
relatively unchanging indigenous cultures. Redfield and colleagues (1936) among others called for a unified theory and methodological framework to evaluate the process of culture change. Acculturation models continued to fall short of those expectations, that is, until 1935 when Melvin Herskovits first published the “Memorandum for the Study of Acculturation” in which he described acculturation as “those phenomena which result when groups of individuals having different cultures come into continuous firsthand contact, with subsequent change in the original cultural patterns of either or both groups” (Redfield et al. 1936:149).

In 1940 Ralf Linton described acculturation as “new cultural elements” that are accepted into populations and are altered to fit into the existing milieu. Linton (1940) also developed the concepts of directed and undirected acculturation. These were later used in the works of Edward Spicer (1961) and are still relevant to contact studies today. Unlike acculturation as defined by Herskovits and Redfield, which completely disregarded power relationships, these models were created to account for differences amongst groups in pluralistic settings. Directed acculturation describes relationships that are asymmetrical, in which one population has much greater control over the other through economic, political, or ideological means, and whose actions were often met with great resistance by the dominated population (also see Dozer 1955). Conversely, undirected acculturation describes groups in multi-ethnic settings with relatively equal power relationships. According to the model equality subverts most forms of resistance and results in generation of “innovation, incorporation, and syncretism” within culture (Cusick 1998b:6).

George Foster (1960) was another pioneer of colonial studies and has used acculturation models to understand the adoption of Spanish cultural traits by indigenous people in the New World. Foster believed culture contact was a dynamic and multi-scalar process that included interaction of people and collaboration of distinct cultural systems. He argued that indigenous
cultures evolved as new “trait complexes,” approved by the church and monarchy, entered the public sphere (Foster 1960:11). These traits were further assessed by local colonial and indigenous people but resistance to impositions was limited due to imbalance of power. In the end many of the sociopolitical structures of colonial societies were mere reproductions of cultural systems initiated by the Spanish during the initial conquest period.

Archaeological Approaches to Measuring Acculturation

Initially ratios of European and Native artifacts in an assemblage served as proxies for degree of acculturation (e.g. Deetz 1963; Di Peso 1974). A more nuanced model for measuring acculturation was developed by Quimby and Spoehr (1951), whose framework involved recording artifacts according to 1) whether or not they had native equivalents 2) whether they were replicas of Western items created out of Native raw materials and 3) whether they were western items embellished with Native design (Carlson 2006:202). Influenced by this model, other classifications used to describe artifacts for acculturation studies include traditional, hybrid, and imported (Lightfoot 1998:200; Farnsworth 1987, 1992; Hoover and Costello 1985; Smith 1987; White 1975). Though these classifications were more fine-tuned than earlier ones they were used in the same way, as direct measures of acculturation. Assemblages with high numbers of Native artifacts meant that people were “traditional” and conversely, assemblages with more Western artifacts suggest they were “acculturated” (Carlson 2006:202; Orser 1996:61).
Critiques of Acculturation

Acculturation models have been challenged by numerous archaeologists in the recent past (Carlson 2006; Clemmer 1969; Cusick 1998a, 1998b; Farnsworth 1986, 1992; Hoover 1989, 1992; Lightfoot 1995; Orsner 1996; Silliman 2001a, 2001b, 2005). The main critiques are summarized succinctly by Cusick (1998a:131-130). Formative criticisms point out that transmission of cultural information is assumed to be unidirectional from Euro American to aboriginal people, the concept of culture as “super organic and functional,” the lack of consideration of individual decision making, and in many instances, complete disregard for imbalance of power relationships. Cusick (1998a:135-136) critiques acculturation models used specifically in archaeology in the following passage:

Formulations of acculturation, as cast in archaeology, tend to portray Western people as active agents and non-Western people as active recipients; 2) archaeologists tend to confuse behavior or behavioral systems with change in identity; 3) culture traits are equated with material culture, and quantifiable changes in material culture over time are equated with acculturation; and 4) acculturative frameworks are incapable of accurately predicting what aspects of culture will change in given circumstances.

One of the most overlooked critiques, highlighted by Clemmer (1969), takes issue with the sociopolitical climate under which much of the acculturation literature was generated. Underlying imperialism permeated the social sciences during the 1940s and 1950s and within the larger body of research there included studies of social engineering (Cusick 1998a:134). Gregory Bateson (1935:178), in response to Memorandum for the Study of Acculturation replied that the manuscript was “unduly influenced by the kinds of questions administrators ask anthropologists—questions such as, ‘Is it a good thing to use force in culture contact?’ or ‘How can we make a given people accept a certain sort of trait?’—and so on” (see Beals 1953:630;
Cusick 1998a:134). Moreover, during World War II many prominent social scientists worked for governmental institutions and acted as advisors of Indian reservation projects and Japanese relocation programs (Thomas and Nishimoto 1974; Spicer 1952a, 1952b; ed. 1952). In his critique of acculturation studies Cusick (1998a:135) goes on to write, “Theories of acculturation have often been mere tools in the service of enforced policies for social change. […] As archaeologists take new interest in the field of culture contact studies; they have the responsibility not to repeat the mistakes of the past.”

**World Systems Theory and Core-Periphery Models**

Previous approaches to contact studies such as those couched in acculturation models implied an atomistic perspective of culture, focusing on very localized, disconnected interaction among colonizers and colonized (Schuyler 1998). A paradigm shift occurred in 1974 after the release of Immanuel Wallerstein’s *The Modern-System: Capitalistic Agriculture and the Origins of the European World-Economy in the Sixteenth Century*. This publication outlines *World Systems Theory*, which is a model that explains the expansion of modern capitalism. Amongst social scientists this model has been extremely influential and has led culture contact scholars to evaluate human exchange from a more inter-connected and multi-regional perspective (Champion, [ed.] 1989; Gottman 1980; Hall and Chase-Dunn 1993; Rice 1998). It should be noted, however, that geography scholars Chrisholm (1962) and Haggett (1966) and anthropologists Leslie White (1949, 1959) and Julian Steward (1972) had long used models based on multi-regional perspectives (e.g. central-place and political economy theory).

In sum, World Systems Theory is a macro scalar approach that conceptualizes interconnected geopolitical entities of the core, semi-periphery, and periphery, and these interact
to create a larger, dynamic, socioeconomic system. An important detail of this model is that it assumes a top-to-down system with major political and economic components concentrated in one area whereby variation in social status and access to material goods is largely determined by the area in which a person lives (Schortman and Urban 1998). Cores are the areas of economic and political concentration. They are the places where all top level politics and administrative duties are conducted. Peripheries provide the main sources of labor and raw materials used to produce final products. These items are then transferred to the core and are sold back to people in the periphery. Semi-periphery areas are negotiation spaces between the two; and within the core there are also middle men who serve as buffers between labor workers and upper level management. The high level official’s agenda is concealed by the tiered geopolitical structure of the system. Thus any ill-feelings amongst the labor workers gets projected onto middle managements, which shields the true major source of power at the core (Schortman and Urban 1998:106).

Core-periphery models are influenced by Wallerstein’s (1974, 1980) work. They are also macro scalar and are used to explain culture change in colonial settings, most notably within periphery, frontier, and boundary contexts during expansion of settlers into western North America (Rice 1998). As with World Systems Theory, this model assumes the core is active, with all innovations, political changes, and material goods concentrated there and disseminated out to people living in the periphery. Frontier zones are similar to semi-peripheries, they are places where confrontations between the core and periphery are played out (Rice 1998:49). They additionally serve as areas for colonial growth and as boundaries between colonial powers and indigenous populations (Lightfoot and Martinez 1995).
World Systems theory has been used successfully in many archaeological applications. For example, Aron Crowell (1997) uses it to explain socioeconomical exchanges between Russian traders and the Qikertarmiut people of Kodiak Island, off the coast of Alaska, during the late-eighteenth and early nineteenth century, in which trade goods from the core were given to local communities in peripheral areas in exchange for food and labor. In another instance, T. Max Friesen (2013) uses World System Theory as a framework to describe regional socioeconomical exchange in the Western Canadian Arctic, over a 500 year period, spanning the late pre-contact and early contact periods. He argues that Inuvialuit peoples had a dynamic system that was in place long before colonialism, whereby Euro-American traders utilized the pre-existing system, which was intensified and eventually collapsed as a result.

Critiques of World Systems Theory and Core-Periphery Models

Lightfoot and Martinez (1995) provide a concise critique of the two models, many of which parallel critiques of acculturation. Similar to acculturation, under these models cultural exchange is assumed to be unidirectional with all innovation collected and disseminated from the colonial powers in the core. Thus indigenous people in the periphery are, ipso facto, passive recipients and are incapable of generating cultural change (also see Wolf 1982). Lesser (1961:42) argues that this reinforces the “myth of the primitive isolate.” Moreover, frontier zones are assumed to be populated by homogenous settler and aboriginal groups, and in spite of their constant interaction, no innovation of cultural evolution results from the exchange. Lightfoot and Martinez (1995:474) maintain that, on the contrary, frontiers are dynamic places of cultural change and innovations. They describe a revised approach to studying frontiers, one that assumes these areas to be:
possible zones of cultural interfaces in which cross-cutting, segmentary groups can be defined and recombined at different spatial and temporal scales of analysis. Research is directed toward issues concerning how people establish and maintain inter-ethnic relationships in frontiers contexts, how multiple kinds of interactions take place within and between groups that cross-cut both colonial and indigenous populations, and how frontier relationships can facilitate innovations in the lifeways of newcomers and indigenes with varied backgrounds, beliefs, and world views.

Frontier zones in effect are ideal settings to understand better multi-ethnic populations and their influence on technological innovation (Lightfoot at al. 1993), creation of new identities (Lightfoot 2005; Silliman 2001a, 2001b), and ethnogenesis (Deagan 1998; Hill 1998).

**Formulating a Theoretical Framework for Early Colonialism in the Mid-Fraser**

Acculturation and core-periphery frameworks are inappropriate for this case study due to two major assumptions of the models. The first has to do with time scale. These models are devised to frame colonial circumstances only and are not set up to address evolving situations before and after Euro American settlement, such as the conditions of this study. Unidirectional cultural transmission from settler to aboriginal populations is the second. Based on historic (e.g. Fisher 1992) and ethnohistoric (e.g. Drake-Terry 1989) documents we know it is simply not the case that settlers incited the only changes during the Fur Trade Period. In fact, Euro Americans being that they were relatively new to the area and unfamiliar with the terrain were highly reliant on aboriginal populations; not only to support the economy, but also to provide the fundamentals necessary for their very survival. In general, under acculturation and core-periphery models the colonial experience is too narrowly defined to frame the circumstances of this research.

**Defining Variation in Culture Contact**

In recent decades scholars have made concerted efforts to build theoretical frameworks suited to contexts involving different forms of cultural interaction. Jonathan Hill (1998) stresses
the need to investigate culture contact in the hinterlands, beyond direct interaction, or point of “first contact.” Edward Schortman and Patricia Urban (1989) describe variation between egalitarian interaction systems, coevolving interaction systems, and hierarchical interaction systems. Similarly Rani Alexander (1998:476) argues that there are three main types of interaction, she calls them colonization, cultural entanglement, and systematic exchange. Upon examining data from various case studies she concluded that there are different archaeological signatures associated with each type of interaction reflected in “assemblage diversity, architecture and site structures, and ritual” (Alexander 1998:476). For all three colonial situations she investigates the degree to which non-native ideas and goods are adopted into aboriginal communities, though she does not start out with assumptions employed in the previously described models.

Colonization

According to Alexander’s (1998:482) definition, colonization is “an asymmetrical form of interaction in which there is an extreme difference in political and military power held by the colonizers from that of the colonized” (Alexander 1998:482). This is also similar to Schortman and Urbans (1998) concept of hierarchical interaction system. Examples of colonization include Rome, Jamaican plantation slavery (Armstrong 1998), and the Aztec Triple Alliance. She describes three characteristics of colonization:

1) the power differential between the core state and its colonies often confers the ability to exercise coercive force over substantial differences 2) the gulf between that colonizers and colonized is often marked geographically and culturally, and 3) the geographic distance between the core and state and its colonial hinterland is vast, and the efficiency of various modes of transportation and communication become critically important (Alexander 1998:482-483).
Rice (1998) argues that colonizing forces, in its attempts to acquire resources, often leverage varying levels of control over native labor (Alexander 1998), which often result in asymmetrical trade relationships and forced reliance of aboriginal people on colonizing forces. Colonization may also result in a “dual colonial economy” in which there is some replacement of traditional subsistence economies by cash crop economies (Alexander 1998; Geertz 1963; Wolf 1982). To maintain movement of economic goods from hinterlands to the core, settlers are relocated to these areas to serve as vehicles for long distance transportation (Alexander 1998:483; Santley and Alexander 1992). Ethnogenesis or ethnocide commonly results under these circumstances.

In evaluating the archaeological implications of colonization, aboriginal groups are often refused access to non-traditional goods. Under other circumstances, non-traditional goods are completely rejected, particularly those that are associated with “technology, transport, or symbols of authority” (Alexander 1998:487; see also Lightfoot et al. 1993). Architecture and site structures become dramatically altered with spread and replacement of them by colonial style and layout (Alexander 1998:490); and Native ritual becomes “compartmentalized” as new ideologies spread and are reinforced symbolically through architecture (Alexander 1998:492).

Cultural Entanglements

Cultural entanglement as “a process whereby interaction with an expanding territorial state gradually results in change of indigenous patterns of production, exchange, and social relations” (Alexander 1998:485). This includes situations of “nondirected colonial contact,” such as adoption of fire arms during the Great Lakes Fur Trade and Nubian adoption of Egyptian prestige items. Under these circumstances there is relatively little control of the periphery areas by the core. Labor control is largely in the hands of indigenous populations and frequently leads
to emergent complexity through creation of specialized trading roles (Lightfoot 2005) and concentration of wealth (Fisher 1992). Colonization can develop from cultural entanglements if there becomes more concerted effort to direct change and control labor in the hinterlands.

In thinking about archaeological implications for cultural entanglements, rituals and symbols may become syncretic (Alexander 1998:492) and there may be colonial architecture in the periphery, though it will be small in scale and sparsely distributed (Alexander 1998:490). Household sites and structures will remain relatively unchanged due to labor that is controlled by aboriginal populations. Non-traditional goods are transferred from the core to the periphery, where they are adopted or even reproduced (Alexander 1998:486), though not all Euro American items are adopted whole heartedly. This is particularly true under colonial entanglement situations, under which only certain objects are selected. Moreover, when selected, they were frequently repurposed so that their function and embedded meaning changes. For example, gun barrels were commonly flattened and used for digging tools, and copper kettles were crafted into various items such as projectile points, scrapers, and tinkling cones (Juen and Nassaney 2012:29). Euro American goods were not viewed as “inherently more desirable” than traditional items (Alexander 1998:486), thus under these circumstances archaeologists often employ theoretical approaches that address native agency.

Symmetrical Exchange

Alexander (1998:486) defines symmetrical exchange as “a process in which networks of interdependency among households create symbiosis in economic, social, and ritual spheres that crosscuts linguistics, and territorial boundaries.” An example of symmetric exchange is Terrell’s (1998:191) research in the southwest Pacific, where between the main communities trade was
relatively equal, though there were distinctions within the communities, between different households. Reciprocity of raw materials and goods were vital to maintaining long-term and wide-spanning trade networks. Terrell calls these networks “social fields,” which he describes as conditions of “borrowing, diffusion, and patterned, structured, interactions across large-scaled social aggregates.” He argues that they are smaller than world systems but larger than face-to-face interactions of small groups. In considering the archaeological implications of symmetrical exchange, there is intensive trade of crafts, subsistence goods, and ritual items, along with ritual practices (Alexander 1998:487-488). These transcend territorial and language barriers, though are constrained to interaction within the social field.

Defining Culture Contact in the Mid-Fraser during the Early Fur Trade

In light of the definitions provided by Alexander (1998) the contact situation for this particular case study is best described as cultural entanglements. By the time House pit 54 was occupied there were already trading posts in the interior Plateau. Unlike other cultural entanglement situations there was direct contact of settler and aboriginal populations. At the time, however, there was no concerted effort amongst the colonial populations to effect change upon local peoples. Change that did occur was arguably undirected and contingent upon local circumstances. Our pre-existing knowledge of the interior Plateau during the Fur Trade Period also suggests conditions of cultural entanglement. Monumental architecture from this era does not exist around the peripheral Mid-Fraser area, and as demonstrated by Housepit 54, nor do wooden Euro American-style houses. Concomitantly, aboriginal families that lived around Fort Kamloops did occupy wooden house structures (Carlson 2006). Under both circumstances it
appears that indigenous populations were extremely selective of Euro American items they adopted for regular use (Carlson 2006; Fisher 1992; Prentiss 2013).

Consensus among earlier historians implies that during the Fur Trade in the Pacific Northwest Euro American traders took advantage of “naïve” Native people, because they traded “useless” things such as glass beads and other baubles in exchange of valuable animal pelts (e.g. Howay 1932; Ryerson 1960). When in fact, aboriginal groups along the coast largely controlled the early Fur Trade (Fisher 1992). Entries from Euro American journals of the time demonstrate that rather than being naïve, aboriginal people were very astute trading partners (Malispina 1789-1794). As mentioned previously, they were extremely particular about Euro American trade items. Low quality iron and other goods were often flat-out rejected (Johnson 1911; Meares 1790). Items they did select, such as iron tools, for example, were often adopted for traditional uses. Ornamental items they received stood in for traditional adornments, or, were merely additional “gifts to facilitate trade” (Fisher 1992:7).

Revised perspectives of the Fur Trade Period in the Pacific Northwest are largely due to historian Robin Fisher (1992) and his meticulous research of historic, colonial, and ethnohistoric documents. He argues that Native groups for the most part had complete control over the socio-economy, including management of trade, labor, social relations, and ritual. Wealth consolidation, new trading roles, social ranking, and unequal access to subsistence items and trade goods did develop during the Fur Trade. These were established due to preexisting conditions and eternal mechanisms rather than outside influence of Euro American traders (Fisher 1992:1). Of course colonization did occur in the Pacific Northwest once trading companies became more formally established throughout the region, and more particularly, after the discovery of gold and establishment British Colombia as an “official” British colony in 1858.
Assessing Scale of Analysis

Early theoretical approaches to culture contact research under the rubrics of acculturation and world-systems theory tend to focus on culture change from a societal or regional scale, and generally ignore micro-scale interactions at the household or individual level (for discussion see Cusick 1989a; Hodder 1987; Lightfoot and Martinez 1995; Schortman and Urban 1998). Recent scholars suggest that in order to understand fully the effects of culture contact it is necessary to investigate it from multiple scales (Lightfoot 2005; Silliman 2001a, 2001b); though a good portion of research is still being conducted only at macro scale levels (e.g. Sherratt 2004; Storey 2004). In her discussion of cultural entanglement situations Alexander (1998) highlights the importance of Native households, and even individuals, in affecting cultural change. Other anthropologists agree, arguing that it is individuals, not cultures that interact to create change (Hodder [ed.] 1987; Renfrow 1972; Schortman and Urban 1998). According to Ian Hodder “societies are made up of individuals, and since individuals can form groups to further their ends, directed, intentional behavior of individual actors or ideologies can lead to structural change. Indeed, societies might best be seen as non-static negotiations between a variety of changing and uncertain perspectives” (Hodder [ed.] 1987:6).

Indeed ethnohistoric and trade documents describe that during Fur Trade Period in the Pacific Northwest individuals within aboriginal communities maintained a high degree of control over the exchange economy. Household-level activities were vital to production of goods, social relationships, and trade (Fisher 1992) and this pattern also existed in the region during the late-prehistoric period (Gahr et al. 2006; Hayden and Schulting 1997). In light of this, it is crucial to evaluate change during the Fur Trade Period from the household and individual level.
Researchers have argued (e.g. Cusik 1998b; Lightfoot 2005; Silliman 2001a, 2001b) that colonialism must be assessed from multiple scales (e.g. individual, household, community, region, etc.) to understand “interaction involving individuals, factions, institutions, and states” (Cusick 1985b). The preferred units of analyses for this study are both micro-scalar, however, they provide a jumping-off point from which to do macro-scale analyses in the future (e.g. Flannery (ed.) 1976).

Defining Households and Individual Agents

Changing paradigms over the decades have shaped the ways in which culture is defined and how culture change is explained. There is growing concern amongst scholars to understand the history of archaeological thought (e.g. Trigger 2006; Willey and Sabloff 1974, 1980) as a way to assess issues of “subjectivity, objectivity, and the gradual accumulation of knowledge” (Trigger 2006:1). Trigger (2006) applies philosophies of Thomas Kuhn (1970) to understand how the archaeological “community develops a paradigm that influences the types of questions thought to be worth asking, the theories that are employed to explain data, and the procedures that are employed to collect and analyze evidence.” That said, now that household and agency are determined to be appropriate scales of analysis it is important to situate them within historical context by discussing larger paradigms under which these approaches developed.

Household Studies

Household studies have transcended shifting paradigms and *household*, as a concept, has multiple definitions, which makes it difficult to attribute it to a particular period in archaeological thought. Only recently have households become main units of analysis. In the
Pacific Northwest households studies did not begin until the 1960s. According to Gahr, Sobel, and Ames (2006:3) this was largely due to interest in the role households played in the development of complex hunter-gatherers. Moreover archeological research was going through a revolution prompted by Joseph Caldwell, whom, in 1959 published *The New American Archaeology* in *Science* magazine. Archaeological research, he argued, was too descriptive and trait-oriented. By merely describing artifacts, culture was viewed as static, and merely a “sum total of their preserved artifact types” (Trigger 2006:392). Similar to Wallerstein’s (1974, 1980) world systems theory, Caldwell proposed culture should be viewed as numerous integrated subsystems. Most importantly he maintained that archaeologists must move beyond mere description if they are to get at the root of actual cultural change.

Caldwell’s thoughts influenced many young archaeologists. Lewis Binford was one. He was the main scholar to popularize Caldwell’s ideas, through which he ignited a New Archaeology revolution (Trigger 2006:393). Under processual archaeology, as it is also referred, Binford (1962) argued for scientific approaches that included hypothesis testing and development of theoretical frameworks used to explain cultural evolution. He saw culture as a series of integrated systems and defined it as “humanity’s extrasomatic means of adaptation” (Trigger 2006:394). Thus cultural evolutions, as perceived by Binford, are rational adaptive responses to environmental change, population pressure, and inter-group competition. Mechanisms of cultural evolution are largely macro-scalar, with external influences being the main prime-movers for change. Certain traits, such as distinct idiosyncratic beliefs or traditions, which could not be explained through environmental or other forms of adaptation, were generally ignored by processual archaeology. They were considered fairly inconsequential (Shennan 2002:72).
In the 1980s, before processual archaeology became the dominant school of thought, houses were not used as an analytical scale of analysis. Instead they were recorded as sets of aggregate features (Gahr, Sobel, and Ames 2006). Moreover, archaeologists were not interested in the people who lived in the houses, rather, they were focused on architecture and general layout of the structures themselves (Ames 2006; Gahr, Sobel, and Ames 2006). It wasn’t until the popularization of processual archaeology that the study of “households”—or people that lived in the structures—became important to scholars (Bender 1967; Wilk 1981; Wilk and Rathje 1982; Yanagiasako 1979). Major theoretical frameworks that emerged from early household research by archaeologists such as Flannery and Winter (1976), Hill (1970), and Sheets (1979) defined households as “functional units,” or subsystems that interacted with others including the community, village, and region (Flannery [ed.] 1976). According to this approach households are discrete adaptable units, which are affected by social, political, ecological, and economic pressures (Ames 2006:17).

By the mid-1970s archaeologists were interested in studying the emergence of social complexity among hunter-gatherers, particularly in the Pacific Northwest (e.g. Ames 1981, 1983; Fladmark 1975; Hayden and Cannon 1982; Matson 1983; Schalk 1977). Hayden and Cannon (1982) argued that household-level investigations were key to understanding emergent inequality and that residential corporate groups were instrumental to its development. According to their definition, corporate groups were multi-family households that had control over trade, land, and important resources. Work by these archaeologists explored the role of social agents in creating culture change, something that was completely unprecedented at the time.
Beginning in the 1980s there were strong reactions among scholars over the ways in which processual archaeology defined culture and evaluated culture change. Post-modern critiques of processual archaeology by philosophers (e.g. Salmon 1976; Wylie 1982, 1985) and archaeologists (e.g. Hodder 1982, 1988; Miller 1982) parallel those that occurred in literature, philosophy, art, and other areas of science (Foucault 1979). Recall that processual archaeologists believed they were conducting objective scientific research. This was a major point of contention by post-processual archaeologists, who believe that the nature of the archaeological record coupled with predisposed biases of scholars makes it impossible to create an absolute and completely impartial narrative of the past (Hodder 1982; Shanks and Tilly 1987). Since archaeologists are not able to produce objective knowledge they maintain that data should be interpreted from multiple perspectives, particularly those of aboriginal peoples (Hodder 1982; Gosden 2007; McGuire 2007).

Another important contribution of post-processual archaeologists is the argument that material culture does not directly reflect cultural adaptation, one of the major underpinnings of processual (Binford 1962), not to mention, acculturation approaches in culture contact research (e.g. Herskovits 1938; Spicer 1961). Post-processual archaeologists argue that material culture is embedded with social and cultural meaning beyond basic cultural utility. As a person receives information it is regenerated and passed on to others (Hodder 1982). Binford (1962) and colleagues (e.g. Watson 1991) hold a much different view. They perceive culture to be purely adaptational and the mechanisms of culture change to come from extra-somatic forces, such as environmental change or population packing (Trigger 2006). Post-processual archaeologists
succeeded in bringing social actors into the narrative by arguing that humans are a major prime-mover in generating cultural change.

New approaches to household studies developed along with the rise of post-processual thought. In 1982 Claude Levi-Strauss created *House* theory (instead of *house*), which is an approach that is still widely used by post-processual archaeologists today (e.g. Chesson 2011; Marshall 2000). Under this model Houses:

may include one or more residential units for people who are working collectively to ensure survival of the House and its members...in working cooperatively to perpetuate the House, members draw a shared sense of identity, through bonds of fictive, or real kinship...their labors on behalf of the House must focus on both material wealth and immaterial wealth grounded in social memory, identity, status, and sense of future potentials (Chesson 2011:319).

Franz Boas’ (1966) research of the Kwakwaka’wakw influenced Strauss to create this model. At the time, cultural anthropologists commonly categorized Native social structures into predetermined kinship systems. Kwakwaka’wakw kinship was very fluid and was also passed down through both the male and female line. Thus it did not fit tidily into the kinship models. Boas’ response was to develop a kinship model based upon traditional terms provided by his Kwakwaka’wakw informants. Kinship is most significantly founded on *numaym*, which is their term for household group, and then to a lesser extent it is recognized by blood relatedness. Boas’ findings influenced Strauss to determine that kinship models often fail to represent accurately social structural conditions. As for the Kwakwaka’wakw, it was house structures, not blood relatedness, around which kinship and households were organized (Gahr et al. 2006).

This study includes Housepit 1 from the S7istken site and Housepit 54 from the Bridge River site. The physical houses are the unit of analysis and the subjects of the study are the *households* (i.e. people) that occupied them (Ames 2006). *House* as defined by Flannery and
Winter (1976) and Strauss (1982) is applicable to this case study. In the Mid-Fraser houses were most definitely discrete economic units that interacted with others. At the same time occupants within them were “working cooperatively to perpetuate the House” through a “shared sense of identity, through bonds of fictive, or real kinship,” and where their “labors on behalf of the House must focus on both material wealth and immaterial wealth grounded in social memory, identity, status, and sense of future potentials” (Chesson 2011:319).

**Agency Approaches**

As the concepts of House are applied to this case study the scale of analysis includes the individual people that lived in them. Social agents shape culture. This is an important idea that originated from post-processual thought. It is used to address issues such as technological development (e.g. Lightfoot et al. 1993), labor (e.g. Silliman 2001a, 2001b), and gender (e.g. Conkey and Spencer 1984). More recently, it has become the main theoretical framework for colonial studies (e.g. Carlson 2006; Dietler 1998; Lightfoot 2005; Silliman 2001a, 2001b). Early approaches to agency are described by Marx (1963) and Engels (Marx and Engels 1970) and their ideas influenced the work of Giddens (1984) and Bourdieu (1977, 1990). Social actors under these models are assumed to be knowledgeable and have the ability to act reflexively. Personal identities are forged according to particular social and cultural circumstances, with constant interplay of agents and culture. There is a feedback loop in which one informs the other. Commonly this is referred as the agent and cultural dialectic (Giddens 1984, Bourdieu 1977, 1990). Giddens (1984) also calls this structuration (Giddens 1984). He describes that “the basic domain of study of the social sciences, according to the theory of structuration, is neither
the experience of the individual actor, nor the existence of any form of societal totality, but social practices ordered across space and time” (Giddens 1984:2).

*Practice* as a concept is more recently applied to archaeological research (e.g. Silliman 2001a, 2001b). According to Giddens’ definition it refers to group actions, not individual actions. Conversely, Bourdieu (1977) describes practice as actions of individuals. He also uses the term *habitus*. He argues that habitus allows people to navigate society in varieties of ways, but at the same time, it limits alternative views and ways in which lives are experienced. According to Bourdieu (1977:164) the “natural and social world appear self-evident” thus there is limited “awareness and recognition of the possibility of different antagonistic beliefs.” Bourdieu refers to this as *doxa*. He further argues that culture is deeply engrained in individuals and so it cannot be conscientiously chosen, removed, or disregarded.

Bourdieu’s definition of practice is useful to archaeologists who conduct colonial research (e.g. Carlson 2006; Lightfoot 2005; Silliman 2001a, 2001b). Silliman (2001a, 2001b) notes that while mundane everyday practices are usually ignored by historians, they are ideal for archaeological research. It is the day-to-day activities that are reflected in the archaeological record through discarded material items. In his study of Native American labor practices in colonial California, he argues that aboriginal people were constrained by colonial powers. At the same time they were able to “bend and alter some structures of colonialism to mesh with indigenous expectations or to accommodate new notions of identity and social order” (Silliman 2000a:1). In doing so, Native peoples negotiated within colonial settings to create new identities for themselves and often they were able to better their situation.

Like his predecessors (e.g. Lightfoot 1995; Lightfoot et al. 1993; Lightfoot and Martinez 1995), Silliman (2001a) insists that presence of Euro American artifacts does not imply degree of
acculturation, or loss of indigenous identity. For example, he describes a room occupied by a neophyte (the term for native people living in missions or ranchos in California and Florida under Spanish colonial powers), which contained vast amounts of mission ceramic ware. According to acculturation models this individual would have been completely indoctrinated by colonialism. Silliman (2001a) interprets these data differently. He asserts the artifacts were likely embedded with new symbolic and social meaning and that perhaps the person identified as the mission ceramicist. Contrary to earlier approaches to colonial studies, this role would have given him or her an outlet for self-expression and autonomy.

Marshall Sahlins (1981) applied practice approaches to his research of encounters between Captain James Cook and Native Hawaiians. He talks about the structure of conjuncture, which he describes as the spatial and temporal context under which specific events occurred (1981:7). Cultural processes are bounded by historical context. Thus archaeologists must analyze the past according to multiple time and contextual scales. Like Silliman, Sahlins argues that colonial studies must consider negotiations of aboriginal peoples rather than flat-out acculturation. Archaeologists must analyze events from the Native agent’s perspective. As such Sahlins interprets the death of Cook in the hands of Hawaiians on January 17, 1779 (Beaglehold 1974; Hough 1995), as deification, arguing that it fit within Hawaiian Makahiki calendrical rites predicting the return of their god Lono (Sahlins 1981:11).

Sahlins’ deification of Cook generated heated debate between him and Obeyesekere (1992). According to Obeyesekere historiographical documents were not critically assessed, and resultantlly, Sahlins reinforced colonial views of Hawaiians as “incredulous primitives” and reproduced a European, not a Hawaiian concept of god (Herzfeld 2001:66). He (Obeyesekere 1992:56) writes that Sahlins’ “structural theory [is] not so much a theory of history or more
specifically, as an ‘explanation’ of events… but as a continuation of the discourse on
Cook’s…myth biology.” Sahlins (1995) in response argued that Obeyesekere imposed European
rationalism onto Hawaiians, and as a Sri Lankan anthropologist, he assumed he had authority to
speak for other groups that lived under colonial settings.

Exchanges of Sahlins and Obeyesekere created one of the most famous debates in
anthropology. It has generated numerous commentaries from other scholars (e.g. Borofsky
1997; Herzfeld 2001; Lamb 1993; Roberts 1994) and most agree it is unsolved to this day
(Herzfeld 2001; Roberts 1994). Herzfeld (2001:66) argues that it should remain unresolved:
“the fissures may best be kept open so that we can fully discern the ideological and political
concerns of both lines of argument.” It provides a cautionary tale for scholars interested in
practice. The most important being how to appropriately seek out and best represent “other
for Hawaiians would be morally repugnant as well as epistemologically mad. Nor is the problem
whether they can speak. The problem is whether they can be heard and understood.” Herzfeld
(2001:67) adds that the debate has brought to light the need for archaeologists to be “modest”
and realize “limitations” to being an “authoritative voice” (Herzfeld 2001:67).

Moving Beyond a Colonial Archaeology

Lessons of the Sahlins and Obeyesekere debates are indeed well-taken. Since then
archaeologists have made concerted efforts to reconcile practice and history, while at the same
time, they are more reflexive of their authority to create narratives of the past (e.g. Lightfoot
2001; Murray 2011; Silliman 2001a, 2001b). Ironically, post-processual archaeologists made
similar critiques of processual approaches (e.g. Gosden 2007; Hodder 1986; Shanks and Tilley
As previously described, at the height of its popularity, processual archaeologists fully believed that research could be conducted in a scientific and objective manner. That through hypothesis testing and scientifically rigorous field methods the truth of the past would be revealed. Collaboration with indigenous people was perceived to have little value due to this prevailing attitude. Interaction between processual archaeologists and Native peoples was mainly through ethnoarchaeological research. Through this type of field work archaeologists used *middle range theory* to establish testable models used to interpret the past. For example, Binford (1978) worked with the Nunamiut of Alaska to record what he believed to be universal principles of hunting, food processing, and other activities. His investigations are tremendously valuable to archaeological research, though his approaches have been criticized for overgeneralizing human behavior (e.g. Hodder 1986). At its worst, post-processual archaeologists argue that these methods reinforce colonial attitudes rampant in the discipline since its establishment (see Gosden 2001, 2007; Hodder 1986).

Through his research of the Cook and Native Hawaiian encounters Sahlins (1981) attempted to overcome some of the issues faced by processual archaeology, though potential misuse of ethnohistoric documents lead to the aforementioned criticism of his work. Since then archaeologists have attempted to further distance themselves from *colonial* approaches. Most importantly, Native peoples regularly take part in creating narratives of the past (e.g. Gosden 2001, 2007; Guilfoyle et al. 2009; Guilfoyle et al. 2011; Hodder 1982; McGuire 2007; Murray 2011). Chris Gosden (2007) refers to this as *post-colonial* archaeology, of which he writes:

> A growing proportion of the profession realize that cooperation with local indigenous communities is not just a matter of social courtesy or legal necessity, but as a theoretically informed process through which the ideas that an archaeologist initially brings to an investigation will be modified or even thrown out through discussions with local people. This is now seen as a sign of intellectual strength and not weakness: learning about the past is about ways of life not our own, and it is a process which
requires a Western investigator to give up some of the values they hold dear. Constructive self-criticism is crucial to the understanding of difference (Gosden 2004:162).

Lightfoot (2005) and Silliman (2001a, 2001b) propose a holistic approach to archaeology, one that incorporates sources of ethnohistory, ethnography, native texts, and archaeological data to create a “multivoiced perspective on the past” (Lightfoot 2001:13). Silliman (2001a, 2001b) uses what he refers as top-to-bottom and bottom-to-top approaches. He developed during his research of Native labor in California mission and rancho settings. Top-to-bottom refers to use of colonial, mission, and other ethnohistoric documents to evaluate the intended structural impositions of the mission and rancho system on Native people. Bottom-to-top refers to use of archaeological data, native texts and oral histories to get at the actual structural imposition, or the ways in which aboriginal people operated within the system.

Synthesis and Summary of Theoretical Frameworks

In sum, the early colonial period in the Mid-Fraser is best described as cultural entanglements. Alexander (1998:485) defines this as “a process whereby interactions with an expanding territorial stage gradually results in change of indigenous patterns.” From this I determine that household and agency-level analyses are most appropriate for this study. As for theoretical concepts of house, I draw from the works of Flannery and Winter (1976), which describes houses as discrete economic units that interact with other economic units. I also utilize Strauss’ (1982) concept of house, within which people had a shared sense of identity and worked cooperatively to maintain the household. Agency-level approaches are drawn from the work of Bourdieu (1977, 1984). In particular, I use his concept of practice or habitus, which addresses daily human activities and how they are shaped by culture. In turn, cultural is shaped by people’s daily activities. Finally, I draw from the work of Silliman (2001a) and use a top-to-
bottom and bottom-to-top approach to establish the intended outcome of the Fur Trade in addition to its actual outcome.
 CHAPTER 3
BACKGROUND

Before delving into the core of this study and testing hypotheses associated with the effects of the Fur Trade Period in the Mid-Fraser, it is first important to become familiar with the contextual background of the area. Discussions about environmental settings open this chapter, followed by cultural context, which is broken down by descriptions about the ethnographic and ethnohistoric background and the Fur Trade Period. The final section of this chapter describes previous archaeological research.

Environmental Setting

The traditional territory of the St’át’imc Nation is in the Middle Fraser region of south-central British Columbia. In the first part of the nineteenth century, at the time that it was first documented, the territory ran along the Fraser River from Leon Creek (Figure 3.1) down to Harrison Lake (Kennedy and Bouchard 1978; Teit 1906). Dramatically shaped by canyons, high peaks, and deep river valleys, the Mid-Fraser is part of the Canadian Plateau, the northern portion of the vast Northwestern Plateau region. The Plateau covers most of the interior territory in the Pacific Northwest. It is flanked by Coast and Cascade Ranges in the west and the Rocky Mountains in the east, and contains some of the most variable landscape on the entire continent, including microenvironments of desert, steppe grassland, parkforest, rainforest, and alpine forest (Prentiss and Kuijt 2004). The Mid-Fraser contains several of these of these microenvironments.
Figure 3.1. St’át’imc traditional territory (Teit 1906).
It is nestled in the rainshadow of the Coast Ranges in one of the most arid and rugged areas in all of British Columbia.

Variation in altitude and geography within such a small area of land allows for wide varieties of resources, though they are quite limited during the winter months. Alexander (1992a) describes seven environmental areas: Alpine, Montane Parkland, Montane Forests, Intermediate Grasslands, Intermediate Lakes, River Terraces, and River Valleys. High Alpine areas are dominated by exposed bedrock and rock pavement with very little arable soil. These characteristics, coupled with low moisture, harsh winters, and heavy snow fall, result in short growing seasons and relatively treeless environments, with the exception of stunted subalpine species such as whitebark pine, subalpine fur, lodgepole pine, and Engelmann spruce (Alexander 1992a; Ryder 1978). The alpine supports a wide range of other floral species, mainly varieties of low shrubs, grasses, and sedges. Plant foods of the area utilized by the St’át’imc comprise of spring beauty, avalanche lily, and dwarf mountain blueberry. In addition to the flora, the Alpine environment attracted a number of animal species targeted by local communities. These include ptarmigan, deer, grizzly bear, black bear, wolf, coyote, wolverine, long-tailed weasel, and a variety of ungulates (Cowen and Guiguet 1965).

Montane Parkland areas are transitional subzones between alpine meadows and subalpine forests. Comprised of an assortment of microenvironments these areas are dabbled with patches of parkland meadows, krummholz tree clumps, and sparse stands of subalpine trees such as whitepine bark, Engelmann spruce, subalpine fir, and lodgepole pine (Alexander 1992a). This area also supports Alpine plant species, only in greater numbers due to its more hospitable environment, with milder winters and relatively abundant rainfall. There are also several key floral species found in Montana Parklands that are absent from Alpine areas, such as tiger lily,
nodding onion, balsamroot, cow-parsnip, and Indian celery. More restricted and growing in interface areas of meadows and tree stands are soapberry and other varieties of berries. Animals living in the area include deer, bighorn sheep, mountain goat, grizzly bear, snowshoe hare, porcupine, red squirrel, northern flying squirrel, and yellow bellied marmot. All these species were hunted or trapped by the St’át’imc for food and pelts. Other animals residing in Montane Parklands were hunted purely for their pelts. These were the wolf, coyote, wolverine, cougar, lynx, bobcat, red fox, marten, mink, fisher, short-tailed weasel and long-tailed weasel (Alexander 1992a).

Below Montane Parklands lay Montane Forests, which sit at elevations of 6500 to 2000 feet, and constitute at least of half the Mid-Fraser area (Alexander 1992a; Ryder 1978). Much warmer and drier than the former, the most commonly occurring trees in higher elevations of this area are subalpine fir, Engelmann spruce, white bark pine, and lodge pole pine. Middle elevations, ranging from approximately 3000 to 4000 feet are dominated by Douglas-fir zones, though also contain lodgepole pine, ponderosa line, western white pine, and grand fir. In damper areas deciduous trees such as aspen, cottonwood, Douglas maple, paper birch, and scrub birch occur frequently (Mitchell and Green 1981). In lower elevations are sparsely occurring western red cedar and Rocky Mountain juniper, both of which were used by the St’át’imc for manufacturing a variety of items, from clothing to houses (Alexander 1992a; Teit 1906). Grasses of Montane Forests are mainly pine and bunchgrass. Many important plant species grow in Montane Forests. In open areas grow a variety of berry plants such as soap berry, wild strawberry, blackcap, and white-stemmed gooseberry. At the highest elevations also reside black huckleberry, oval-leafed blueberry, wild raspberry, and thimbleberry; and in the lowest elevations grow Oregon-grape, choke cherry, and Saskatoon. Important non-berry food plants
that grow in the area are tiger lily, false Solomon’s-seal, cow-parsnip, Indian celery, and fireweed. All animal species of Montane Parklands occur in Montane Forests except for mountain goats.

Intermediate Grasslands, located at elevations of 3000 to 4500 feet, are found within areas of Douglas Fir zones. The geography is flat or gently sloping, undulating toward stream valleys, and dominated by open grasslands. Streams also run through these areas, their banks often surrounded by deciduous trees such as aspen, cottonwood, Douglas maple, paper birch, and scrub birch. Wet bank areas provide a perfect living environment for food plants, including false Solomon’s-seal, cow-parsnip, and red-osier dogwood. Plant resources growing in drier, more open meadow regions are spring beauty, balsam root, nodding onion, and fire weed. Berries grow in these Intermediate Grasslands too, although not very abundantly. A variety of important animal species occupy these areas, particularly along streams and forest edges. These include snowshoe hare, beaver, squirrels, bears, deer, and elk. Ungulate populations often move to higher elevations during the summer, so are generally most plentiful in grasslands during the spring and late fall. Although there are streams present in this area there are no abundant fish or shellfish species.

Intermediate Lake areas, comprised of lakes along with inlet and outlet streams are encompassed by Douglas Fir zones in environments less than 3500 feet in altitude. Lake and river water levels fluctuate annually and are controlled by the level of snow pack in the mountains, generally reaching maximum depth after the spring run-off in the month of May. Although dominated by Douglas-fir, there are many deciduous tree species along lake and river banks, including cottonwood, aspen, maple, and alder. Wetland plant species are abundant in these areas; they include cottonwood mushrooms, water parsnip, silverweed, gooseberries,
cattails, tule, reed canary grass, and willows, all of which were important to the St’át’imc for food or technological purposes (Alexander 1992a; Turner 1992). Drier areas also support other necessary plant species. These include soapberry, saskatoon, nodding onion, balsamroot, blackcap, and Oregon berry. In addition to plants there are several important animal species living in these areas. Grouse are common, along with various species of wetland birds. Deer are abundant during the spring, late fall, and winter; and other animals such as bears, snowshoe hare, yellow-bellied marmot, porcupine, and squirrels are commonly found in drier areas most of the year. There are also frequently occurring wetland animal species such as beaver, mink, and muskrat. With the exception of sparsely distributed Dolly Varden or squaw fish, lakes are filled with no fish species other than trout.

River Terrace areas are comprised of all terraces in the Fraser River Valley located between 1000 and 2000 feet in elevation. The hottest, driest areas of the region, terraces are generally located below Montane Forests and are dominated by arid loving flora such as Ponderosa Pine, bunchgrass, antelopebrush and sagebrush. Wetter areas near creek banks also support deciduous species such as Douglas-fir, cottonwood, aspen, and birch. Mariposa lily, cactus, and desert parsley are among the few food plants that live in these areas; however others, such as balsamroot and Saskatoon are found near stream valleys that cut through terraces. Fewer animal species occupy these areas than those previously discussed. Most creeks in the area are unable to support fish population due to freezing in the winter. Bighorn sheep and deer were likely seasonally abundant at one time, however in many areas they have been driven out by grazing cattle and horses (Anderson 1973). Animals relatively commonly found in River Terrace areas include bears, grouse, snowshoe hare, yellow-bellied marmot, squirrels, and porcupine.
The narrow stretch of land along the bank of the Fraser River is distinguished as the River Valley area. Environmentally similar to River Terraces, this area is known to have cold, windy, dry winters, and extremely hot summers. The flora is also similar, and is dominated by bunch grass, sage, and the same food plant species, though these are sparsely scattered amongst Ponderosa pine. Deciduous trees and brush are supported along stream banks and springs. The main food resource found in this area is anadromous salmon, which travel up the Fraser River between May and September to reach spawning areas to the north. Other fish living in the river include sturgeon, steelhead, large scale sucker, Dolly Varden, northern squawfish, peamouth chub, burbot, and various types of sucker fish. There does not appear to be significant populations of freshwater mussels, though species *Margaritifera falcata*, *Anodonta kennerlyi*, and *Anodonta nuttalliona* may be found (Langemann 1987:121-127). Many large mammals can be found throughout these areas because they use the river as a travel passage and for drinking water. Bears are commonly found there during various salmon runs from spring to early fall; and ungulates aggregate in these areas in the winter and spring. Grouse and low numbers of small mammals, such as snowshoe hare, yellow bellied marmot, porcupine, and squirrel, occupy tree covered areas.

**Ethnographic and Ethnohistoric Background**

Ethnographic (e.g. Kennedy and Bouchard 1978; Romanoff 1992b; Teit 1900, 1906, 1909) and ethnohistoric literatures (Drake-Terry 1989; Smith 1998) provide archaeologists a wealth of knowledge about earlier Mid-Fraser communities, which aids in development of testable hypotheses, archaeological expectations, and interpretations. Descriptions of the *ethnographic present* are provided in this section of the chapter. Most of the information is
drawn from the works of ethnographer James Teit (1900, 1906, 1909), who conducted research in Mid-Fraser communities in the early part of the twentieth century. Also included in this section is information drawn from ethnohistoric documents (Drake-Terry 1989; Smith 1998) and from personal communication with Stát’ímc community members.

**Geography and Language**

Like their Secwepemc and Nlaka’tamux neighbors, the Stát’ímc speak a dialect of Interior Salish (Teit 1906: 195). To early white settlers Stát’ímc were known as the Lilooet and are called the same name in the local ethnographic literature (Hill-Tout 1978; Teit 1900, 1906, 1909). The main community was separated into two divisions whose territories were split by the Pole and Anderson River watersheds (Teit 1906:195-196). Within the population the divisions were known as Sla’lemux and Li’luet but amongst white settlers they were called the Upper and Lower Lilooet. In this text I use the terms Upper and Lower Stát’ímc which is how they are distinguished in the ethnohistoric literature (Smith 1998). The divisions are further separated into seven bands, Bridge River, Seton Lake, Cayoose Creek, Fountain, Mount Curry, Lilooet, and Pavillion. The sites included in this study are within the Bridge River, or Xwisten, territory, located just north of the modern town of Lilooet (Figure 3.2).
Social and Political Organization

The St’át’imc bands were organized according to clans and Teit (1906:254) notes their structure was similar to that of the Coast Salish. Clan membership was passed down bilaterally through the male and female line. Husbands and wives did not gain membership of each other’s clans, however children did claim membership of both parent’s clans. In earlier times it appears that each village was occupied by a single clan and that members were all descended from a common ancestor (Teit 1906:252); for example, the Bridge River Band is said to be descended
from the Bear. All clans had masks representing their common ancestors (Teit 1906:253). They were owned collectively by the entire community and could be handled by both men and women; though, they could only be viewed during potlatches (Teit 1906:254). Villages did split up occasionally, and in those circumstances they were still considered to be part of the same clan, only separate branches. On occasions in which one clan settled in a village with another, they were considered to be two clans living within the same community.

Each clan had hereditary chiefs and achieved chiefs. While hereditary chiefs were considered to be the legitimate leaders of the clans, ascribed chiefs often had greater amounts of power and influence (Teit 1906:255). Hereditary chiefs along with their descendants formed an aristocracy of sorts; though, the title afforded them no notable privileges (Teit 1906:254). Rather than rule through outward coercion chiefs were expected to lead by example and maintain a high degree of hospitality (Teit 1906:257). Chiefs oversaw entire clans, even when they were spread out over multiple villages. Under circumstances in which several clans occupied the same village, they all recognized the settlement’s original chief. Achieved chiefs earned their titles, gaining status by having valued qualities such as wealth, generosity, and great oratory skills (Teit 1906:255). Wealthy men and women with enough surpluses to throw potlatches could become chiefs and so could people with special occupational skills, for example, good hunters, fighters, or religious dancers, could all become chiefs of their respective occupations. Children of achieved chiefs did not inherit the title but could earn it through their own effort.

Residential patterns were patrilocal, so typically wives lived with their husband’s families. Amongst nuclear families the husband and eldest son were in charge and within extended families the eldest men were patriarchs (Teit 1906:259). When a husband died his sons and daughters both inherited property. Fishing rocks or platforms were usually given to the sons,
and most other items (horses, dogs, canoes, etc.) were divided equally between all children, except for the house and all of its furnishings, which were inherited by the wife (Teit 1909:255).

**Socioeconomy**

One of the overarching goals of this study is to evaluate changes in household socioeconomies through time, from the late period to the Fur Trade Period. General trends in household socioeconomics during the *ethnographic present* are described in this section, and are divided into discussions about traditional subsistence practices, trade activities, and ritualistic feasting activities.

**Subsistence**

The St’át’imc enjoyed a fairly mixed economy that included local plant, mammal, and riverine resources. The breadth and evenness of food resources shifted, depending on the time of year. During the spring and summer, when people were disbursed into smaller more mobile populations, there was increased availability of resources giving people access to wide varieties of plants, mammals, birds, and fishes. Populations practiced a foraging-based subsistence strategy, they hunted and gathered resources and consumed them on an immediate basis with little to no need to collect extra food for storage (Binford 1980). During the coldest months, when people were settled into their winter villages, their subsistence shifted to a collector-based strategy, in which people relied heavily on stored food, eating mainly dried salmon and deer meat supplemented by dried roots and berries (Hayden 1992b; Prentiss and Kuijt 2012).
Fishing

During the warmer months local rivers, streams, and lakes were teeming with life and people harvested fishes including Dolly Varden, squawfish, lamprey, sturgeon, and different trout species. Salmon was the most important fish resource, it was caught beginning in the late spring or early summer with the first Chinook runs and continued to be harvested well into the middle of fall. Fish captured during the first half of the year were seized with lines and baited hooks, fishing traps, and spears, and for the most part, they were consumed immediately. Spear fishing was commonly done at night, assisted by pitch-fueled fire torches, which were held just above the water’s surface to attract the fish up from deeper waters. Unbeknownst to the fish, they would swim right into the reaches of people brandishing spears (Teit 1906:228; Kennedy and Bouchard 1975; Ray 1942:105-115).

Starting in late fall and lasting though winter people were aggregated into winter villages, conditions during which people consumed mostly stored food, narrowly ranging in resources. Dried salmon meat was eaten daily and was the key source of protein and calories (Kennedy and Bouchard 1978, 1992). Fish stockpiles were necessary for survival. Each person needed approximately ninety to last the entire season, and even then, it was pretty common to have persistent hunger pangs (Carl Alexander, personal communication 2011). At the same time, people generally accepted that the cold season was a lean time of year.

Fish stockpiling usually began near the end of summer when sockeye and Chinook runs peaked, and environmental conditions were optimal for wind drying. Late-run fish were leaner and had less body fat, though, ideally, the salmon had enough fat to meet nutritional requirements and satisfy taste preferences. Salmon could not be too fatty, however, otherwise it would go rancid before the end of the season.
Fishing occurred at Six Mile Rapids, located on the Fraser River, just above the Bridge River /Fraser River confluence (Figure 3.3). Here the Fraser Canyon pinches into a narrow gorge with steep walls and rapidly moving waters below. Salmon travel up the Fraser to spawn and by the time they reach the rapids they are too exhausted to pass, forcing them to rest behind rocks and slow moving eddies. People were keenly familiar with this behavior, and would place set nets strategically near their resting points, or, would use dip nets (Figure 3.4) to capture several fish at a time in one foul swoop (Kennedy and Bouchard 1998; Teit 1906). As soon as fish were captured they were quickly brought to shore, gutted, and then prepared for wind drying.

Though done slightly differently, people still wind dry salmon today, so we have a sense of how they probably processed them in the past. First the heads are removed and then the fillets are butterflied-open, with the connection at the tail rather than the spinal column. Each fillet is scored through the flesh and propped open with Saskatoon twigs. Finally fish are draped from wooden racks by their tail were they remain until their flesh is completely dried out (Figure 3.5). Today the backbones are removed from fillets before they are hung from drying racks, but according to archaeological evidence, in the past the bones were kept intact (e.g. Smith and Carlson 2011). Teit (1900:234) also describes that backbones were left intact for wind drying. This makes sense since in the past bones were consumed, either boiled down, or ground and mixed with other foods (Teit 1900, 1906, 1909). Heads were dried as well, but they were usually first separated from the rest of the body.
Figure 3.3. Six Mile Rapids fishery. Photograph by Eric S. Carlson.

Figure 3.4. Dip net fishing at Six Mile Rapids.
Today the fishing rocks and drying racks at Six Mile Rapids are all owned by individuals or families, and in fact, many of them have been within the same family for multiple generations. One Xwisten band member I spoke with uses a fishing rock and rack that was passed down from his grandfather. In earlier times there were public and privately-owned fishing sites (Kennedy and Bouchard 1978, 1992; Teit 1900, 1906, 1909; Romanoff 1992a). All members of the community had access to fish, one way or another; however the quality of salmon differed significantly, depending on points of access, to timing, and to location. People with their own fishing spots had access to Chinook, the largest salmon, because from their rocks or platforms they could penetrate the deepest waters in which these fish migrated (Kennedy and Bouchard 1992; Romanoff 1992a). They could also collect enough fish to use for feasting or trade surplus. People that used public grounds, on the other hand, fished from areas located along river banks close to shallower waters. The smallest sockeye migrated in these waters, and the Chinook were
all but absent. Public fishing grounds also opened at the very end of the season. By this time, fish that passed through the area were at their all-time leanest. They were so low in fat that the dried meat reportedly tasted like cardboard and was considered to be a starvation food.

_Hunting_

Hunting grounds were community property of the tribes (Teit 1906:256); and although fishing was an important mainstay of St’át’imc subsistence, it was hunters, not fishers, whom were held in high esteem and given upper-level status in the community. It is not exactly clear why hunters—or _tewit_, as they were known—were so admired. Romanoff (1992b) suggests that perhaps it was because hunting was more dangerous than fishing or that deer meat was more highly regarded than fish meat. Harris (2012) argues that hunters gained prestige during the Fur Trade Period, when hunting and trapping became an important part of the economy. It may also have been because hunters (unlike fishers) were not allowed to horde their surpluses, instead, they had to share it with the rest of the community (Teit 1906; Romanoff 1992b). It was commonly believed that hunters had guardian-spirit powers which gave them great hunting abilities, and this may have also contributed to their high social standing (Bouchard and Kennedy 1977:64; Kennedy and Bouchard 1998:179). Regardless, hunters were admired as being brave and generous, and for that they were rewarded handsomely with material gifts and laborious favors, and even, multiple wives (Romanoff 1992: 472, 478-480).

Hunters targeted ranges of small, medium, and large-sized mammals for their meat, bones, sinew, and fur. Their tool kit included bows and arrows, snares, pitfall traps, spears, and clubs (Teit 1906:224-227; Kennedy and Bouchard 1977). They also used domesticated dogs, which were trained to pack gear, track and fetch animals, and, to drive herds into lakes or rivers.
for easier dispatch (Teit 1906:225). In Upper Stát’imc territory mule deer were the most prized animals to hunt and were taken for their flesh, skins, sinew, and antlers (Teit 1906:225). Deer hunting season started in early fall and lasted until rutting season sometime in November. The meat was prepared in three different ways; it was roasted for immediate consumption, or, was smoked or air-dried for winter storage. Indeed deer meat was an important subsistence item, especially during the winter. It provided people with approximately thirty-percent of their daily protein intake (Kenney and Bouchard 1992) and also gave them a significant portion of their calories. Deer meat was also considered to be a prestige food. It was often served at feasting events by elites, who acquired large quantities of it in exchange for their salmon surpluses (Romanoff 1992b).

Gathering

A fairly large range of edible plants were locally available throughout the year. Most important amongst these were patches of berries and geophytes (i.e. roots), which were owned communally by clans, giving all members full access to patches within their own territory. Critical geophyte patches were typically situated at higher elevations, beyond direct access, while berry patches were often located closer to the communities. It was fairly common practice for people to harvest fruit from places nearest their villages (Teit 1906:256), and they even provided general maintenance to these patches (Lepofsky and Peacock 2004:119-120). Although they pruned and harvested the same plants consistently there was no sense of ownership or special access because of it (Teit 1906:256). Clan chiefs had a lot to do with that. They were in charge of berry patches within the territory and were the ones who decided when it was time to
go out and harvest. It was also part of their job to ensure that people had equal access to this resource.

Traditionally women did most of the gathering and their tool kits included digging sticks for uprooting geophytes, and coiled cedar baskets and birch bark containers for hauling plant foods back to their villages. Around thirty-five species of geophytes were recognized as food and they provided the bulk of dietary carbohydrates (Lepofsky and Peacock 2004:119). Root foods were also valued for their storability; most, when roasted, could be kept in caches for an entire winter. Geophytes such as spring beauty and nodding onion were vital supplements to daily dried salmon and deer meat allotments. Some scholars go as far as to suggest that intensive use of geophytes maintained large winter village populations during the late prehistoric period (e.g. Pokotylo and Froese 1983), and they tentatively attribute the collapse of these villages, starting around 1000 BP, to geophyte decline (Kuijt and Prentiss 2004).

Berries were gathered throughout the summer and into the early fall, providing a great deal of vitamins and other nutrients to the diet (Lepofsky and Peacock 2004:120). Over fifty varieties of berries were gathered, but the most important species of all was Saskatoon, which was harvested during the late summer in low-lying dry environments. These fruit were consumed immediately and were dried for winter storage. Dried Saskatoon was stored as-is or mixed with Oregon grape and turned into cakes (Teit 1906:222). Hunters carried bags of these berries on long trips and snacked on them whenever they felt hungry or tired (Teit 1906:227). They also ate a version of pemmican, which was a mixture of dried Saskatoon and salmon meat.

Trade

All of the St’át’ímc bands were extremely active in trade. They exchanged goods locally between villages and clans and also participated in more extensive regional trade with
neighboring tribes and beyond. Much of the local exchange occurred at Six Mile Rapids where the Upper St’át’ímc bands gathered to salmon fish in the months of August and September, during which time bands from the lower portion of the territory would come to conduct trade (Teit 1900:167; 1906:231). The neighboring Secwepemc tribe also participated, and occasionally, so did the Nlaka7pamux; but due to existing hostilities with the St’át’ímc, the Chilcotin were rarely present (Teit 1906:233). Later Six Mile Rapids was the main trading hub for resident tribes and Hudson’s Bay Company. It was one of the places in peripheral areas where furs and food supplies, among other things, were exchanged.

Nonlocal goods from the coast were acquired by the Lower St’át’ímc first. These items included dentalia and other shells, cedar bark, and black-tailed deer skins, and occasionally slaves (Teit 1906:232). Exchange items coming from the east included Buffalo hides and bitterroot; and horses were brought into the area after European contact. Copper was a major trade item, but apparently it did not originate from a single source, rather it seemed to have come from several different places (Teit 1906: 233). Salmon oil, animal hides, dried salmon, dried deer meat, and berries, all were items exchanged by the Upper St’át’ímc. There is archaeological evidence that they also traded nephrite (i.e. jade) celts or adzes (Hayden and Schulting 1997; Morin 2012). During the early part of the Fur Trade Period they exchanged beaver, martin, and other furs to the Lower St’át’ímc, who in turn would sell them to the Lower Fraser Tribe or directly to the Hudson’s Bay Company.

Feasting

Large feasting or potlatch events were held periodically to mark special occasions or distribute resources. Potlatches could be thrown from one individual to another or from one
chief to another clan (Teit 1906:258). Chiefs would often call upon several hunters to acquire enough meat to distribute, which often an entire hunting season. Others acquired feasting items by trading dried salmon surpluses (Romanoff 1992b). People able to hold these feasts used the events to display their power and prestige, which allowed them to maintain their wealth and status in the community. Both men and women could throw feasts, and if they held them consistently enough, they could even earn the title of ‘chief’ (Teit 1906:255). Of the items given away, none was more important than deer meat, though distribution of other fresh meats and goat-skin rugs also occurred (Romanoff 1992b). Special potlatches called ‘scrambles’ were thrown, during which time whole deer carcasses were tossed down into house entrances down to waiting guests who would butcher and pull apart the flesh in a frenzy (Kennedy and Bouchard 1975; Romanoff 1992b). Guests of potlatches received generous amounts of goods though were expected to reciprocate sometime in the future. Those who were unable to, or those who reciprocated with inferior items, were laughed at and not given gifts at future feasts (Teit 1906:258).

**Winter Villages and Houses**

During the coldest months of the year, usually from December through February (Teit 1900:195), occupants of the region would aggregate into their winter villages. These settlements varied quite dramatically in size. For example, during its peak it is estimated that 29 houses were occupied simultaneously at the Bridge River site (Prentiss et al. 2008), while at the S7istken site there were possibly only 2 houses occupied at once (Smith and Mattes 2014). Typically, villages had three to four houses (Teit 1900:195), and were commonly located on the banks or terraces of major rivers and their tributaries, situated in the semi-arid Ponderosa Pine-

There is a fairly rich, though uneven, distribution of food resources within or adjacent to the winter village environment. Of course the most important resource was salmon, which migrated through the area starting in the spring with the early Chinook and sockeye runs, and continued to run in spurts until late November or early December with the final runs of Coho (Kew 1992:190). A number of edible plants also grow within the surrounding areas. By the middle of summer the river terraces are strewn with large Saskatoon berry bushes, while growing less prominently are patches of edible cactus, Indian celery, Mariposa Lily, and Oregon grape. Of all the plants within the winter village surroundings Saskatoon was the most important. The St’át’imc people harvested the berries for immediate consumption but they also dried them for winter storage. During the cold season these, along with dried roots, provided the bulk of their carbohydrates (Lepofsky and Peacock 2004).

Winter Houses

Winter houses of the St’át’imc were similar to those of neighboring Nlaka7pamux and Secwepemc groups (Teit 1900, 1906), all of whom lived in semi-subterranean pithouses, called s7istken in the St’át’imc language (Gerard “Bobo” Michel, personal communication 2011; Kennedy and Bouchard 1978) and kekule in Chinook jargon (Teit 1900:192). The Lower St’át’imc who lived in the southern reaches of the territory was one exception, because during the winter they occupied plankhouses that were similar to structures on the coast (Teit 1906:214). All other winter houses were generally circular-to-ovoid in shape and their sizes varied according to population density, which was typically around 15 to 30 people per
residence. Most of the time occupants were all related, either as immediate or extended family members.

Pithouses, so aptly named, had pit foundations and wooden roofs or superstructures that were well-insulated, making them warm in the winter and cool in the summer (Figure 3.6). Most of the time they were only occupied during the coldest months of the year, since in the warmer months people typically lived in mat lodges at higher elevations (Teit, 1900, 1906, 1909). There were occasions in which elderly or sick people remained back at the winter villages because they were incapable of travelling. Fortunately the pithouse’s insulating properties would have made them reasonably comfortable during the hottest months. There are a number of replicated pithouses throughout the northern Plateau and during the summer I have spent a great deal of time in them. From my observation they were actually quite cool inside, even in the extreme summer heat in Kamloops.

Constructing a pithouse was usually a community affair with men, women, and children all participating in the event (Carl Alexander, personal communication 2012; Teit 1900). According to Teit (1900:192), sometimes as many as twenty to thirty people contributed to a single housepit construction, which, quite impressively, provided enough labor for the structure to be built in a single day. However, this may be a slight underestimation, because at least one elder I spoke to said that it would have taken much longer than a day, even with a large group of people (Carl Alexander, personal communication 2012). Regardless, having the entire community involved would have made the construction go much faster. The additional help was always appreciated by the home owner, who in return, provided food for the workers (Teit 1900:192).
The site on which a housepit was built usually depended on the compaction of the soil. Once an ideal area was located a large circle would be mapped out on the ground using two bark ropes of similar length (Teit 1900:192). The ropes were crossed in the middle making a perfect “t” shape. The ends of the ropes marked the outline of the house while the place in which the ropes crossed marked its middle. Stakes were then used to mark the middle and four outer points of the house designated by the ropes. From these points a man would use a stick to draw out a large circle. Within the circle a large pit would be excavated, which was traditionally done by women using digging sticks, sharp wooden scrapers, and baskets. The men collected the timber, which included a number of tree trunks necessary for creating the main structure support. First several large posts were inserted into the ground around the outside perimeter of the pit. They were angled into the middle, where they were held up by additional support posts, creating the main frame of the roof. Rafters were secured perpendicularly across the main frame and then the top of the roof was shingled with smaller pieces of wood. Finally, the roof was covered with grass and pine needles, followed by a layer of dirt (Teit 1900:194).
Figure 3.6. Ethnographic illustration of a pithouse (Teit 1900).

**House Features and Furnishings**

The layout of the house depended on the number of people it accommodated. Typically the house entrance was located on top of the roof and people would use a notched ladder to climb in and out. Some houses also had side entrances and I have received different explanations for when and why they were used. According to some elders side entrances did not come into use until after European contact (Carl Alexander, personal communication 2012), though a number of older houses at the Bridge River site show evidence for side entrances (Prentiss et al. 2010) suggesting they did occur, even if only on rare occasion. Elders say that side entrances were used by elderly and any other people unable to climb up and down the ladder. On another
occasion I was told that they were used by women because they were forbidden to be positioned at a higher level than their husbands. I get the impression that the first explanation is more widely accepted since it was told to me by several different people. The second explanation was given to me by only one person so I have no real sense of how well-established it is.

Inside, the houses had at least one main fire hearth. Reconstructed pithouses commonly display the hearth directly in the center of the house but according to archaeological evidence their location varied considerably, usually according to the houses’ population density and social organization (Hayden 2000b). For example, large houses occupied by multiple families might have numerous fire hearths around the periphery, each demarcating separate domestic areas while smaller houses occupied by fewer families might contain only one central hearth. Most of the daily activities were conducted around the hearths. Food processing and preparation are the most obvious ones, but other tasks undertaken on a regular basis included hide processing, sewing, basketry, and lithic tool production. There are also those activities, such as singing songs, storytelling, and general socializing, which leave no material imprint but were also commonly conducted around fire hearths.

Around the edges of the houses were sleeping benches constructed from wood or compacted earth. Rush mats were placed on top of the benches and covering them were blankets made from goat hair or bear skins (Teit 1906:215). Hammocks were used occasionally by adults (Teit 1900:199) and sometimes they were reserved as sleeping places specifically for children (Teit 1909:496). Families often had their own separate sleeping areas and within them they kept their personal gear either hanging from the rafters or scaffolds (Teit 1909:495), or stored on the ground in coiled cedar-root baskets (Teit 1906:215). Food was cached in a variety of ways. Dried berries were commonly kept in baskets and fish oil was placed in containers made of dried
salmon skins (Teit 1909:517) or animal bladders (Teit 1906:215), while water was collected and stored in birch, poplar, or spruce bark baskets (Teit 1906:216). Cache pits, called *powa’wan*, were used to store larger quantities of food (Teit 1906:223). They were usually lined with bark to ward off insects and vermin, and within them would be stores of surplus roots, berries, and salmon, each of which were packaged separately in birch bark wrapping. Food for more immediate use was often placed in storage boxes outside. These were constructed out of wood and kept on top of raised platforms (Teit 1909:495).

**The Fur Trade Period**

The first documented contact of Europeans and Aboriginal people of the British Columbian Pacific Northwest was by Franciscan friars, Juan Crespi and Thomas de la Pena aboard the *Santiago* in July of 1774 after navigator Juan Perez encountered a group of Haida near the island of Langara (Fisher 1992:1-2). In their diaries they report that a group of men approached the *Santiago* in their canoes. Refusing to come aboard, they continuously circled the ship throwing feathers into the water, in an act of amity. Crespi (Crespi and Pena 1774) could not have understood the exact significance of their actions, though he had the instinct to believe that the Haida were a “peaceful and docile people” (As cited in, Fisher 1992). Before long a number of other canoes were visible in the distant. Soon after, the Native’s fear had subsided and they were on the *Santiago* offering sea otter furs and other handmade goods to trade in exchange for clothes, beads, and knives.

Four years would go by before the next encounter, when in 1778 Captain James Cook received otter pelts from Indians of the Nootka Sound area while on his third voyage of the Pacific (Cook and King 1784). In 1785, the year after Cook’s official expedition account was
published, James Hanna manned the first fur trading ship, the *Sea Otter*, into Nootka. By 1792 the maritime Fur Trade was in full swing with British and American ships travelling to the region. Soon American ships out of Boston outnumbered British ships, and by 1812 the trade had reached its peak. Hudson’s Bay Company did not become an active presence on the Northwest coast until 1825. By that time, the maritime Fur Trade had waned due to overhunting of local seal and otter populations, and it was no longer a separate enterprise.

As the maritime Fur Trade reached its peak European traders and Indigenous communities on the coast established distinct business alliances with one another. Scholars of the past have depicted the enterprise as being very one sided, suggesting that “gullible” Indians were completely exploited by European traders (see Bancroft 1890; Howay 1923; Ryerson 1960). Indeed European traders did profit nicely from their exploits, however ethnohistoric documents demonstrate that it was actually coastal Indians who controlled much of the business dealings, likely because of their previous trade knowledge, and demands for European items, particularly brass, iron, and blankets (Fisher 1992). Of the Indian’s astuteness, one of Cook’s (Cook and King 1778:302) men remarked, “they are very keen traders getting as much as they could for everything they had; always asking for more give them what you would (As cited in, Fisher 1992). And in 1787, when John Meares was about to embark on an expedition, he was told by fellow traders, “it appears that the Natives are such intelligent traders, that should you be in the least degree lavish, or inattentive in forming bargains, they will so enhance the values of their furs, as not only to exhaust your present stock, but also to injure, if not ruin, any future adventure.”

Overtime the trade economy became consolidated and was controlled by chiefs or wealthy families within Native communities on the coast, who were able to acquire mass
amounts of pelts. Many of them were not hunters per se, but were middle men, brokering deals between interior aboriginal groups and European traders, and vice-versa (Fisher 1992:12). Individuals able to edge out competition of others came to dominate trade, becoming extremely rich, powerful, and prestigious (Duff 1964:58). Increased wealth among the communities created florescence of art and ceremonial potlatching, and some scholars argue it resulted in development of monumental arts such as the totem pole (Barbeau 1942; Duff 1964). Economic disparity between populations also increased because of the Fur Trade. Whereas groups actively participating in the trade economy, such as the Haida, became rich and powerful, those less involved, such as the Coast Salish, lost wealth, and more importantly, lost prestige within the aboriginal communities (Fisher 1992).

As the maritime Fur Trade began to dwindle due to decline in sea otter and seal populations, entrepreneurial Europeans searched for ways to take the Fur Trade into the New Caledonian interior. In the beginning the economic structure remained largely the same. Coastal Indians continued to be middle men, though by this time, they largely acquired beaver pelts from interior communities. European traders soon realized that their profit margins would increase if they cut out coastal middle men and traded directly with interior groups. In 1805 Simon Fraser and colleagues of the North West Company established the first interior trading post at McLeod Lake, and in the years to come they would set up several more. By 1806 forts were established on Stuart and Fraser Lakes, and in 1807 Fort George was constructed near the confluence of the Fraser and Nechako Rivers. Once Euro Americans established direct trade with interior groups, coastal populations such as the Haida became disenfranchised, loosing much of their wealth and prestige (Fisher 1992).

1 New Caledonia became British Columbia only after it became an official British territory in 1858.
In 1808 Fraser set out to discover a trade route that would take him directly from the interior to the coast. Travelling down the river that would eventually be named after him—though at the time he believed he was traversing the Columbia River—Fraser became the first person to have recorded contact with the Upper St’át’imc. In his diaries he describes the St’át’imc as having lived in a fortified village near what is now the current town of Lillooet (Lamb 1960). It was clear that the St’át’imc already had direct or indirect association with the Fur Trade economy because Fraser witnessed in their possession European trade items, including a copper kettle. Moreover, they illustrated to Fraser and his men a route that would lead them directly to the coast. In the end, Fraser was unsuccessful in documenting a usable trading route; however David Thompson was able to navigate successfully the Columbia River, reaching its mouth in July of 1811. The North West Company established a fort there in 1813, after they acquired Fort Astoria from the Pacific Fur Company during the war of 1812; and from then on the post was referred as Fort George.

In 1812 the North West Company established Fort Thompson (Fort Kamloops after 1820) in Secwepemc territory to the east. Posts were expected to be relatively self-sustaining, so settlers associated with the post received large portions of their provisions from surrounding aboriginal groups. People regularly travelled from Kamloops to traditional trading centers in the Mid-Fraser to acquire dried salmon and furs, among other goods, from the St’át’imc people (Drake-Terry 1989; McLeod 1823; McDonald 1826; Smith 1998). The locals were well-versed in facilitating and maintaining exchange relations, since traditional trade centers that were concentrated around Fountain and Six Mile Rapids, were established possibly over two millennia, long before arrival of European settlers (Hayden and Schulting 1997). The Fur Trade
persisted in the interior for approximately four decades, until 1858, once the region became an official British territory approximately (Fisher 1992).

Effects of the Fur Trade on interior populations began prior to the advent of local trading posts, while operations were still largely managed from the coast. Similar to coastal populations, there was economic disparity between those who participated in trade and those who did not. Opportunities for social mobility developed through newly created broker positions (Collins 1950). Not only did managers become extremely wealthy, they were given special treatment by the companies, which at times resulted in tension between them and other community members (McLeod 1823). Their roles were rarely challenged, however, because material good access was one way by which interior peoples traditionally maintained their prestige (Fisher 1992:46; Teit 1900, 1906, 1909). Another result of the interior Fur Trade was development of new concepts of land ownership (Jenness 1937). For example, among the Sekani, families subsumed into the Fur Trade economy exploited the same territory season after season, and over time these areas became family-owned hunting grounds.

Native ethnohistoric accounts on the effects of the Fur Trade on St’át’imc people specifically, are limited to a few sources (Drake-Terry 1989; Duff 1997; Smith 1998). Archaeological evidence suggests that local communities throughout the region, even those in close proximity to posts, maintained many of their traditional technologies and subsistence practices (Carlson 2006; Prentiss 2013). Drake-Terry (1989) confirms settler’s accounts that the St’át’imc provided dried salmon to traders associated with Fort Kamloops. She also reaffirms claims that while some people benefited from the exchange economy, for others, it had detrimental effects. During years in which salmon migrations were lean, there was often not enough food to feed both settler and local aboriginal populations. It was during those periods
that people suffered particular hardships, as they were competing with community members interested in maintaining trade relations, and persistent settlers desperate for provisions. Reportedly, in some instances settlers bribed the communities by threatening to withhold smallpox vaccinations. That said, we cannot forget the impact caused by European diseases that swept through the communities, which no doubt had the most devastating effects of all.

Overall, there are competing perspectives of the negative and positive effects of the Fur Trade on Native populations. Fisher (1992) argues that while it resulted in increased social distinctions, for the most part the early colonial period had positive effects, by bringing new wealth opportunities into the communities. Duff (1964:58) notes that groups powerful prior to European contact gained even more influence during the Fur Trade and that groups with less power quickly adopted some of their customs. For example, interior tribes such as the Carrier were highly influenced by neighboring coastal groups, who reportedly inspired them to adopt customs such as the potlatch (Teit 1909). Knight (1978) describes that increased competition between populations also augmented inter-group warfare; and that throughout the region there was increased focus on the exchange economy at the expense of the traditional subsistence economy (Fisher 1992).

In general, many agree that in the Pacific Northwest, changes during the Fur Trade were not intentionally directed by settlers to the extent that they were in places such as California (Lightfoot 2006; Silliman 2004) or Florida (Milanich 2006); and that at least some of it can be attributed to pre-existing conditions prior to colonialism (Duff 1964; Fisher 1992; Warburton and Scott 1985). Later on, during the gold rush, Euro Canadian settlement, and reserve periods there were instances of forced removal, loss of land, and extreme destruction of resources (Drake-
Terry 1989; Fisher 1992; Smith 1998), but at this early stage it appears that there were limited, intentional disruptions to traditional societies.

**Archaeological Background**

This section provides a brief overview of past archaeological research in the Mid-Fraser. Prehistoric cultural chronologies of the Upper Canadian Plateau region are described first and are based upon work by Sanger (1969, 1979) and Stryd and Rousseau (1996; Rousseau 2004). Ongoing archaeological research programs are described in the following section, all of which focus on emergence of complex hunting and gathering populations during the late prehistoric period. Most of this research is led by archaeologists Brian Hayden (e.g. Hayden 1992a; Hayden and Cannon 1982; Hayden et al. 1985, 1996; Hayden and Ryder 1991; Hayden and Spafford 1993) and Anna Prentiss (e.g. Prentiss et al. 2007, 2008, 2011, 2012, 2014; Prentiss and Kuijt 2012).

**Culture History of the Middle Fraser Region**

The culture history described in this section draw from work from Stryd and Rousseau (1996; Rousseau 2004), who have consolidated the works of previous archaeologists (e.g. Sanger 1969, 1970). Overall, Mid-Fraser prehistory is divided into two main traditions: Nesikep (7000-3500 B.P.) and Plateau Pithouse Tradition (3500-200 BP). These are distinguished largely on the basis of differential settlement patterns and subsistence strategies. This section summarizes these traditions, which are further divided into phases, based upon changes in other characteristics such as changes in lithic technologies and population size.
Nesikep Tradition (7000-3500 B.P.)

The Nesikep tradition marks the earliest well-established evidence for persistent human occupation on the Upper Plateau. It lasted for approximately 2500 years (7000-4500 B.P.), and was proposed by Sanger (1969, 1970) to be the beginning of a continuous occupation of the Plateau by Interior Salish people. Stryd and Rousseau (1996:203-204) have further divided the Nesikep tradition into the Early Nesikep (7000-6000 ca B.P.) and the Lehman Phase (6000-4500 B.P.). They identify the subsequent Lochnore Phase (5000-3500 B.P.) as the beginning of the Plateau Pithouse tradition (PPT). Research by Prentiss and Kuijt (2004), on the other hand, suggests the Lochnore Phase has characteristics more associated with the Nesikep tradition. Thus they argue that Lochnore marks the end of Nesikep, not the beginning of the Plateau Pithouse tradition. This summary follows the chronology described by Prentiss and Kuijt. Here the Lochnore Phase is associated with the end of the Nesikep tradition.

The earliest known Nesikep occupation is a lower component of a Lehman site, which dates to 6650±110 B.P. (Sanger 1970; Stryd and Rousseau 1996). Rousseau (2004) describes general settlement and subsistence patterns of this tradition, based upon archaeological excavations of the Lehman site and others (Lawhead and Stryd 1985; Rousseau et al. 1991; Sanger 1970; Stryd 1972; Wilson 1991). Origins of these early Plateau inhabitants remain uncertain (Rousseau 2004). One thing we do know is that during the Early Nesikep the climate was warmer and drier than today and that there were grasslands and shallow lakes all throughout the southern interior of British Columbia (Rousseau 2004). At the time, people were highly mobile foragers with low population densities. Their settlement patterns included residential base camps located on valley sides or river confluences, near places of optimal water and fish acquisition, and field camps that were situated within various ecological niches, from which
people exploited seasonal subsistence resources. For the most part, people maintained a land-based subsistence economy, though fauna recovered from residential and field camps include ungulates, salmon, steelhead, bird, and freshwater mussel, suggesting at least minimal use of riverine resources (Lawhead and Stryd 1985; Sanger 1970; Stryd 1972). Lithic assemblages demonstrate relatively high variation in tool kits. Implements that are identified include lancelots, bifaces with corner-notched, barbed, and shouldered forms, and scrapers that are ovoid and circular in shape (Rousseau 2004:5-6). Microblade technology also persists, appearing in the Mid-Fraser first by approximately 8500 BP, after it diffused from the coast (Carlson 1983).

According to Rousseau (2004), cultural patterns of the Lehman phase (6000-4500 B.P.) are directly descended from the early Nesikep (7000-6000 ca B.P.). During this time there was significant increase in population densities, but the same time, there is no evidence for storage-use, so it appears that they maintained previous broad-spectrum hunting-and-gathering strategies. Overall lithic toolkits were the same as in the Early Nesikep, as well as, subsistence strategies; however, there is evidence for increased exploitation of salmon after 5000 B.C. (Rousseau 2004:10). There is also increased use of non-local, high-quality lithic materials, suggesting more intimate knowledge of regional resources, and possibly higher reliance on trade (Rousseau 2004:11). More broadly, this pattern may reflect changes in socioeconomic and political organization at the regional level.

Lochnore Phase (5,000-3,500 B.P.)

Starting at about 5000 B.P., the climate began to get cooler and wetter, which resulted in expansion of conifer and deciduous forests and decrease of grassland habitat (Hebda 1982; Mathewes 1985; Mathewes and King 1989). Consequently, there was development of rich
forest/grassland ecotones and extreme seasonal variation, during which resources became more diversified and highly concentrated (Chatters 1995; Kuijt and Prentiss 2004; Prentiss and Kuijt 2004). Under harsher winter conditions, it is argued that highly mobile hunter-gatherers of the Canadian Plateau became more seasonally sedentary, and it is here that we see early experiments in winter pithouse living (Matson and Coupland 1995; Ormerod 2002; Schaepe 1998). There is still no evidence for food storage, though it is suggested that this phase may have been marked by early forms of collecting (Rousseau 2004). Sedentism continued to increase, and by approximately 3500 BP, there was discontinued use of wedge-core and microblade technologies. Decrease in mobility gave rise to lithics that were produced from poorer-quality local materials, and also to more expedient tool traditions (Rousseau 2004).

According to Rousseau (2004) this phase evolved into the subsequent Shuswap Horizon (3500-2400 B.P.). Prentiss and Kuijt (2004) disagree; instead they argue that Lochnore went extinct, and that the Shuswap Horizon represents replacement populations that migrated in from the coast, bringing with them cultural patterns of the Plateau Pithouse Tradition. They further suggest this to be the first incursion of Salish-speaking people into the interior.

**Plateau Pit House Tradition (4,500-200 B.P.)**

Coinciding with the Neoglacial period, environmental change beginning at about 5000 B.P. resulted in a dramatic alteration in settlement and subsistence strategies on the Canadian Plateau, marked with a shift from foraging to collector strategies. This shift in logistical organization was first described by Stryd and Rousseau (1996), who defined it as the rise of the Plateau Pithouse Tradition. They divided it into four phases: the Lochnore (5000-3500 ca. B.P.), Shuswap (3500-2400 ca. B.P.), Plateau (2400-1200 ca. B.P.), and Kamloops (1200-200 ca. B.P.)
Horizons. This summary follows research by Richards and Rousseau (2004), which divides the Plateau Pithouse tradition into three phases: Shuswap (3500-2400 ca. B.P), Plateau (2400-1200 ca. B.P.), and Kamloops (1200-200 ca. B.P).

*Shuswap Horizon (3,500-2,400 B.P.)*

By the start of the Shuswap Horizon the environment had reached maximum coolness and wetness. Anadromous fish populations increased in number and according to Stryd and Rousseau (1996), this marked establishment of more fully realized “collector” strategies (Chatters 1995; Kuijt 1989). Prentiss and Kuijt (2004) conversely argue that the Shuswap Horizon marks the beginning of winter pithouse collector strategies and Plateau Pithouse traditions, brought in with populations that migrated in from the coast. It is at this time that we see the first evidence for winter pithouse villages and cache pit technologies, suggesting that populations were larger and increasingly more dependent on stored food (Richards and Rousseau 1982). Pithouses were large in size and they likely housed multiple families. Rousseau (2004) suggests that larger houses were utilized because they required less energy to construct than did numerous small houses. Considering that groups were semi-sedentary, larger houses would have been a wiser investment.

*Plateau Horizon (2,400-1,200 B.P.)*

Research suggests that during the Plateau Horizon the environment of the Canadian Plateau was a little warmer and drier than it is today (Hallett et al. 2003; Lepofsky and Peacock 2004). Overall this phase was the pinnacle of development of hunter-gatherer populations, which also correlated with expansion of the Marpole traditions on the South Coast (Burley 1980;
Carlson 1996; Mitchell 1971, 1990), and rise regional trade networks (Hayden and Schulting 1997). The Plateau Horizon was marked with continued development and expansion of winter pithouse villages, along with increased population densities, and first evidence of social stratification (Hayden and Schulting 1997; Rousseau 2004). Pithouse villages grew steadily in size with some containing up to 100 houses (Hayden 1997a, 2000a, 2000b; Wilson 1980). Rousseau (2004) demonstrates that houses became smaller during this time, reasoning that increased population and competition over food resources would have made it more practical for people to live in separate, single-family dwellings. Mid-Fraser houses are the one exception; here houses were larger and more varied in size than they were during the Shuswap Horizon (Hayden 1997a, 2000a, 2000b, Wilson 1980).

In the Plateau Horizon there was heavy reliance on salmon, deer, and small animals. There was also adoption of bow-and-arrow technologies and development of craft specialization of antler and bone tools were among many of the important developments (Rousseau 2004). Increased use of fine-quality lithic raw materials suggests discovery of mid-and-high altitude quarries, possibly correlated to intensive use of secondary root and berry resources from within the same areas. High-quality silicates produce tools with superior working edges, which would have made them important additions to personal tool kits (Andrefsky 1994; Bamforth 1986; Bleed 1986; Rousseau 1992; Torrence 1983, 1989).

Kamloops Horizon (1,200-200 B.P.)

During the Kamloops Horizon winter villages continued to be occupied and collector-based subsistence strategies, organized around intensive salmon predation persisted (Stryd 1983). Trade networks flourished across the region (Hayden and Schulting 1997; Stryd 1983), and back
in villages, house sizes and their internal organizations became more diversified, with larger structures possibly maintaining extended families, or, elite corporate groups (Hayden 1992b, 1997b, 2000a, 2000b). Technological innovation during this time included the Kamloops side-notched point, which was smaller and more triangular than their earlier counterparts. Lithic assemblages also included scrapers, gravers, perforators, and pentagonal formed bifaces, all of which were supplemental to collector subsistence strategies and a semi-sedentary lifestyle (Rousseau 2004).

Considerable cultural change and population decrease occurred between 1200-1000 BP, which according to Hayden and Ryder (1991), resulted from reduced salmon runs due to blockage of the Fraser River during the Texas Creek landslide. According to them, this ultimately may have led to villages in the Mid-Fraser area to be abandoned. Other researchers, however, point out that there is lack of evidence for this occurrence (Kuijt 2001; Rousseau 2004). Subsequently, competing hypotheses for population decreases have been suggested. For example, Kuijt and Prentiss (2004) and Lepofsky and Peacock (2004) posit that heavy exploitation of secondary food sources in the mid-and-high altitudes during the Plateau Horizon may have put stress on these vital resources, while dry and warming period may have had an impact on salmon, ungulate, and root populations (Prentiss et al. 2005, 2012).

Late period Occupations (ca. 600 BP-200 BP): After an approximate 600 year hiatus winter villages were re-occupied in the Mid-Fraser. Little is known about the gap in village occupations, though it is assumed that people resumed back to more mobile hunting and gathering settlement patterns, once dearth of storable resources made it difficult for them to be semi-sedentary. To my knowledge, little is known about the conditions in which the villages
were reoccupied. Perhaps it was a combination of low human populations and natural cycling, which allowed salmon populations to rebound, and favored return of winter-settlements, along with collector-based subsistence strategies.

One thing we do know for certain is that village populations were much lower than they were in earlier, late-prehistoric occupations. For example, at the Bridge River site, populations peaked during the late prehistoric period around 1200 cal. BP, with 29 pithouses possibly occupied simultaneously (Prentiss et al. 2008:73). Then, when the village was re-established during the late period, around 600 cal. BP, there was a maximum of 13 pithouses occupied at the same time. One thing to consider is the possibility that populations were spread out into smaller villages, though if radiocarbon dates from household contexts are any indication, it does appear that overall, populations were lower at this time, than they were during earlier times (Hayden and Adams 2004; Prentiss et al. 2008; Smith and Mattes 2014).

**Archaeological Investigations of Emergent Complexity during the Late Prehistoric Period**

The 1980s heralded new interests in archaeological investigation that were focused on development of social inequality amongst human societies. Many scholars agree that all human societies have the propensity to become stratified, but often there are cultural mechanisms in place that maintain egalitarianism, for example, through learned practices such as food sharing and cooperative behavior (e.g. Bowles 2006; Maschner and Patton 1996; Wiessner 2002). At some point leveling mechanisms are relaxed, and conditions under which this occurs is a focus of many social scientists, cultural anthropologists (e.g. Boyd and Richerson 1988) and archaeologists alike (e.g Arnold 1996). Increases in group size (Boyd and Richerson 1988) and population packing (Binford 2001) are suggested as formative traits, and this has led many
researchers to connect emergence of social inequality to the advent of agriculture (e.g. Becker et al 1990, Cohen 1977, Sellen and Mace 1997), while others looked to possible conditions associated with hunting and gathering societies (Koyama and Thomas 1982; Price 1981; Price and Brown 1985).

From early works of emergent inequality among hunting and gathering groups, the concept of “complex hunter-gatherers” was developed (Price 1981), initially defined according to traits, such as high population densities, resource intensification, use of food storage, and sedentism, all of which are argued to be associated qualities. Subsequent work uses more theoretically informed frameworks and attempts to get away from trait-based definitions (e.g. Arnold 1996; Price and Brown 1985; Hayden and Cannon 1982). For example, Arnold (1996) describes that social ranking occurs under conditions of resource stresses, during which, resource managing roles develop, leading to control over non-kin labor and craft specialization, and eventual unequal distribution of resources. On the contrary, Hayden (1995; Hayden and Cannon 1982) describes that social ranking develops under conditions of resource richness, in which, aggrandizing individuals assert control over resources and use their surpluses to form alliances that are based upon hierarchically-organized corporate groups.

Hayden’s ideas are founded upon ethnoarchaeological work that he conducted amongst Maya Highland populations, during which he identified corporate groups as the basis for socioeconomical coherence, rather than individual households or entire communities (Hayden and Cannon 1982). The term “corporate group” has been used by other archaeologists to describe communality amongst groups, underpinned by shared wealth and responsibilities, and common purpose, all of which are often facilitated through some form of identified leadership (e.g. Belshaw 1967; Honigmann 1959; Johnson and Earle 2000). On the other hand, Hayden’s
(1977, 1995; Hayden and Cannon 1982) concept of corporate groups describes hierarchically-organized populations, in which there is manipulation of lower-ranking people through elite control over production and distribution of resources, where households that cannot access resources are forced to be dependent on those that can. He describes these elites as being aggrandizing individuals with propensity for wealth and power. So much so that eventually entire communities are structured by competing corporate groups, each of which is headed by aggrandizers. Overall, corporate group power is measured by group size, their ability to access a wide variety of resources, and ability of elites in the group to control distribution of resources to non-elites.

After his work in Central America, Hayden sought to test his model through archaeological research of large pithouse villages, located in the Mid-Fraser region. Previous ethnographic studies (e.g. Teit 1900, 1906, 1909) and archaeological research (e.g. Stryd 1972) suggested to him that this was one of the best places in which to continue his work. Not only was there evidence for social ranking among local aboriginal populations in the ethnographic present (Teit 1900, 1906, 1909), there was also evidence for it in the late prehistoric past, demonstrated by varying sizes in house structures, evidence for regional trade activities, and possibly, elite control over keystone food resources (Stryd 1972, 1973, 1974, 1980; Stryd and Baker 1968; Stryd and Lawhead 1978).

Most of Hayden’s work focuses on the Keatley Creek site, the largest village of the area, which contains over 100 housepit depressions of varying sizes, all of which are distributed across a series of terraces, located on the east side of the Fraser River (Figure 3.8). In the initial phase of his work, he tested 21 housepits and established that the village was founded sometime in the late Shuswap Horizon (3500-2400 BP) (Hayden and Spafford 1993). Cool and wet Neo-Glacial
conditions of the time resulted in increased salmon populations (Chatters 1998), leading to intensification of this resource and decreased focus on terrestrial resources (Kusmer 2000). Collector-based strategies made salmon intensification possible through newly adopted processing and storage technologies (Chatters and Prentiss 2005; Prentiss and Kuijt 2004; Richard and Rousseau 1987).

Hayden’s subsequent research focused on his ideas of corporate groups and their possible ties to winter village organization on the Upper Plateau (Hayden 1997a, 1997b, 2000a, 2000b, 2005; Hayden and Matthews 2009; Hayden and Schulting 1997; Hayden and Spafford 1993). To test his hypothesis, he completely excavated one large house (Housepit 7), one medium house (Housepit 3), and two small houses (Housepits 9 and 12). Results of his excavations revealed that inter-and-intra-household ranking existed at Keatley Creek, and as his model predicted, rank was predicated on house size, with HP 7 being a wealthier house than all the rest. A radiocarbon sample recovered from basal rim deposits of HP 7 dated to 2625±50 BP and samples from upper rim deposits clustered at around 1000 BP, meaning that social ranking and corporate groups developed during the earliest formations of the village and persisted relatively consistently for over a millennium (Hayden et al. 1996:342), until a landslide blocked salmon migrations, leading to abandonment of Keatley Creek and all other villages (Hayden and Ryder 1991).

Hayden used archaeological data to make other interpretations about corporate groups and socioeconomical organizations of Mid-Fraser villages. Occurrences of chert and chalcedony debitage throughout HP 7’s deposits were used to infer that elites controlled upland lithic resources for over 1000 years (Hayden et al. 1996), while broad studies of prestige item distributions supported the argument that elites controlled regional trade networks (Hayden and Schulting 1997). Other aspects of Hayden’s ideas were also explored, including use of
competitive feasting to maintain debt relations (Hayden 2000b, 2005), and presence of secret societies, whose affiliates were among high-ranking members of the community (Hayden 1997b; Hayden and Adams 2004).

It must be stressed that most of Hayden’s ideas were formed before he started working on the Plateau, and are based upon previous ethnoarchaeological work and comparative ethnographic studies. For example, in reference to secret societies he writes, “comparative studies of developed trans-egalitarian hunter-gatherer societies lead us to expect the existence of secret societies at Keatley Creek and the use of restricted spaces for most secret society meanings and rituals of these groups” (Hayden and Adams 2004:84, emphasis mine).

Hayden’s interpretations of Mid-Fraser winter villages became widely accepted, until subsequent work by Prentiss and colleagues (2003, 2005b, 2007, 2008) challenged certain aspects of it. From 1999 to 2002, Prentiss and her crew spent summers exploring small houses that were deposited beneath HP 7. Several radiocarbon samples were recovered from these houses, in situ from hearths, post holes, and floor contexts. Sub-housepit 3 is one; and this house is located directly below HP 7 and dates to approximately 1700 cal. BP, making it at least 700 years younger than the larger house above it (Prentiss et al. 2003:730). Recall that the aforementioned radiocarbon dates cited by Hayden and colleagues (1991, 1996) were from samples recovered from rim contexts composed of secondarily deposited pit and rim fill, making their association suspect.

Results of these dates convinced Prentiss that HP 7 could be no older than the smaller houses beneath it. At its oldest it possibly dated to around 1600 BP (Lenert 2001; Prentiss et al. 2003), which was also a time during which the environment became warmer and dryer and possibly had deleterious effects on salmon populations. From her perspective, Keatley Creek
was likely established sometime around 1700 BP, under warm and dry environmental conditions that lead to salmon reduction and population packing around key fishing locales (Prentiss et al. 2003, 2005). During a brief wet and cool period salmon populations rebounded, resulting in human population growth from 1600 to 1200 BP, and for emergent inequality to become evident near the end of this peak. Around 800 BP Keatley Creek was abandoned, coinciding with larger regional abandonment patterns that occurred during the Little Climatic Optimum due to extreme drought conditions (Chatters 1995; Galm and Masten 1985; Kuijt 2001; Prentiss et al. 2005a, 2005b, Schalk 1983).

Overall, according to Prentiss, winter villages developed in the Mid-Fraser around 1700 BP, due to population packing around fishing locales during warm and dry climatic conditions. Social ranking developed around 1200 BP, in a time of peak-population growth that led to increased competition for resources. This is also the period during which the neighboring Bridge River site is abandoned. Thus, Prentiss et al. (2008, 2012), make the case that former Bridge River occupants were possibly absorbed into Keatley Creek, which would have heightened the situation, by expanding corporate group alliances. Moreover, since new-coming occupants were likely dependent on elites for crucial resources, it would have created even more apparent wealth distinctions. On the whole, Keatley Creek patterns were by-products of changing resource availability during periods of environmental change, rather than results of premeditated actions by wealth and power-seeking individuals.

Following research at the Keatley Creek site, starting in 2003, Prentiss pursued studies at the Bridge River site to test her recently proposed model against Hayden’s. The Bridge Village is part of this study, so general descriptions of the site, along with previous archaeological research are provided in greater detail in Chapter 5. In sum, her findings demonstrate that
occupational patterns of Bridge River were somewhat similar to those at Keatley Creek, though the timing is slightly different (Prentiss et al. 2008). The village was established around 1800 cal. BP by small groups of people, who were strategically aggregated around neighboring fishing locales. Populations remained relatively stable until 1600 BP cal., during which we start to see three punctuated growth periods over the course of 450 years (Prentiss et al. 2012, 2014). Occupations peaked around cal. 1200 BP, and by this time there were two distinct “communities” on separate sides of the village. Social ranking was also in place by this time, and then around 1100 BP, the village was suddenly abandoned, likely due to decrease in salmon and ungulate resources. Following an approximate 600 years hiatus, the site was re-occupied by a small population, which persisted until the early colonial period.

Like the Keatley Creek site, Prentiss et al. (2008, 2009, 2011, 2012) argue that emergent inequality developed at the Bridge site during the late prehistoric period due to competition for food resources, not because of aggrandizing elites, though historical trajectories of the site appear to have been slightly different. At the Keatley Creek site subsistence strategies became organized around the largest and oldest households of the village, which consolidated wealth within these occupations. Conversely, at the Bridge River site, subsistence strategies became organized around newly developing households, creating what was essentially a nouveau riche class in the community. Based upon these differences, Prentiss (2011; Prentiss et al. 2012; Prentiss and Kuijt 2012) argues that if we are to fully understand emergence of social ranking in the Mid-Fraser we need to consider specific historical contexts along with overarching environmental conditions.
The goal of this research is to understand the effects of early colonialism on Mid-Fraser households. In particular I focus on aspects of emerging social complexity, which are based upon control over trade, subsistence resources, and prestige items, and sustained by debt relations maintained through competitive feasting. To conduct this study I look for evidence of household participation in trade, material-based wealth, feasting activities, and intra-household social ranking. Data sets from three household occupations are used, two of which come from a late period house, and the third of which is from a Fur Trade Period house; and these assemblages are utilized and reconfigured in various ways to address the research questions at hand. This chapter describes methodological approaches used for this study. The first section details artifact analysis methods and the second section describes interpretive methods. The interpretive methods section is further divided into two sections: Inter-household analyses and intra-household analyses.

Table 4.1. Housepits included in this study and their related time periods.

<table>
<thead>
<tr>
<th>Village</th>
<th>Housepit</th>
<th>Time Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>S7istken</td>
<td>1, occupation 1</td>
<td>Late Period</td>
</tr>
<tr>
<td>S7istken</td>
<td>1, occupation 2</td>
<td>Late Period</td>
</tr>
<tr>
<td>Bridge River</td>
<td>54</td>
<td>Fur Trade Period</td>
</tr>
</tbody>
</table>
Artifact Analysis Methods

This study utilizes lithic tool and faunal data recovered from three domestic contexts that date to the late period and Fur Trade Period. Since these data are reflections of past tool and craft production activities and subsistence behaviors, they are well-suited to address issues brought to light by this research. Methodological approaches utilized to analyze these data are outlined in this section.

Lithic Tool Analyses

Lithic tools are defined as flakes or any other stone implements that have discernable evidence of cultural modification usually associated with some form of initial shaping, edge retouch or use (Andrefsky 2005). Each tool was examined for traits including material type, thermal alteration, size, use wear, and retouch. Each lithic tool was assigned to the most discrete raw material class possible and thermal alteration was identified by characteristics including potlidding, surface crazing, and noticeable color changes. Size was measured with calipers used to record maximum thickness, length, and width. Use wear was identified through microscope analysis, and modifications including polishing, crushing, grinding, and rounding were recorded as such, while attribute flake scars and striations were noted in more detailed qualitative description. Flake scar fractures have step, scalar, or feather terminations that correlate to the type of use wear activity, the amount of force placed onto the tool, or the density of the material to which it was applied. Vigorously cutting dense bone, for example, will lead to sharp step fractures on both sides of the working edge (Odell 1981; Tringham et al. 1973). Conversely, scraping soft materials such as animal hides will result in more subtle scalar fractures, which usually occur on one rather than both sides of the working edge. Striations are also correlated to the type of use wear activity, and they are noted by the way in which they traverse along the tool,
either as being parallel, oblique (i.e. cutting), or perpendicular (i.e. scraping) to the working edge (MacDonald and Sanger 1968).

Retouch is intentional modification of a tool usually by grinding or pressure flaking the stone (Andrefsky 2005). Re-sharpening a cutting edge and re-angling a well-used scraper are but two examples of purposeful retouch. Attributes noted include flake scar termination type (e.g. step, scalar, hinge), invasiveness (i.e. marginal retouch versus retouch that extends onto the tool face, etc.), and whether or not the alterations were conducted on the edge of a single tool margin (unifacial) or both (bifacial) (Andrefsky 2005; Odell 2003). Finally, angles of each culturally modified edge were measured using a Ward’s Goniometer. The degree to which an edge was worn, either through use wear or retouch, serves as a proxy for the intensity in which it was utilized. For example, tool margins with high edge angles are described as intensively used while those with low and acute angles are said to be used more briefly before they were discarded. Moreover, cutting tools tend to have sharp and low margins, and alternatively, scraping tools tend to high margins (Andrefsky 2003; Odell 1981, 2003). Edge angle measures thus can also be used to help indicate basic tool functions.

All of these attributes were used to identify functional tool types, and each implement was categorized according to the pre-established Middle Fraser lithic typological classifications developed by Arnoud Stryd and Mike Rousseau (1996) and Brian Hayden (2000b), but with slight modifications. The original scheme finalized by Hayden has over two-hundred tool-types. For this study it is too complicated for making general observations about the assemblages. I do use the projectile point classification—Kamloops, Plateau, etc.—but the other tools are put into general categories, for example a scraper with unique attributes is still classified as a scraper, and rather than given its own typological name or code the qualities are noted in the database (e.g.
scaper—convex, etc.). Cores are also part of the tool assemblage and they too are described, labelled as either unidirectional (flake scars are in one direction), multidirectional (flake scars travel in different directions), bipolar (fractured with a hammer stone and anvil), or fragment (too exhausted or fractured to identify).

**Faunal Analyses**

This study includes faunal remains from all household three assemblages. Fish elements were identified through comparative collections maintained at the archaeological laboratory at the University of Montana and by identification manual *Marine Fish Osteology*, by Debbie Yee Cannon (1987). Non-fish bones were identified through comparative collections housed at the Philip L. Wright Museum, also located in the University of Montana campus.

Each bone fragment was identified to the most discrete element and taxonomic classification possible. In most instances bones were identified to class (e.g. Mammalia) but occasionally they were categorized according to family (e.g. Cervidae) or genus (e.g. *Odocoileus* sp.). On the rarest occasions they were identified to species (e.g. *Odocoileus hemionus*). Bones classified as mammal were further sorted into size range categories of small mammal (small rodent to rabbit), medium mammal (beaver to dog), and large mammal (deer and larger) (Reitz and Wing 2008). Bones identified to element (e.g. femur) were also assessed according to side (right/left) and portion (proximal, distal, medial, lateral, etc.) and these analyses were used to identify minimum number of individuals (MNI) in the assemblages (Lyman 1996; Reitz and Wing 2008). For example, two right proximal (upper) humeri of *Odocoileus* sp. (deer), indicate an assemblage contains a minimum of two deer, while on the other hand, a right and a left proximal humerus suggests an assemblage contains a minimum of one deer. Bones not
identified to element-type were quantified according to number of total identified specimens (NISP), which is basically a raw count of all elements.

All non-fish bones, identifiable and unidentifiable, were assessed for human modification imposed through butchering, cooking, and tool making processes. Fragment size was the first characteristic by which bones were sorted and six categories were used: 1-9mm, 10-19mm, 20-29mm, 30-39, 40-49mm, 50-59mm, 60+mm (Prentiss et al. 2009). Size grades are useful for assessing bone processing. For example, the degree to which they were utilized for marrow or grease extraction is generally indicated by presence of small bone fragments (Binford 2001). Butchering was further identified according to cut, chop and hack marks on bone surfaces and by breakage patterns such as spiral, oblique, parallel, or irregular fracturing (Sadak-Kooros 1975).

Burning was the next analysis. This is based upon Shipman’s (1988) experimental studies, which demonstrate that bone burning progresses in predicable stages, identified according to a series of color changes including yellow (early-stage burning), black (completely carbonized) and white (completely calcined). Other experimental work determines that bones reach the calcined stage only through direct and continued exposure, circumstances which are difficult to meet unless under conditions of intentional burning by humans (Lyman 1994:386).

Lastly bones were analyzed for basic taphonomic characteristics not imposed through intentional human modification. These include qualities such as rodent and carnivore gnawing, root etching, abrasion, and trampling, weathering. The final assessment is one of the most important. It was based on the work of Behrensmeyer (1978) which establishes five general stages of weathering from slight parallel surface crazing to complete exfoliation of the outer cortical surface. Weathering analyses are useful for assessing depositional histories of archaeological sites. For example, under circumstances in which all bones were deposited at the
same time the fragments would have similar degrees of weathering. Conversely, bones deposited at different times and by varying means (e.g. water or animal transport) would not have similar degrees of weathering.

**Analytical Methods**

**Assessing Inter-household Socioeconomies**

Comparative analyses of the three household assemblages are conducted to evaluate changes in socioeconomies through time. As described previously, the main goals of inter-household analyses are to assess changing patterns of trade activities, material-based wealth, and feasting activities. This section outlines analytic methods utilized to address these research questions, most of which are drawn from previous archaeological research in the Mid-Fraser.

**Trade**

The degree to which households participated in larger trade networks is an important part of this research. Under the scenario of hypothesis one, in which there was significant cultural changes during the Fur Trade Period, there will be evidence that occupants of HP 54 were intensively involved in exchange. In contrast, in the HP 1 occupations there will be minimal to no evidence for participation in regional exchange. Hypothesis two states that exchange networks remained relatively stable through time and were not affected by the Fur Trade, thus under this scenario all three occupations will demonstrate relatively similar evidence for participation in trade. Effective ways to evaluate human behavior through material artifacts is a conundrum that has consumed archaeologists for many years. How can remnant pieces of
debitage, animals bones, and the like, go from simple debris to evidence for human behavior? In the case of this study, what is the most effective way to utilize artifact data to examine exchange and participation in the larger political economy?

Access to Non-local Goods

As archaeological evidence demonstrates, populations that participated in regional trade economies usually had access to non-local raw materials and goods (Ames and Maschner 1999:170-176; Arnold 2001; Blake 2004:103-112; Warren 1984:345). Steatite originally from Santa Catalina Island off the coast of California, for example, was a major exchange item of the Gabrieleno people, which made its way throughout the west coast region (Bean and Smith 1978:547). Valued for its soft and smooth consistency this stone was sculpted into a variety of items including arrow straighteners, ornaments, bowls, pipes, and charm stones. Bison products from the Plains were also exchange items in North America throughout the late prehistoric period. Meat was collected by the Blackfeet and other local tribes during annual fall drives (MacDonald 2012). Bones, sinew, horns, and hides were used additionally, and turned into various utilitarian items, many of which became part of the larger trade economy. Bison hide robes, in fact, were among the items reportedly valued by Mid-Fraser peoples (Teit 1900, 1906, 1909).

Teit (1906) provides a detailed description of trade items brought into St’at’imc territory during the ethnographic period. Surely, goods came in from all directions, but in particular, he describes things that originated from the east and from the coast. Shells, black-tail deer skins, and cedar wood, to name a few, were some of the things transported into the territory from the coast, usually through the Pemberton and Lake Bands of the Lower St’at’imc territory via the
Jervis Inlet and Howe Sound routes (Teit 1906:232). Animal hides, bitterroot, and after European contact, horses, were goods that came into the area from the east, frequently through neighboring Nlaka’pamux groups.

Archaeologically, non-local lithic materials are commonly recovered from house contexts, and amongst these are obsidian, pisolite, and Hat Creek jasper (Prentiss et al. 2009). Obsidian quarries are located outside the interior Plateau. Any of these materials found within the Mid-Fraser area likely came from coastal sources at least 200 kilometers away. Pisolite and Hat Creek jasper, on the other hand, come from deposits on Fountain Ridge and in Hat Creek valley, respectively, both of which are situated in the interior, east of the study sites. Dentalium and clam shells are also common in archaeological deposits. They obviously come from the coast and likely traveled into the area along the same routes as did obsidian. Glass beads, iron, metal points, and other European items are collected from colonial period deposits. These were usually transported into the area via Fort Kamloops to the east or Forts Yale and Hope to the south (Drake-Terry 1989).

For this study I am interested in evaluating the persistence of non-local goods through time during the late prehistoric and early colonial periods. Under the scenario of hypothesis one, which predicts cultural change during the Fur Trade Period, I expect to see increases in non-local goods through time with the largest assemblage being in the Fur Trade occupation of HP 54. Hypothesis two describes a situation in which there was no change during the Fur Trade Period; and for this to be supported I expect to see relatively similar distributions of non-local goods through time.

Abundance indices (AI) are utilized throughout this study as a way to simplify the data and track general trends over time (Bayham 1979; Betts and Friesen 2004; Betts and Friesen
2006; Butler 2000; Broughton 1994; Grayson 1991). For this part of the analysis an AI was developed to trace changes in non-local goods abundances as $\sum_{\text{non-local items}} / \sum_{\text{non-local items}} + \sum_{\text{local items}}$, where non-local items include pisolite, Hat Creek jasper, obsidian, and marine shells. Resulting AI scores are always between 1 and 0. As for this particular index, an assemblage with all non-local goods will have a score of 1 and an assemblage lacking non-local goods will have a score of 0. Euro American trade items, especially trade beads, occur in high frequencies in colonial-era aboriginal household contexts throughout the Pacific Northwest (Auge et al. 2013). Based upon this, I feel it necessary to hold HP 54’s Euro American trade items constant, at least for this portion of the study. Point of origin is also pertinent to this study, and is another reason that these items are excluded. Regardless, if exchange did intensify during the Fur Trade Period, I would expect as well to see increases of non-local indigenous items coming into the area (Fisher 1992).

Production of Exchange Items

Another way to evaluate exchange activities is to measure the rate at which households produced potential trade items. In an additional example from California, Jeanne Arnold and Anthony Graesch (2001) describe how some Island Chumash people were craft specialists who worked possibly full-time to create Olivella beads and ornaments for exchange. Craft specialization, though somewhat more common amongst relatively sedentary populations, rarely occurred in hunting and gathering societies. Mid-Fraser communities are no exception, and while there is minimal evidence associated with nephrite adz production (Darwent 1998), there is no clear indication that craft specialization occurred within domestic spheres. However some housepits have spatial distributions of artifacts interpreted as special work areas (Spafford
2000b:173). I am not trying to argue that exchange goods production in the Mid-Fraser were all conducted outside of domestic spheres. Although the signatures may not be as clear-cut as groups like the Chumash, who had specialized bead-making workshops (Arnold and Graesch 2001).

Ethnographic (Teit 1906) and ethnohistoric (Drake-Terry 1989; Smith 1998) literature describe that the St’at’imc produced animal hides, dried salmon, and salmon oil among other things for exchange, though absent from the narratives are references as to how and at what level manufacture or distribution of these goods occurred. Other production activities such as subsistence and household-level hide production did indeed happen within domestic spheres (Prentiss et al. 2009), and it has been suggested that some of these activities were managed by high ranking families (Hayden 1990a; Spafford 2000a). Some archaeologists go one step further and argue that production and dispersal of trade goods were completely controlled by elites (e.g. Hayden and Schulting 1997). The degree to which high-ranking families actually controlled trade is debatable and to analyze it, at least from an inter-household perspective is beyond the scope of this study. Evidence from the coast suggests all aspects of economic production occurred at the domestic level (Gahr et al. 2006). Coupled with archaeological evidence described above, this makes it reasonable to suggest that in the Mid-Fraser most if not all trade was managed by households (Rousseau 2004b). Whether it was controlled specifically by elites, in my opinion, there is not enough evidence to say for certain.

A combination of faunal and lithic data will be used to measure exchange item production, and it is expected that under conditions of intensive manufacture, certain animal remains and stone tools will correlate. For example, lithic scrapers are the main tools for hide production (Hayden 2000b; Shott 1995). Thus under a scenario of intensive hide production we
would expect to see correlation of lithic scrapers and hide bearing mammals such as beaver, muskrat, or deer. Whereas in situations of intensive salmon processing we might expect to see correlation of salmon bones with composite knives (Rousseau 2004b) or ground slate knives (Hayden and Schulting 1997; Lepofsky et al. 2005).

As discussed previously, with over 200 classifications, the Middle Fraser lithic tool typology is complicated and somewhat overwhelming. To simplify the procedure and not get caught up in typological specifics, for some of the analyses lithic tools are sorted into functional categories first described by Harris (2012), using, hunting and butchery, light duty (e.g. hide processing), heavy duty (e.g. woodworking), tool production, and general purpose classes. Formally made tools are captured in the first four main categories, except for Tool Production, which in addition to shaft straighteners and saws, consists of less purposely modified items such as block and bipolar cores. General purpose is the last main category. It includes utilized flakes and expediently made knives and scrapers without retouch, based on the assumption that these tools were made on a whim and were likely used for any number of activities. Items beyond the scope of these categories are sorted into two secondary classes: Ornamental and Miscellaneous. Functional tool categories conceal artifact variation, which is duly noted, however they are appropriate and useful for evaluating variation of basic household activities (Grier 2006). By and large, formal tools were easier to refurbish and had longer lifespans, so I argue they were reserved for more intensive activities associated with exchange item production while general purpose tools were used for basic undertakings such as daily food preparation (Andrefsky 2005).

Several AIs were developed to evaluate manufacture of trade items for this study. The first is a basic mammal index, \( \frac{\sum\text{mammal bones}}{\sum\text{mammal bones} + \text{fish bones}} \) which is used to calculate the abundance of mammal bones in the three household occupations (Broughton 1994).
An assemblage with all mammal bones will have a score of 0 and an assemblage with no mammal bones will have a score of 1. The other AIs are tool class indices (e.g. $\sum$light duty tools/$\sum$all tool classes) and these are utilized to determine abundances of the different tool types for each household. Using the examples above, if households were involved in intensive hide production we would expect the assemblages to have high mammal and light duty tool index scores. Conversely, if households processed large volumes of dried salmon to the exclusion of mammals the assemblages will produce low mammal and high hunting and butchery index scores, based on the argument that knives and other butchery tools were used to breakdown the fish (Lepofsky et al. 2005; Rousseau 2004b).

**Analyzing Material-Based Wealth**

Evaluating the presence of material-based wealth is another important part of this study. Although not as common in more mobile hunting and gathering societies, documented use of material items valued as prestige markers and for social signaling is found throughout the Pacific west coast, Florida, and other places where populations were larger, more sedentary, and complexly organized. Labrets were status symbols on the Northwest Coast, for instance, and during the late prehistoric period they were worn by high status men and women; and after European contact they were used to distinguish free women from slaves (Ames and Maschner 1999:182). The Calusa of southern Florida also had material prestige items. Their exquisitely crafted goods included engraved shark’s teeth and carved animal figurines, many of which were excellently preserved in coastal wet sites (Widmer 2002).

There is a suite of artifacts and other features used to identify prestige as expressed through material-based wealth in the Mid-Fraser (Hayden 1997a, 2000c; Hayden and Schulting
Yet there is also disagreement over the validity of some of these as accurate measures (Prentiss 2014; Prentiss et al. 2012). In the Mid-Fraser, Hayden (2000b) is one of the leading archaeologists addressing emergence of prestige and material-based wealth, and from his studies much of the subsequent research has emerged (e.g. Harris 2012; Morin 2012; Prentiss et al. 2007). Hayden’s research is discussed at length in Chapter 3. In sum, he argues ranked societies developed sometime around 2,600 BP under conditions of resource richness, during which time, surplus goods were amassed by aggrandizing individuals who asserted control over food and raw material locales. Excess stores were used to manipulate others into debt relationships and to leverage expansion of hierarchically organized corporate groups (Hayden 2005; Hayden and Cannon 1982; Hayden et al 1996). Archaeological expectations of this, Hayden (1997a) argues, includes association of large houses (i.e. corporate groups) with prestige items, faunal richness (i.e. access to diverse resources), and storage capacity (i.e. ability to amass surplus).

Other archaeologists have since tested this model and come up with contradictory results. Using prestige raw materials and items as the set variables, Harris (2012) establishes there is no association of these with faunal richness or storage capacity, so she completely rejects the notion of hierarchically organized corporate groups, rather than offering an alternative way to measure them. Prentiss (Prentiss et al. 2012, 2014) comes up with similar conclusions that prestige raw materials and prestige items do not correlate with house size or storage capacity. Not completely rejecting the existence of hierarchically organized social structures, however, she demonstrates wealth items correlate with faunal narrowness and remains such as deer and dog. Prentiss interprets this as prestige associated with unlimited access to highly ranked resources rather than diversity of resources (c.f. Romanoff 1992b). According to her model an expanded diet breadth
is actually associated with low-ranking families, whereby they had limited access to the best resources, and were forced to supplement their diet with small mammals. Furthermore, in Prentiss’ study house size and storage capacity correlate with fire-cracked rock density. She argues that these attributes reflect population size rather than status distinctions.

Occurrences of “prestige items” on their own do not necessarily indicate presence of material-based wealth, so in order to demonstrate this we need multiple lines of evidence. For this portion of the study I base my analysis on Prentiss’ (Prentiss et al. 2012) findings that under conditions of social ranking, material-based wealth is reflected by correlation of prestige items and prestige food materials such as deer and dog. Since single households are used for each time period, inter-household analyses of prestige are beyond the scope of this study. We cannot test, for example, whether material-items were prestigious in their truest sense as objects that were available to some households and not others. Nevertheless, this research can evaluate changing concepts of prestige during the early colonial period as expressed through material items and the degree to which they were used for social signaling.

To test for resource diversity I use the formula $H' = -\sum(p_i) \ln(p_i)$, where $p_i$ is the relative proportion of each taxon in an assemblage (Reitz and Wing 2008:247). Evenness or equitability of resources is also calculated. For this I use the Shannon-Weaver (1949) formula $V' = H' / \log_e S$, where $S$ is the total number of identified taxa for each assemblage. Equitability scores run between 1 and 0. A score of 1 reflects even distribution of all taxa, while zero implies uneven distribution of all taxa. Following Prentiss’ findings, elite households will have low diversity and equitability scores, based on the argument that they had unlimited access to high-ranking resources, and in effect, did not have to expand their diet breadth to make-up for dietary shortfalls. Conversely, low-ranking houses will have high richness and evenness scores,
reflecting an expanded diet-breadth, necessary for supplementing nutritional deficits. According to previous research, resource richness is commonly correlated to sample size (e.g. Grayson 1984). To evaluate potential biases based upon this, sample size as NISP (number of identified specimens) is plotted against richness diversity scores.

Abundance indices are also utilized to track distributions of prestige items through time. According to hypothesis one, all three prestige scores will be highest in HP 54, reflecting the development of material-based wealth during the Fur Trade Period. Under hypothesis two, prestige scores will be relatively similar for each occupation. The AIs used to measure prestige include a prestige raw material index ($\sum$ nephrite+$\sum$ obsidian+$\sum$ pisolite+$\sum$ Hat Creek jasper/$\sum$ all raw materials), a prestige item index ($\sum$ prestige items/($\sum$ prestige items+lithic items), and a prestige food index ($\sum$ Odocoileus sp. (deer) +$\sum$ Ovis Canadensis sp. (goat) +$\sum$ Oncorhynchus tshawtscha (Chinook salmon)+$\sum$ Canis sp. (canine)/($\sum$ all Oncorhynchus (salmon)+$\sum$ all mammals). These selected lithic raw materials, artifacts, and faunal remains are drawn from ethnographic literatures (Kennedy and Bouchard 1978; Romanoff 1992b; Teit 1900, 1906, 1909) and previous archaeological research (Hayden 2000b; Hayden et al. 1996; Hayden and Schulting 1997), which identify them as prestigious. Prestige items are all objects that were potentially used for social signaling, including Euro American trade items; and prestige foods are identified as such in ethnographic literatures (Romanoff 1992a, 1992b), based upon elite-control of the resources and limited availability. A high utility index for ungulates is also used for this study as $\sum$femur+$\sum$ thoracic+$\sum$ pelvis/$\sum$ identifiable elements. Following Madrigal and Holt (2002), the purpose of this AI is to track the abundance of high utility ungulate elements through time. According to hypothesis one, if unequal access to high-ranking resources developed during the Fur Trade Period, we would expect to see increase in the high utility index scores time. Under
hypothesis two, access to high-ranking resources remained relatively the same through time. Thus the high utility scores will all be somewhat similar.

Analyzing Feasting

For the final inter-household analysis will I evaluate the degree to which households were participating in ritualistic feasting activities. From the earliest days of ethnographic field work anthropologists have been interested in traditional feasting practices amongst aboriginal people (e.g. Goldschmidt and Driver 1943; Post 1938; Stevenson 1943). The most famous studies of traditional feasting come from Franz Boas (1917, 1966) and his documentation of potlatching practices on the Northwest Coast, in which he describes the potlatch in terms of Westernized views of economical investments and returns (Codere 1950). Recently anthropologists have moved beyond thinking about feasting in purely economic terms. Several archaeologists have tied feasting to animal domestication (e.g. Bender 1978, 1985) and agricultural intensification (e.g. Brookfield 1972; Hayden 1990b). While others have linked feasting to technological innovations such as storage (Kuijt 2009) and the development of pottery (Hayden 2009).

Archaeologists have also studied traditional feasting practices in the Mid-Fraser (Hayden 1995, 2000a; Prentiss et al. 2012, 2014; Romanoff 1992b). According to Hayden’s (1992:550-555, 1995, 2000a:269) model of emergent inequality corporate groups used food and other surpluses to gain prestige through competitive potlatching. Generosity indeed was one means by which to gain status in the community (Teit 1906:255) and large feasts were held by chiefs or other high ranking people during which huge quantities of food, blankets, and other goods were given away (Teit 1900:297-300, 1906:257-258; 1909:574-575). With charity came obligations, however, so to return the favor recipients held potlatches of their own and gave away items of
equal or greater value (Teit 1906:258). Those unable to reciprocate were mocked and did not receive items at later potlatches.

Ethnographic literature describes deer meat as one of the main food items passed out during feasts (Romanoff 1992b:474). Occasionally it was distributed through scrambles, a ritual in which deer carcasses were thrown into pithouses and butchered on spot by waiting guests (Kennedy and Bouchard 1978; Romanoff 1992b:475). Horse meat, not obtained until the early colonial period, was also eaten during potlatches (Teit 1900:297). Salmon was apparently not a potlatch item (Romanoff 1992b:475) though archaeological evidence suggests fish heads may have been a special feasting food (Hayden and Adams 2004; Prentiss et al. 2012).

The antiquity of potlatching as documented ethnographically is questionable. While Hayden (1997a) uses ethnographic data to interpret late prehistoric feasting activities, in actuality it might have been a Fur Trade development. According to Teit (1909:574), potlatching of this form spread into the Mid-Fraser around 1880, after it was first taught to Shuswap bands closest to the Carrier and Chilcotin Indians. There is archaeological evidence that feasting of some kind occurred prior to the Fur Trade (e.g. Prentiss et al. 2012, 2013), though in terms of identifying feasting solely on the basis of ethnographic data, it must be done with caution. Moreover, material remnants of feasting versus feeding large household populations may leave similar archaeological imprints. Without other corresponding artifacts, large bowls or traditional “give-away” items, for example, archaeologists must be careful not to attribute evidence such as excess faunal remains or storage capacity to potlatching too hastily.

That said, to evaluate feasting for this study I do draw from ethnographic data because quite frankly, this is what I have to use. Based on what we know from these narratives, archaeological implications for potlatching includes excessive amounts of deer bones (Romanoff
1992b) and possibly dog bones (Cail 2012; Crellin and Heffner 2000; Hayden 2000b; Prentiss et al. 2012, 2014; Teit 1909:579-80) associated with prestige items. According to Romanoff (1992b:474-475) and Kennedy and Bouchard (1978) goat hair blankets were the only give-away item at potlatches. Hayden (1992:550-555) speculates prestige items such as nephrite adzes would also have been given away. But his interpretations are founded on ethnographic research of traditional feasting in places including South America, New Guinea, and the Northwest Coast, not by ethnographic research on feasting in the Mid-Fraser. Nonetheless, Teit (1906:258) does describe that potlatches were platforms by which people affirmed their wealth. So, it does make sense that whether given away or not people wealthy enough to throw potlatches would have also been wealthy enough to own prestige items.

Abundance indices for prestige items are also used for this analysis, along with AIs that measure abundances of feasting foods ($\sum$deer+goat+dog/$\sum$all identifiable taxa) and salmon cranial elements ($\sum$salmon cranial elements/$\sum$all salmon elements). According to hypothesis one the index scores for prestige, feasting foods, and salmon cranial elements will be highest in HP 54 reflecting increase of feasting activities during the Fur Trade Period. Hypothesis two states that feasting activities persisted unchanged during the Fur Trade Period. Thus the scores will be relatively similar for all three households.

**Intra-household Analyses**

Intra-household analyses are used for this study to evaluate socio economic relations of the families living together under a single domestic structure. This is commonly referred as household archaeology. Not only are there specific methodological approaches in doing household archaeology, there are also theoretical frameworks that underpin the entire process.
Household archaeology is discussed at length in the Theory chapter (Chapter 2). In brief, this approach assumes the *house* as a unit of study (Wilke and Rathje 1982) and *household* refers to occupants that co-reside within a single house (Ames and Maschner 1999; Matson and Coupland 1995). Households can be single families of multiple families living under one roof. In effect, household archaeology is a micro-scalar analysis. Unlike regional scale approaches, under which, houses are one among many features that are part of the broader picture. Both approaches are important to create a nuanced portrait of the past. Regional-scale analyses are useful for making broad generalizations about the evolution of human culture through time. While small-scale analyses are useful for evaluating cultural evolution in terms the individual agents who took part in it.

The purpose of household archaeology is to assess the socio economic relations of people living within a house. Questions archaeologists might ask include: how was food distributed amongst household members? Did some occupants have access to certain resources, while others did not? Or, how were daily activities organized within the house? In order to address these questions it is necessary to document spatial distributions of features and artifacts associated with the house floor. Unlike other theoretical approaches household archaeology actually begins during field excavations. Field methods utilized during the HP 1 and 54 excavations are detailed in the Study Sites Background chapter (Chapter 5). Tight spatial control was utilized during excavation, which in the end will give us a good perspective of how the households were organized. In sum, both were excavated according to a site grid, which at its smallest, was broken down into 5.x.5 meter excavation squares. During floor strata excavations sediments were removed from these squares separately in 5 centimeter levels and all features were excavated and documented separately.
Intra-household social ranking has been documented throughout the Northwest Coast region (e.g. Coupland et al. 2009; Grier 2006; Martindale 2006; Samuels 2006). One of the most famous examples comes from House 1 of the Ozette site in which high ranking members of the household occupied the back of the house while low ranking members occupied the front of the house (Huelsbeck 1989). As for the Mid-Fraser region, there is some evidence for intra-household ranking in some of the larger houses at Keatley Creek. In HP 3, for example, there is one fire hearth around which is associated large cache pits, non-local raw materials, and dense concentrations of Kamloops projectile points (Hayden 2001b:14). Hayden suggests this was the domestic area of a high-ranking family whose main form of subsistence was hunting. Local ethnographic literatures also document that hunting was regarded as a prestigious occupation (Teit, 1900, 1906, 1909; Romanoff 1992b).

In light of the hypotheses for this study, under a scenario of hypothesis 1, which states that there was cultural change during the Fur Trade Period, I expect there not to be intra-household social ranking in the HP 1 occupations. Conversely, in HP 54’s Fur Trade occupation there will be evidence for intra-household ranking. According to hypothesis 2 there was no change during the Fur Trade Period. Intra-household ranking developed during the late prehistoric period and continued relatively unchanged into the early colonial period. Thus there will be evidence of intra-household ranking in the HP 1 and HP 54 occupations.

Following the work of Hayden (1997b, 2000b), Grier (2006), Coupland (2006), among others, distributions of features and artifacts will be utilized to address the two hypotheses for this study. Features typically identified in housepits in the Mid-Fraser include cache pits, hearths, benches, and post holes. These are useful for identifying activity and domestic areas. Faunal remains are included in this study as well as lithic debitage and tools, which are identified
according to functional categories (e.g. light duty, heavy duty tools) described in the previous sections. Distributions of faunal and lithic artifacts can be used to identify activity areas associated with butchering, cooking, hide processing, and lithic reduction.

Faunal remains are also useful for evaluating access to subsistence resources. Even distribution of fauna can be used to infer equal access to subsistence resources. Differential distribution of fauna, on the other hand, can be used to infer unequal access to resources. Additionally, variation in butchering techniques is a telltale sign of resource access. Families with limited access to mammalian resources may have processed bones more intensively to recover as much marrow and bone grease as possible. Those with unlimited access likely retained the highest utility elements with the most meat. Thus they did not have to rely on the bones to consume required amounts of protein and fat. Following Prentiss and colleagues (2014), to evaluate the rate at which families processed mammalian bones a small fragment abundance was used ($\sum$ mammal bone fragments $\leq 9$ mm/$\sum$ all mammal bone fragments).

According to hypothesis 1 there will be differential distributions of small fragments in the Fur Trade Period occupation of HP 54. Under hypothesis 2 there will be differential distribution of small bone fragments in the HP1 and HP 54 occupations.
CHAPTER 5

THE RESEARCH AREA: BRIDGE RIVER AND S71STKEN SITES

In this chapter I describe the villages and housepits included in this research. As discussed in previous chapters the goal of this study is to understand better the socioeconomic patterns that persisted during the late period and early colonial period in the Middle Fraser region of British Columbia; but ultimately the aim is to analyze the effects the European Fur Trade had on indigenous households. Late period and colonial period research in the Mid-Fraser is still very much in its infancy. Most of the research of the area is focused on the late prehistoric period, the time in which hunting-and-gathering populations were aggregated into large winter pithouse villages. According to evidence produced by Prentiss et al. (2012) and Hayden (e.g. 2004), it was also the time in which individuals and households were hierarchically ranked and marked with material-based wealth inequalities. Recent research by Harris (2012) challenges this assumption; however, this continues to be widely accepted by archaeologists and other scholars.

Much of the prevailing narrative has been informed by the local ethnographic literature (e.g. Teit 1900, 1906, 1909), particularly that generated by Hayden (2004), who uses it as direct analogy for interpreting the deeper past. At the moment archaeologists lack in-depth knowledge of the late period and early Fur Trade Periods in the Mid-Fraser. According to Hayden’s use of ethnographic data, one can only assume that an approximately 400 year hiatus of winter village occupations, followed by late period occupations, and European colonialism, had absolutely no effect on indigenous populations; such that societies basically remained static possibly since ca.
2600 BP (Hayden et al. 1996). I think it is safe to say that archaeologists do not really believe this is true, however we continue to accept ethnographic literature at face value and in some instances we use it irrefutably. This is not to say that ethnographic data has no utility for interpreting the past, but I do argue that they must be used appropriately, as one of many lines of evidence, utilized to develop testable hypotheses and archaeological expectations.

In order to shed some light on the evolution of socioeconomic patterns during the late period and Early Colonial Period I am testing two counter hypotheses. Hypothesis one states that the Fur Trade had an effect on indigenous households and that many of the socioeconomic patterns described in the ethnographic literature are a product of colonialism rather than a holdover from the more ancient past. Countering this hypothesis, the second one states the Fur Trade had little effect on indigenous households and that indeed many of the socioeconomic patterns described in the ethnographic literature originated during the more ancient past. To test these hypotheses I utilize data sets collected from housepits which are comprised of lithic and faunal remains, and European trade items. The assemblages were collected from houses located at two separate villages; one house was occupied during the late period and is located at the S7istken site, while the other was occupied during the early colonial period and is located at the Bridge River site. This research also consists of spatial analyses of the houses, a process which involves measuring distributions of artifacts and ecofacts from floor contexts in association with other features such as cache pits, hearths, sleeping benches, and post holes. Test expectations of the hypotheses are detailed in Chapters 1 and 6. Research expectations aside, artifact analyses are crucial to evaluating the domestic activities that took place; and spatial analyses provide key information about social aspects of households, for example, whether food resources were
distributed evenly, or, if occupants conducted activities such as tool production in personal or communal spaces.

**The Bridge River Site**

Just beyond the northern reaches of the modern town of Lillooet is the Bridge River site, one of the last remaining large pithouse villages in the Mid-Fraser and the only one positioned on the west side of the Fraser River. The village is not located on the Fraser proper; rather, it sits on a terrace high above the Bridge River, which merges with the Fraser some 3 kilometers downstream from the site (Figure 5.1). Touring the site in person it is easy to see why people chose this very spot to construct a village. Its placement on the terrace would have made it relatively easy to defend and its immediate surroundings would have supplied occupants with a rather broad array of subsistence resources, including large game animals and seasonally available roots and berries (Sakaguchi et al 2010). But of all the locally available resources none were more important than salmon, because located just above the Bridge River/Fraser confluence was Six Mile Rapids, one of the most productive fisheries in the entire Pacific Northwest region. Dried salmon meat was one of the keystone food items that sustained people during the harsh winter months, and from generation-to-generation, people passed down traditions of dip net fishing and wind drying (Kennedy and Bouchard 1978; Kew 1992; Romanoff 1992a). In fact, these methods have remained relatively unchanged and are still practiced by many people in the community today.

Archaeological investigations of the Bridge River site began in the 1970s under the direction of Arnoud Stryd (1974; Stryd and Hills 1972) and was part of the larger *Lillooet*
Archaeological Project. The research focused on a number of pithouse villages of the area and because the work was so extensive, excavations at the Bridge River site were minimal, limited to a handful of test units placed within a small sample of the approximately 80 visible housepit depressions. Throughout the 80s and 90s archaeological research was contained on the east side of the Fraser River and a large portion of the work was conducted at the Keatley Creek site under the direction of Brian Hayden. Archaeologist Anna Prentiss worked with Hayden on his projects at Keatley Creek; then in 2003, Prentiss pursued her own long term research project, only this time the work was conducted at the Bridge River site.

Like Hayden, Prentiss was interested in understanding better the socioeconomic histories of the large Mid-Fraser Villages. More specifically she wanted to test competing models that
explain the development of ranked societies, a pattern described in the local ethnographic literature (Teit 1900, 1906, 1909), which according to archaeological evidence emerged sometime during the late prehistoric period (see Chapter 3 for more details). Hayden has long been amongst the leading archaeologists conducting research on the development of ranked hunting-and-gathering societies, however his work has received some criticism (e.g. Prentiss et al. 2003, 2007, 2008). One of the main critiques focuses on Keatley Creek and the fact that Hayden has never developed a historical chronology of the site. In other words, his research is limited to a small number of houses (out of over 100) and is removed from the larger historical context, simply because there is no knowledge of how the site actually developed through time.

Prentiss recognized this issue so her first goal at the Bridge River site was to test and date as many of the houses as possible. During the 2003 and 2004 field season Prentiss and colleagues collected approximately 90 radiocarbon samples from hearth and pithouse floor contexts, from which she was able to establish a general chronology for the development of the Bridge River site, one that is broken down into four distinct occupational periods (Table 5.1). In summary, the village was established around 1800 BP and continued to grow until it peaked at approximately 1200 BP, then it was subsequently abandoned around 1000 BP. Following a long hiatus the village was reestablished around 400 BP and remained occupied well into the Fur Trade Period by a small number of households. To date the Bridge River site is the only well-dated large pithouse village in the Mid-Fraser region.
Table 5.1. Bridge River Chronology (Prentiss et al. 2008).

<table>
<thead>
<tr>
<th>Period</th>
<th>Date Range</th>
<th>Number of Housepits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridge River 4 (BR4)</td>
<td>610-145 cal. BP</td>
<td>13</td>
</tr>
<tr>
<td>Bridge River 3 (BR3)</td>
<td>1275-1261 cal. BP</td>
<td>29</td>
</tr>
<tr>
<td>Bridge River 2 (BR2)</td>
<td>1552-1326 cal. BP</td>
<td>17</td>
</tr>
<tr>
<td>Bridge River 1 (BR1)</td>
<td>1797-1614 cal. BP</td>
<td>7</td>
</tr>
<tr>
<td>Pre-Bridge River (Pre-BR)</td>
<td>2538 cal. BP</td>
<td>1</td>
</tr>
</tbody>
</table>

The second phase of Prentiss’ research was modelled after Hayden’s, with the goal being to sample at least two small, medium, and large size houses as a way to analyze possible relations between house size and elite status. At Keatley Creek, Hayden excavated entire or almost entire house floors but Prentiss decided to take a different approach. Within the housepit depressions she conducted magnetometry, a remote sensing application that recorded the underground anomalies created by activity areas and their associated cache pits and hearths. Rather than conduct full-scale excavations she was able to use the magnetometry results to target specific activity areas and sample them using long, narrow excavation trenches (Prentiss et al. 2008, 2009, 2010).

In the 2008 and 2009 field seasons Prentiss and colleagues tested several housepits at the Bridge River site. Her techniques were similar to those employed by Hayden during his big Keatley Creek excavations, minus the full-scale excavation blocks. Six houses were selected and tested according to their size (two small, two medium, two large). Three trenches were strategically placed in each house depression, staked directly over activity areas that were originally identified through the magnetometry. The trenches were further divided into 5.x.5
meter squares; and during excavations the crews used trowels, brushes, and bamboo sticks to remove sediment from each square separately according to 5 centimeter levels. Artifacts identified in situ were mapped and collected individually. All other debris was sifted through 1/8 inch screens and any artifacts collected from the screens were bagged separately according to excavation square and level.

The excavations yielded many artifacts and ecofacts that were to be expected, demonstrating that occupants of the village spent much of their time hunting, cooking, creating buckskin hides and baskets, and manufacturing stone tools, while subsisting mainly on salmon and deer. However the excavations also revealed some surprising information. Unlike houses at Keatley Creek, which for the most part contain the most recent stratified floor and roof deposit, many houses at the Bridge River site contain a complex series of stacked floor and roof layers, many of which are bisected by cache pits and post holes associated with overlaying floors. Rather than remove old floor and roof debris to construct new houses, as they did at Keatley Creek, occupants of Bridge River houses collapsed the dilapidated roofs and proceeded to build on top of them.

**Housepit 54**

One of the pithouses excavated during the 2008 field season was HP 54, which is located in the northern half of the site, about 20 meters in from the edge of the terrace slope (Figure 5.2). The flat surface of this house is just shy of 12.5 meters in diameter, so relative to other pithouses in the Mid-Fraser, it would be approximately medium in size. Housepit 54 is one of the houses with extremely complicated stratigraphy. At the time excavators, working in narrow trenches,
were able to identify thirteen separate floor surfaces, many of which were thin and fairly ephemeral, recognized only because of the crew’s keen eyes and deft hands (Figure 5.3). Some of the more interesting artifacts recovered from the house included spindle whorls, stone and glass beads, and a nephrite adz. The faunal assemblage consisted mainly of salmon and deer bones, but analysts were also able to identify beaver and mink (Prentiss et al. 2009), which were likely trapped for their hides but may have also been utilized for their meat. Beaver teeth and bones were also collected and carved into various tools, ornamental items, and gaming pieces (Teit 1900, 1906, 1909).
Following the field season five radiocarbon samples from HP 54 were processed (Prentiss et al. 2009). The oldest deposits, floors twelve (stratum IIk) and thirteen (stratum III) were not dated. A radiocarbon sample from floor eleven (stratum IIj) was processed and it dates to 1380±37 BP, placing it within the Bridge River 2 occupational period. A wood beam fragment was collected from the roof deposit (stratum Vd) two strata above floor eleven and it dates to 1438±36 BP. At first glimpse this appears to be chronologically backwards, but in actuality it is within the same calibration range as the floor deposits beneath it. Two other processed radiocarbon samples are associated with floor seven (stratum IIf) and roof three (stratum Vb) and they date to 1222±35 BP and 1219±35, respectively. These strata bracket several others and place at least five of the occupations squarely in the Bridge River 3 period, the time during which the village was at its peak. The very top floor (stratum II) was not dated; however, a number of European trade items were recovered from this context, including glass trade beads and several miscellaneous metal objects, placing this occupation, at very least, within the proto-historic time frame and the Bridge River 4 occupational period.
In the years following the fieldwork at Bridge River the data were used to produce several academic articles (e.g. Prentiss et al. 2012; Prentiss et al. 2014), professional conference presentations (e.g. Carlson 2010a; Smith et al. 2010) and theses (e.g. Carlson 2010b; Reininghaus 2011), prompting Dr. Prentiss to resume work at HP 54 in the future. The initial fieldwork yielded insightful information, so much so, that she wanted to learn more about the house, thus began developing plans to conduct a more full-scale excavation. Her intentions were to excavate the entire housepit over the course of a three year period and use the data to analyze the socioeconomical and political changes that occurred throughout the house’s history.
Dr. Prentiss was awarded a National Endowment of the Humanities grant in the fall of 2011 and then in the summer of 2012 she held the first of three field schools at HP 54. That season she and her crew were able to excavate a large portion of the first occupation (Figure 5.4). From the deposit they recovered a large assemblage of lithic artifacts, faunal remains, and European trade items, all of which are included in this research and are described at great length in subsequent chapters. Meanwhile, Prentiss had the opportunity to date a radiocarbon sample collected during the 2008 excavations. It was associated with the roof deposit of the recent excavations and turned out to be around 112±25 cal. BP, placing the occupation well within the Fur Trade Period (Prentiss 2013). The second field school was held during the summer of 2013 and the final one is scheduled for the summer of 2014. Results of these excavations are beyond the scope of this research so are excluded from all analyses and discussions.

Figure 5.4. HP 54, completed 2012 excavations. Photograph by Anna Marie Prentiss.
The S7istken Site

The S7istken Site is a small late-prehistoric village situated on a terraced slope, approximately .5 kilometer above Bridge River, and located roughly 3 kilometers north of the Bridge River village (Figure 5.1). It rests on a terrace between two drainages, with a natural spring occurring 25 meters to the north and a small alpine lake due east, making the direct environmental context substantially different from that of the surrounding landscape. Densely distributed across the site is a combination of birch and aspen trees, with an understory of primrose, willow, alder, and Oregon grape. Just beyond the periphery of the site, the landscape lacks shallow water tables and is much more arid, consisting of sparsely distributed ponderosa pine, with an understory of various low scrub species, along with mariposa lily, Saskatoon, and prickly pear cactus.

Survey during the 2010 field season revealed that the S7istken Site contains 8 housepits and 14 external pit features (Figure 5.5). Pithouses range substantially in size, with the largest being approximately 10.5 meters in diameter and the smallest being around 5.2 meters in diameter. Several of the houses have extremely high and wide rim deposits, suggesting possible long-term use and occupation. Pithouse 1 is the largest house and is somewhat isolated from the rest on the edge of the western drainage. To the north-east of Pithouse 1 is a cluster of five houses (Pithouses 2, 5, 6, 7, and 8); and in the southern most reaches of the site are two small houses (Pithouses 3 and 4). Another cluster of pithouses are located about 80 meters below the terrace, near the main road, and appear to be part of a separate site.

Fourteen external pit features (EPFs) are distributed throughout the site but most are concentrated in the central region between houses clustered on the north-east and southern portion of the site. During the 2010 field season only one EPF was tested (EPF H), which
proved to be a large cache pit about 2.9 meters in diameter. Other EPFs on the site are likely cache pits or roasting features, though future testing is required to confirm their function.

Figure 5.5. Map of the S7istken site.
Housepit 1

House pit 1 is the largest pithouse of the S7istken village. It is approximately 10.5 meters in diameter and is located on the very northern edge of the site, not too far from the fresh water spring. Upon our initial test excavation in 2010 we identified a single floor and roof deposit in the strata. In 2011, additional excavation work was conducted at HP 1, only this time, we excavated a one meter wide trench that ran from the center of the house through the edge of the southern rim. In this excavation, we identified an additional floor and roof deposit, discovering that in total the house had two separate occupations (Figure 5.6). A central fire hearth/roasting feature was revealed to be associated with the oldest occupation; and in the south rim, associated with the second occupation, was a cache pit. At the bottom of the feature was some of the original food remains, including articulated salmon skeletons and butchered deer bones. It also contained what appeared to be a glass trade bread fragment, suggesting that at very least, the occupation dated to the proto-historic period. In addition to the major features we identified two post holes in the southern rim of the house, which would have held posts used to secure the outer edge of the roof. A third post hole was also identified in the center of the house and it would have supported one of the main central roof posts.

Additional excavation work was conducted in HP 1 during the 2012 field season, which was conducted in much the same way as Prentiss’ excavation of HP 54 of the Bridge River site. HP 1 was placed within the main site grid and was divided up into four quadrants or blocks. Each block was further divided into 1x1 meter excavation units and each excavation unit was tied into the main site grid through its SW corner, designated according to their specific northings and eastings. All the excavation units were divided into four .5x.5 meter squares and each of these were labelled according to its location in the larger excavation unit, as either the
Figure 5.6. Housepit 1, east wall profile.
NE, NW, SE, or SW quad. The materials from each square were excavated separately in 5 centimeter levels using trowels, brushes, and bamboo sticks. Upon identification artifacts were mapped *in situ* and collected separately and all other materials were sifted through 1/8 inch screen. Artifacts recovered from screens were bagged separately according to each designated square and 5 centimeter level.

During this season, approximately seventy-percent of HP 1 was excavated; and results and discussions are provided in detail in Chapters 6 and 7. In sum, HP 1 does not have a contact period occupation as I had originally hypothesized. During the course of our excavation we recovered no Euro American artifacts and results of additional radiocarbon analyses demonstrate the two occupations occurred back-to-back, between 343 and 305 cal. BP, respectively. The “glass bead fragment” now appears to have been something that intruded into the shallow deposit. Nevertheless, these data are still important for establishing a basis from which to compare the contact period assemblage of HP 54 of the Bridge River Village; and independently they provide a snapshot into the socioeconomics of a household occupied during the late period. As stressed before this is a period in which archaeologists have very limited knowledge.

Interestingly the two HP 1 occupations differed significantly in layout (See the Chapter 6, *Intra-Household Analyses* for more details). During the first occupation there was a central fire hearth/roasting feature and an earthen sleeping bench constructed into the eastern side of the house. We were not able to identify cache pits associated with this occupation so it is likely that occupants were storing their food above ground in wooden boxes, or outside, possibly in one of the many external pit features (EPFs). In the second occupation the house underwent fairly extensive reconstruction. The earthen bench on the eastern side of the house was filled in with dirt and excavated directly into it was a roasting feature and a cache pit; and two additional cache
pits identified in the south and west rims. In total, four cache pits were identified, including the one excavated during the previous field season. At least two of the cache pits were associated hearths and in all likelihood they mark separate domestic areas. In the northwestern quadrant of the house was a conglomerate of amorphously-shaped thermal features, which appeared to have been a place for food preparation. Faunal and lithic artifacts were also collected during the excavation and results of these analyses are described in Chapters 6 and 7.
As described in previous chapters, throughout the Pacific Northwest most socioeconomic activities were organized around households (Ames 2006; Gahr et al. 2006; Rousseau 2004), including operations associated with trade, subsistence, tool production, and craft specialization. For this study I evaluate presence of social ranking in late period and Fur Trade Period households in the Mid-Fraser. In particular I am looking for evidence of active participation in regional trade, presence of material-based wealth, and involvement in competitive feasting activities (Hayden 2000b; Hayden et al. 1996; Hayden and Schulting 1997; Kennedy and Bouchard 1978; Romanoff 1992a, 1992b; Teit 1900, 1906, 1909). While analytical approaches to these studies are described in Chapter 4, this chapter presents the results. Section one of this chapter reviews the hypotheses and derived archaeological expectations; and section two provides the results, which are further divided according to inter-and-intra household studies. Within these sections I also provide brief interpretive narratives.

Hypotheses and Archaeological Expectations

Two hypotheses are tested for this research, focusing on socioeconomics and potential organization of late period and Fur Trade Period households. Statements in both address potential changes to socioeconomic and sociopolitical structures resulting from the Fur Trade, particularly the development of social ranking as described in ethnographic literatures (Teit...
1900, 1906, 1909). Previous research suggests that this form of social ranking can be traced back to the big village period of approximately 1200 years ago (Prentiss et al. 2011, 2012), or even earlier (Hayden et al. 1996), though it is possible that some of the ethnographic patterns developed during the colonial period and are not actually remnants of the deeper past.

To summarize, hypothesis one states that there was cultural change throughout the course of the different periods. Although social ranking existed during the late prehistoric period, households established during the late period, after an approximate 300 year hiatus of winter village occupation, were relatively egalitarian. Social ranking as described in the ethnographic literatures did not develop until later in the colonial period. Conversely, hypothesis two states that there was cultural continuity. According to this statement households established during the late period show evidence for social ranking as described in ethnographic literatures and are continuations of patterns that existed during the late prehistoric period of approximately 1200 years ago.

**Hypothesis One: Culture Change**

Upon re-establishment of winter villages during the late period, households comprised of single and multifamily units were relatively economically independent and egalitarian, with limited wealth differentiation, and status based primarily on gender, age, and achievement distinctions. European contact brought about a qualitative transformation of household socioeconomics and village relationships. Trade networks once functioning to move important subsistence items and lithic raw materials transitioned into supporting the new trade economy. As trade items poured into the region and households actively participated in the Fur Trade, individuals and houses consolidated their power, taking over trade and other resources. This
resulted in development of achieved and hereditary ranking status, increasing intra household competition, sharp wealth differentiation, and the start of competitive feasting outlined in ethnographic literature (Teit 1900, 1906, 1909). Intra village and household competition resulted not only in differential access to trade items, but also to important food resources.

**Expected Supporting Evidence**

- During the pre-contact period individual family units within households will have similar domestic activity areas reflecting everyday economic activities. There will be little evidence of wealth distinctions between family groups. After contact, activity areas of family units will have evidence for rising wealth distinctions resulting from differential success in the trade economy.

- Recovery of trade items from contact period occupations indicating direct and indirect contact and participation in trade. Trade items will be disproportionally represented in activity areas of select wealthier families.

- Increase during the contact period in fur-bearing animals such as beaver and muskrat, along with hide production tools, such as scrapers, all reflecting participation in the Fur Trade economy. Hide production gear should be disproportionally represented in activity areas and houses of wealthier families.

- Activity areas during the contact period suggesting production and use of nephrite tools in association with more affluent households or household members.

- Unequal distribution of high-ranked subsistence resources (e.g. Chinook salmon, deer, mountain goat) will be associated with emergent inequality during the contact period.
• There will be intra-household variability in bone processing during the contact period occupation because of differential access to resources. Less affluent people had limited access to large prey resources, so were required to process bones more severely to remove marrow and grease. More affluent people, with full access to large prey resources, had little need to process bones highly.

• There would have been florescence of competitive feasting during the contact period, recognized through increase in cache pit volume used to store amassed surplus, increase in food processing and preparation, and increase in elite trade items. Ceremonial use of dogs may be evident through inclusion in refuse contexts of non-consumable elements such as lower limbs, skulls, and other bones.

**Hypothesis Two: Cultural Continuity**

Upon reemergence of winter villages during the late pre-historic period, achieved and hereditary ranking already existed, having been maintained even after major village abandonment phase that started around 1100 BP. Thus European contact brought about little structural change to household socioeconomics and political relationships, the main difference being incorporation of new trade opportunities into the existing socio-economy.

**Expected Supporting Evidence**

• Activity areas will reflect intra-household variability in access to wealth items during the precontact and contact periods. The main difference will be European trade items associated with more affluent household members during the contact period.
• Differential access to highest ranked food resources (e.g. Chinook salmon, deer, mountain goat) will continue across the boundary between late prehistoric and early contact periods. Those lacking access to these foods had to supplement their diet with lower ranked resources, such as small-sized mammals (e.g. rabbit, squirrel, pine nuts, etc.).

• Traditional feasting practices will continue unchanged other than, perhaps, in scale, across the transition. Access to European goods could have led to an intensification of existing traditions of feasting and associated ceremonies like potlatching (e.g. Kennedy and Bouchard 1978) similar to that which occurred in many coastal groups (Fisher 1992).

**Inter-household Assemblage Comparisons**

Inter-household analyses are conducted to assess change in household socioeconomic organization through time during the late period and Fur Trade Period; and the main purpose is to evaluate evidence for social ranking. According to descriptions by Teit (1900, 1906, 1909) and others (e.g. Romanoff 1992b), social ranking persisted during the ethnographic present, maintained by active trade, control over food and other resources, and through competitive feasting activities. This created material-based wealth distinctions, reflected by unequal access to certain food resources, lithic raw materials, and prestige items. For this portion of the study I investigate the degree to which households participated in trade, the level at which material-based wealth persisted, and the frequency at which households engaged in competitive feasting activities, all during the late period and Fur Trade Period. Results of these analyses are described in this section, which is further divided into three parts: Assessing Participation in Trade, Social Ranking and Presence of Material-Based Wealth, and Feasting.
Assessing Participation in Trade

By approximately 2400 years ago regional trade networks were established across the Plateau region, used to transport everything from lithic raw materials to preserved food items from the coast all the way into the deepest interiors of western Montana (Hayden and Schulting 1997). According to Hayden (2000b; Hayden and Schulting 1997), at the height of the big village pattern in the late prehistoric period, elites controlled these networks and used them to transport prestige goods across the region and to maintain social alliances. Trade was a crucial mechanism by which social ranking persisted during the late prehistoric period. If social ranking indeed existed in the late period or Fur Trade Period I expect that trade was a driving force during those times as well.

The portion of this study evaluates the level at which households participated in trade during the late period and Fur Trade Period. Households involved in trade should reflect two things: that they had access to non-local goods, and that they actively produced items for exchange. Evidence for these is assessed for this study, results of which are described below.

Access to non-local goods

One measure of how intensively households participated in regional trade is the degree to which they had access to non-local goods. Of the imports described in the ethnographic literature (Teit 1900, 1906, 1909) the most common, according to Mid-Fraser archaeological assemblages, include lithic raw materials and marine shells (Hayden 2000b; Hayden and Schulting 1997). As discussed previously, the three non-local materials utilized by the St’át’imc were pisolite, Hat Creek Jasper, and obsidian. Pisolite and Hat Creek Jasper sources are situated in the interior Plateau, east of the study sites. Obsidian sources are all located outside the region,
and the nearest one is approximately 200 kilometers away, not too far from the coast. Marine shells come from the coast as well. They, along with obsidian, likely arrived into the territory from one of two major points of entry (Teit 1906:232), either through the Jervis Inlet, or, Howe Sound route.

Table 6.1 and Figure 6.1 provide results of density measures of non-local items for each assemblage (\(\sum\) non-local items per class/m\(^3\)). According to these totals it appears that density levels of non-local items go down during the second occupation of HP 1, and then they go back up again in HP54 (except for marine shell), suggesting that the Fur Trade Period household was more active in regional trade than the others.

Table 6.1. Density measures of non-local items in each household assemblage.

<table>
<thead>
<tr>
<th>counts/m(^3)</th>
<th>HP 1_1</th>
<th>HP 1_2</th>
<th>HP 54</th>
</tr>
</thead>
<tbody>
<tr>
<td>jasper_hat creek</td>
<td>0.59</td>
<td>0</td>
<td>5.63</td>
</tr>
<tr>
<td>pisolite</td>
<td>1.76</td>
<td>0.72</td>
<td>8.23</td>
</tr>
<tr>
<td>obsidian</td>
<td>3.51</td>
<td>1.45</td>
<td>6.66</td>
</tr>
<tr>
<td>marine shell</td>
<td>0.59</td>
<td>0.29</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>6.45</td>
<td>2.46</td>
<td>20.52</td>
</tr>
</tbody>
</table>
Figure 6.2 presents the data according to percentages. Interestingly, these results show something a bit more dramatic, demonstrating that in HP 54, ratios of pisolite and Hat Creek jasper go up, but ratios of obsidian and marine shells actually go down. If we are to take these figures at face value, it appears that interior non-local items were exchanged more frequently during the Fur Trade Period, while conversely, coastal non-local items were exchanged less frequently. To further assess these data, the items were sorted according to interior non-local (pisolite and Hat Creek jasper) and coastal non-local (obsidian and marine shells) classes. Presented in Figures 6.3 and 6.4 are the results, given as density measures ($\sum/m^3$) and total percentages for each classification, respectively. The density measures yielded the same results as the others, demonstrating that total quantities of non-local items go up in HP 54, but interior items go up significantly more than coastal items. Percentages also reflect the same pattern, and in HP 54, ratios of interior non-local items increase while ratios of coastal non-local items decrease.

Figure 6.2. Non-local material distributions by percentages.
Based on these data it appears that all households were involved in regional trade at least to some degree. Occupants of HP 1 had access to all the non-local items, but for some reason availability of Hat Creek jasper appears to have been limited, even though this material comes from within the interior Plateau. Quantities of all non-local goods do go up significantly in HP
54, so generally speaking, it looks as though these occupants were more active in exchange than occupants of HP 1, but how much more? To assess this, a non-local material abundance index \((\sum_{\text{non-local items}}/\sum_{\text{non-local and local items}})\) was used, results of which are presented in Figure 5.6. Here we see that non-local material abundances are low in all three assemblages, and although they do increase slightly in HP 54, according to these calculations, it appears that non-local materials played an insignificant role in household economies, and that perhaps households were not particularly active in trade.

![Figure 6.5. Non-local abundance measures per household.](image)

Alternatively, fine-grained lithic materials are abundant in the study area, thus it is possible that exotic raw materials simply were not in high demand, but instead were brought into the area as “riders” or add-ons with other trade goods. Fisher (1992:7) describes this as the process by which some European trade items such as glass beads got distributed around the region. Interesting information is revealed from the non-local items nonetheless, demonstrating
that during the Fur Trade Period there was possible increase of interior exchange and drop in coastal exchange. At the outset, it seems difficult to accept that interior to coastal trade declined during the Fur Trade Period. However, interior posts such as Fort Kamloops were well-established by the time HP 54 was occupied, so trade may have been concentrated around the posts and surrounding areas, bringing larger quantities of interior non-local materials to the community, while items coming in from the coast were effectively cut off. To understand the basis of this patterning more fully, we first must evaluate other measures of trade.

Production of Trade Items

Households involved in trade and with access to non-local goods would have also produced exchange items of their own. Assessment of the degree to which households manufactured things such as dried salmon and animal hides is another way to evaluate trade, the behaviors of which can be measured archaeologically through correlations of lithic tool and faunal data. For example, households that intensively produced dried salmon will be distinguished by having large quantities of salmon bones and lithic butchering tools in their assemblages, while households that produced mass quantities of animal hides will be distinguished by having large numbers of mammal bones and scraper tools.

For this study I analyze lithic tools and their associations with mammal and salmon remains. All the tools were sorted according five main functional classes, first described by Harris (2012): Hunting/Butchery, Heavy Duty (wood, bone, and, antler), Light Duty (hide, plants, and other soft fibers), Tool Production, and General Purpose (see Appendix A for a full inventory of tools within each class). General Purpose tools include all lithics that were expediently made and used short-term, identified as such by lack of formal retouch or extensive
use-wear (Andrefsky 2005). These tools are assumed to have been used during day-to-day domestic activities, under conditions in which tasks were conducted on impulse. General purpose tools are also assumed not to have been transported and used for tasks outside of the houses. Conversely, all other tool classes (Light Duty, Heavy Duty, etc.) include formally-made and curated tools, identified as such by extensive retouch and use wear. These tools are more likely to be associated with scheduled and more formal activities, such as hunting and trade item production. Since they are easier to refurbish and have longer lifespans, formal tools are also assumed to have been more transportable, thus they were used for hunting and field butchering activities.

To assess manufacture of trade items, tool class abundance indices (e.g. $\sum$ light duty tools/$\sum$ all tool classes) and a mammal abundance index ($\sum$ mammal/$\sum$ mammal+fish) were calculated, and results of these are presented together in Figures 6.6-6.9. Ornamental lithics classes were excluded from tool class totals and invasive rodents and other non-fur bearing animals were excluded from mammal totals.
Figure 6.6. Light duty tool abundance compared to mammal abundance.

Figure 6.7. Tool production abundance compared to mammal abundance.
Figure 6.8. Hunting and Butchery tool abundances compared to mammal abundance.

Figure 6.9. General Purpose tool abundances compared to mammal abundance.

In Figures 6.6, 6.7, and 6.8 we see that light duty tools, tool production, and hunting and butchery tool abundances all go up substantially in HP54, during the Fur Trade Period, along with mammal abundances, while Figure 6.9 shows that General Purpose tool abundances go way
down in HP 54. According to these calculations, it appears HP 1 occupants were utilizing more general purpose tools and salmon resources than HP 54 occupants, who were utilizing more formal tools and mammalian resources. Based on the assumption that general purpose tools were expedient, and would have been utilized for day-to-day subsistence activities, it appears that HP 1 households mainly processed salmon, and that it was for basic subsistence. On the other hand, while HP 54 occupants surely processed mammal for basic subsistence, high abundances of formal light duty and hunting and butchery tools suggests that at least some mammal-related goods were produced for use beyond the domestic sphere.

Intensive hide production activities might account for high tool and mammal abundance indices in HP 54. One way to test this is to look at abundances of specific tools that might be associated with hide processing. Assuming that projectile points, knives, bifaces, and slate scrapers were the most commonly used tools for the entire hide production process, abundance indices were created to reflect hunting and production activities. The first index measures the abundance of hunting and butchery as \( \frac{\sum \text{Hunting and Butchery Tools}}{\sum \text{Hunting and Butchery Tools} + \sum \text{General Purpose Tools}} \) (Figure 6.10), founded on the argument that this index is distinguishing formal hunting and butchery activities (i.e. Hunting and Butchery Tools), some of which occurred outside of the house, from everyday food preparation (i.e. General Purpose Tools) activities that occurred inside of the house. The second index measures the frequency of hide production tools as \( \frac{\sum \text{slate scrapers}}{\sum \text{General Purpose Tools} + \sum \text{Light Duty Tools} + \sum \text{Hunting and Butchery Tools}} \) (Figure 6.11), based the assumption that slate scrapers were most commonly utilized for hide production (Prentiss 2013). Both artifact abundance measures are displayed with mammal abundances, and in both instances, abundances of hide processing tools and mammal remains go up in HP 54, during the Fur Trade occupations. According to these
comparisons, HP 54 was much more active in formal hunting, butchering, and hide production activities than were the HP 1 households.

Figure 6.10. Formal hunting and butchery tool abundances compared to mammal abundances.

Figure 6.11. Slate scraper abundances compared to mammal abundances.
**Synthesis and Summary**

The above section details analyses of potential trade activities in HPs 1 and 54. Evaluated were degrees to which households had access to non-local items and produced exchange goods such as dried salmon or animal hides. Abundance indices were used for both analyses, and were calculated to measure presence of non-local goods and evidence for exchange goods production. According to these analyses, regional trade occurred during both periods, evidenced by non-local goods present in all assemblages. However, non-local item abundances go up significantly in HP 54, suggesting that regional trade increased during the Fur Trade period. An interesting pattern also emerges during this period, showing that abundances of non-local raw materials from interior locales go up, while coastal items such as marine shells and obsidian go down. During the time in which HP 54 was occupied, it appears that more traditional items were traded from interior areas than they were from the coast. Housepit 54 was occupied ca. 1852-1858 (Prentiss et al. 2013), and by then interior posts were established east and south of the study sites (Fisher 1992). Euro-American settlers from Kamloops and other post locales, travelled regularly to Fountain and Six Mile Rapids to trade with local Aboriginal communities (Drake-Terry 1989). Based upon our findings, it appears that trade was likely concentrated around Fort Kamloops and surrounding areas, which brought increasingly more traditional goods in from the east, while at the same time, traditional goods that came from the coast declined.

Abundance measures were also calculated for trade goods production, and these indices were used to track abundances of lithic tools and mammalian resources through time. According to our figures, in both HP 1 households, occupants relied more heavily on salmon resources than they did mammalian resources. Based upon high abundances of general purpose tools, it appears
that salmon was processed for daily subsistence, rather than for trade. Conversely, in HP 54 occupants relied heavily on mammalian resources and utilized formal tools associated with hunting, butchering, and hide production activities. Surely, they processed mammals for day-to-day subsistence, but concentrated manufacture of slate scrapers and other light duty tools suggests they were also involved in intensive hide production activities. Ethnohistoric literature documents that the St’át’imc sold dried salmon to the Kamloops settlers (Drake-Terry 1989; Smith 1998). In HP 54, it appears that trade-related activities were primarily focused on hide production, but this is not to say that dried salmon was not a trade item during that time. It means that dried salmon was likely not a trade item for HP 54.

**Social Ranking and Presence of Material-Based Wealth**

As discussed in Chapter 6, evaluating social ranking and presence of material-based wealth archaeologically is challenging. Especially for this study in which there are single cases for the late period and Fur Trade period. That said, inter-household analyses of rank and wealth are beyond the scope of this research, thus I cannot assess whether separate household units were socially ranked or whether material items were prestigious in the sense that only wealthy households had access to them. Nonetheless, material-based items can be assessed for potential changes in symbolic significance through time, and the way they were used for social signaling during the late period and early colonial period. If the Fur Trade indeed had a significant effect on households it is expected that material items became more important as possessions used to assert people’s position in the market economy and within the community (Fisher 1992). Analysis of intra-household rank and wealth are within the parameters of this study. These are evaluated and are described in the following subchapter.
A suite of prestige items associated with high ranking households in the Mid-Fraser is established by Hayden (2000a) and is used for this study (see Appendix B for list of prestige items). Analysis of material-based wealth is based on the findings of Prentiss (Prentiss et al. 2012; Prentiss et al. 2013) that prestige items are correlated with faunal narrowness and prestige food remains such as deer and dog (see Chapter 4 for further discussions). She interprets this as elite families having unlimited access to highly-ranked resources, such that they did not have to supplement their diets with small mammals and other low-ranking resources. This is unlike Hayden (1997a), who argues that faunal richness is associated with prestige because it implies unlimited access to a diversity of resources. Conversely, Prentiss suggests that faunal richness is actually a product of expanded diet-breadth due to limited access to highly ranked resources (i.e. more low-ranked resources in the diet). Abundance of high-ranking animal elements may also reflect that search costs for large prey animals are relatively low, meaning that local population densities of deer, goat, and others, were reasonably high (Winterhalder and Smith 2000).

The first step in assessing rank and material-based wealth is to calculate resource diversity and equitability measures for each household. I utilize approaches described by Betts and colleagues (2004) and lump overlapping taxa categories into one general taxon (see also Grayson and Delpech 2002:1440). For example, the HP 54 has an indeterminate Artiodactyla classification, and specimens from this could potentially go into any number of ungulate categories. So, to alleviate this problem and be able to include all artiodactyla data, I use a general ungulate category (See Appendix B for a complete taxa inventory). The Shannon-Weaver (1949) formula is used to calculate diversity and equitability. Diversity is calculated as $H'=-\sum(p_i \ln p_i)$, where $p_i$ is the relative proportion of each taxon in an assemblage (Reitz and Wing 2008:247). Equitability is calculated as $V'=H'/\log e S$, where $S$ is the total number of
identified taxa for each assemblage. Results for this measure range from 1 to 0. One reflects even distribution of all taxa and zero reflects uneven distribution of taxa. Based on Prentiss’ findings from Bridge River 3 period households, wealthier households should have low richness and low evenness scores, suggesting they had full access to all high-ranked resources and did not have to diversify their diet to include low-ranked resources. Conversely, poorer households should have high richness and high evenness scores, reflecting a diversified diet due to limited access to high-ranked resources.

Results of these calculations are presented in Figure 6.12. According to these measures all households had fairly low diversity and equitability scores. Occupants apparently relied on a relatively low number of taxa, not all of which made equal contributions to the diet. General comparisons of the three assemblages show that diversity and equitability actually go up through time, whereby in HP 54, the diet was a bit broader and resources were more evenly distributed. Resource diversity is commonly correlated to sample size (Grayson 1984), so to test for potential bias associated with this, the data are presented in a scatter plot (Figure 6.13). Here we see that sample size has no bearing on research diversity. In fact, the data appear to be negatively correlated, though the samples are inadequate for formal statistical tests. Since HP 1 has lower diversity and equitability scores, it appears that at very least search costs for high-ranked prey were relatively low, as compared to HP 54.
To further evaluate material-based wealth I developed abundance measures for prestige raw materials ($\Sigma \text{obsidian} + \Sigma \text{nephrite} + \Sigma \text{pisolite} + \Sigma \text{Hat Creek jasper} / \Sigma \text{all raw materials}$), prestige items ($\Sigma \text{prestige items} / \Sigma \text{prestige items} + \Sigma \text{lithic items}$), and prestige foods ($\Sigma \text{Odocoileus sp.} + \Sigma \text{Ovis Canadensis sp.} + \Sigma \text{Oncorhynchus tshawtscha} + \Sigma \text{Canis sp.} / (\Sigma \text{all Oncorhynchus}$).

Figure 6.12. Resource diversity and equitability per household.

Figure 6.13. Sample size plotted against diversity scores.
Prestige items are all goods that were potentially used for social signaling, including Euro American trade items, which are part of the HP 54 assemblage. Prestige foods are based upon ethnographic data (Kennedy and Bouchard 1987; Romanoff 1992a, 1992b; Teit 1900, 1906, 1909) and previous archaeological research (Hayden 2000b; Prentiss et al. 2012) (see Appendix C for a list of all prestige items and foods).

Results of the calculations are presented in Figure 6.14, along with the resource diversity measures. Here it shows that all of these variables go up with time, including resource diversity. This does not follow Prentiss’ findings that in high-ranking households prestige items and low diversity will correlate, though we have to consider that her study was of houses that were occupied during the late-prehistoric period. So it may be that the findings reflect underlying historical conditions specific to that time (Prentiss et al. 2012). Nonetheless, since they do not correspond to other prestige indicators, it is possible that prestige goods in HP 54 may not be reflecting elite status per se, rather, they may be signifying changing perceptions of material items during the Fur Trade period, whereby owning these items became an important way to assert one’s position in the community. As for HP 54, the items may have been displayed as a way to “show off” their success in the market economy.
We see that all prestige variables go up in HP 54, along with resource diversity and equitability. In general, it appears that HP 54 occupants had more items associated with prestige than did HP 1 occupants, but on the other hand, they had an extended diet breadth that included low-ranked resources. Before drawing final conclusions, material-based wealth is evaluated in one last way. According to previous research, during the late-prehistoric period, high-ranking families in the Mid-Fraser had access to the choicest deer parts, which are those that provide the most kilocalories for each hour of processing (e.g. Carlson 2011). So, if HP 54 was an elite household, it is expected that they too would have had access to high utility elements. According to Madrigal and Holt (2002:749) the elements that yield the highest kilocalories per hour of processing are the femur, thoracic, and pelvis. Based upon this, a high utility abundance index was created to measure distribution of these parts through time, as

\[
\frac{\sum \text{femur} + \sum \text{thoracic} + \sum \text{pelvis}}{\sum \text{identifiable elements}}
\]

These calculations include ungulates only, results of which are presented in Figure 6.15, along with a general prestige abundance index (\(\frac{\sum \text{all prestige items}}{\sum \text{all prestige items} + \sum \text{all lithics} + \sum \text{all food items}}\)). Here it shows that
abundance of high utility ungulate parts drops significantly in HP 54. Once again, these figures demonstrate that prestige items in this household to not correlate with other typical indicators.

Figure 6.15. High utility ungulate element abundance compared to general prestige abundance.

Considering that the HP 54 household was more dependent on ungulate resources than were either HP 1 households, it is interesting that they had less access to high utility parts. Rather than underlying social factors associated with meat access, this pattern may possibly be reflecting something else. Based on previous observations (Alexander 1992b; Binford 1978; Romanoff 1992b) low percentages of cranial and axial parts in an assemblage suggests people field processed carcasses and brought only select items back to residential settlements. Generally this was done under conditions of long distance hunting forays, during which, elements brought back to home bases depended on their overall transport costs. Long-distance travel for hunting implies that local prey populations were depressed, usually for one of two reasons: that they were low due to natural population cycles, or, that they were low due to over hunting (Broughton 1994).
Following Prentiss and colleagues (2013, 2014), an index was created to measure abundance of cranial and axial parts (\( \sum \text{cranial + axial elements}/\sum \text{all identifiable elements} \)) through time, which can serve as a proxy for hunting travel distance. These abundances are presented in Figure 6.16, along with general prestige abundances. Results demonstrate that cranial and axial parts go down significantly in HP 54, so it appears that so-called decline in high utility parts is actually tied to decline in overall axial elements. In looking at limb elements from the HP 54 assemblage, high-utility upper limbs account for 11 percent of the overall assemblage, which is significantly more than the HP 1, occupation 1 assemblage (HP 1, occ.1= 5%) and only slightly less than the HP 1, occupation 2 assemblage (HP 1, occ. 2=14%). Thus, element distributions do not appear to be reflecting limited access to deer resources during the Fur Trade period, instead they may indicate possible changes in logistical hunting strategies.

![Figure 6.16. Ungulate cranial and axial abundances compared to general prestige abundances.](image-url)
Considering there was increased focus on hunting in HP 54, it may be that during the Fur Trade period, local deer populations were depressed due to over predation. As far as we know HP 54 was the only Fur Trade period house at the Bridge River site (Prentiss et al. 2008). There were other occupations throughout the area, but overall populations were relatively low, possibly even lower than populations during the late period, if radiocarbon dates are any indication (Prentiss et al. 2008; Smith and Mattes 2014). Element distributions from HP 1 late period occupations suggest that occupants were hunting within the surrounding area. Since Fur Trade period human populations were likely lower, basic subsistence hunting could not have affected local deer populations that greatly. An alternative explanation for this pattern is that deer populations were impacted by overhunting, possibly due to increased hide production activities during the Fur Trade period. This interpretation is also supported by richness and evenness scores presented above, which suggest that search cost of high-ranking prey may have been higher during the Fur Trade period.

In sum, resource diversity, equitability, and prestige items all increase in HP 54 during the Fur Trade period, while abundances of high utility elements go down. According to our expectations of low diversity and equitability correlated with prestige items and high-utility ungulate elements, none of the households appear to have been high-ranking, at least not on a materially measurable level. Decrease in high-utility elements in HP 54 likely represents changing logistical patterns during the Fur Trade period, possibly due to over predation of local populations. Increase in prestige items in HP 54 does not necessarily imply that material-based wealth developed during the Fur Trade period, per se, because these items may not be prestigious in the sense that their production or distribution was controlled by elites. Although, since we do not have other houses with which to compare we cannot know for certain. Increase
of material items in HP 54 possibly reflect changing perceptions of material items in the Fur Trade period, during which regional trade grew in the interior Plateau, along with abundances of these goods. Over time material items may have been increasingly used for social signaling, becoming tangible ways by which people asserted their positions in society. In HP 54 material items feasibly symbolized successful participation in the exchange economy. During the late period there was may not have been as much need for this form of social signalizing, which is why we do not see as many prestige items in HP 1.

**Feasting**

Feasting is the last thing to be evaluated for the inter-household analyses. Issues of how best to measure feasting archaeologically are discussed at length in Chapter 4. In sum, unless there are known feasting-related items in the assemblage, for example, the copper shields associated with Northwest Coast potlatching, it is very difficult to sort out the difference between ritualistic feasting and other large-scale cooking activities. It is important to assess feasting for this study nonetheless because according to Hayden (1992:550-555, 1995, 2000a:269) competitive feasting was one way by which elites asserted their positions in the community. He draws from local ethnographic literature (Teit 1900, 1906, 1909) and ethnographic literature from areas such as New Guinea (e.g. Hayden and Adams 2004) among others to describe feasting during the late prehistoric period in the Mid-Fraser. However, a careful read through Teit’s (1900:297; 1909:574) ethnographies reveal that the form of potlatching he describes developed sometime around 1880, after it was learned by Shuswap bands near the Carrier and Chilcotin Indians. That said, there is evidence that some form of feasting occurred during the late prehistoric period (e.g. Prentiss et al. 2013). However, in Hayden’s study he uses
ethnographic data as interpretive analogy without considering colonialism and its potential role in shaping ethnographic patterns.

When used appropriately, in conjunction with ethnohistoric literature, Native oral tradition, and archaeological data, to develop testable hypotheses and derived archaeological expectations, ethnographic data are actually extremely valuable to archaeology. Based on what we know from the ethnographic literature (Kennedy and Bouchard 1978; Teit 1900, 1906, 1909; Romanoff 1992b) and previous archaeological findings (Hayden 1992:550-555; Prentiss et al. 2012, 2013), archaeological expectations for potlatching includes excessive amounts of deer bones (Romanoff 1992b), fish heads (Hayden and Adams 2004; Prentiss et al. 2012, 2013) and possibly dog bones (Crelin and Heffner 2000; Cail 2012; Hayden 2000b Prentiss et al. 2013; Teit 1909:579-580) associated with prestige items such as nephrite adzes (Hayden 1992:550-555). According to ethnographic literature (Kennedy and Bouchard 1978; Romanoff 1992b) goat-skin blankets were the only material items given away in feasts. Hayden argues that other prestige items such as nephrite adzes were possible give-away items (Hayden 1992:550-555), though we do not have empirical evidence for it. Nonetheless, wealthy households were the ones that conducted feasting activities (Kennedy and Bouchard 1978; Romanoff 1992b; Teit 1900, 1906, 1909). Thus, those able to do so were arguably wealthy enough also to own prestige items, regardless of whether they were given away.

To evaluate feasting for this study I use the prestige item index from the previous analysis, along with a feasting food abundance index ($\Sigma$deer+goat+dog/$\Sigma$all identifiable taxa) (see Appendix B and C for inventories) and a salmon cranial element abundance index ($\Sigma$salmon cranial elements/$\Sigma$all salmon elements). Prestige items are used in this study, because as stated before, ethnographic data imply that mainly wealthy people threw feasts (Teit 1906). Although
we cannot be certain that these items were given away, households wealthy enough to hold feasts were also likely wealthy enough to own prestige items. If any of the households included in this study were involved in feasting activities, based on ethnographic and archaeological evidence, prestige items, feasting foods, and salmon cranial abundances should all be relatively high. According to Kennedy and Bouchard (1978) and Romanoff (1992b:474-475) goat hair blankets were the main items given away during potlatches. In all assemblages the number of goat elements is low (HP 1:N=1, HP 54:N=3) and there is no indication they were used specifically for hide production. For this reason they are included in the feasting food calculations rather than prestige items calculations.

Results of these calculations are presented in Figure 6.17 and they show that all AI scores are low in the assemblages. Relatively speaking, however, prestige item and feasting food abundances are higher in HP 54 than in the HP 1 occupations, while salmon cranial abundances are higher in the HP 1 occupations than in HP 54. Prestige item and feasting food abundances do correspond through time. In HP 1 they both go down from occupation one to two and then they go back up again in HP 54. Salmon cranial elements do not correlate with the other variables at all. Instead they are relatively the same in both HP 1 occupations and then go way down in the HP 54 occupation.
Overall, HP 1 does not appear to have been involved in any type of ritualistic feasting activities. Although these occupations have higher abundances of salmon cranial bones than does HP 54, these elements do not correspond with other indicators of prestige items or feasting food. Everything here reiterates what we have discovered from the previous analyses that during the HP 1 occupations people were mainly involved in day-to-day domestic food production activities associated with salmon resources. Special feasts could have been held occasionally in HP 1, but for now we do not have the archaeological evidence to support it.

As far as HP 54 goes, this household has higher prestige item and prestige food abundances than the HP 1 occupations, but they have lower salmon cranial abundances. We have already determined that prestige items in this assemblage likely reflect changes in embedded meaning of material items during the Fur Trade period, whereby these goods became significant ways by which people asserted their position in the trade economy. Prestige foods in this assemblage are mainly represented by deer elements and these have already been associated
with intensive production of deer hides. There are some dog bones in the assemblage, but not enough to say for certain that they were raised and eaten during special feasts. It is just as reasonable to suggest that this house maintained dogs and used them for packing and hunting expeditions. Additionally, without correlation of the third variable, salmon head elements, it is difficult to determine whether prestige items and prestige foods can be attributed to feasting. Not that salmon heads are the linchpin for feasting, however, without other lines of evidence, we cannot say one way or another whether feasting occurred in HP 54.

**Synthesis and Summary of Inter-Household Assemblage Comparisons**

In brief, this portion of the study evaluated the degree to which households were involved in regional trade, had material-based wealth, and participated in competitive feasting activities during the late period and early colonial period. Households participated in exchange throughout both periods, though it appears that just prior to the Fur Trade there was more focus on the traditional subsistence economy and on salmon resources. According to HP 1 data, occupants conducted day-to-day activities such as food preparation and tool production in support of their households. By the time of the Fur Trade period, household socio economics evolved, and people shifted away from the traditional subsistence economy to become more involved in the market economy. Intensive hide production in HP 54 reflects this, in addition to evidence that there was pressure on local deer populations, possibly because of over-hunting, despite the fact that human populations were relatively low as compared to earlier pithouse village occupations. By the time HP 54 was occupied, trade was more concentrated in the interior Plateau, around trading posts such as Fort Kamloops. Trade items, Euro American and aboriginal, which
originated from areas near the posts increased in abundance, while items that traditionally came from the coast decreased in abundance.

Presence of material-based wealth was also evaluated for this study. Although there is evidence of material-based wealth during the late prehistoric big village period and in ethnographic literature, it may not have been present during the early colonial period and just prior, at least not in the same way. But to know for certain, in the future we will have to collect data from other Fur Trade period houses. Abundances of material items used for social signaling do increase from the late period to the Fur Trade period, though they do not associate with other prestige indicators. Thus, the embodied meaning of these objects may have been different from that of the late prehistoric big village period, during which prestige items signified high status in the sense that their production and distribution was completely controlled by elites (Hayden and Schulting 1997; Morin 2012). During the Fur Trade period, HP 54 had access to prestige items, and since there is no evidence for craft specialization of goods such as nephrite adzes, there is nothing to suggest that production or distribution of any of these items were controlled by this household. Although we cannot rule out the possibility that HP 54 occupants controlled production and distribution of buckskin hides. In the case of Euro-American trade items such as glass beads, these are more commonly included in Fur Trade period household assemblages than not (Auge et al. 2013), so it is highly unlikely that HP 54 controlled distribution of these objects. Based on our expected signatures for material-based wealth and prestige, it appears that in HP 54 prestige items were used to assert their role in the trade economy, rather than assert their elite status as a household with complete control over production and distribution of these goods. Again, this is unlike Hayden’s (e.g. Hayden and Schulting 1997) concept of prestige items,
which he describes as goods whose production and distribution were under the control of elites, and were available only to wealthier people in the community.

Ritualistic feasting was the last thing to be evaluated for this part of the study. During the late prehistoric period, circa. 1200 BP, and in the ethnographic period there is evidence that feasting of one form or another occurred. However, as far as feasting activities taking place during the late period and Fur Trade period, we do not have the evidence to say for certain. As discussed earlier, special feasting activities could have happened in HP 1 and HP 54, but unfortunately we do not have the data to separate the differences between ritualistic feasting and other intensive cooking activities.

**Intra-household Analyses**

Throughout the Pacific Northwest, during the late prehistoric period, multi-family households demonstrate evidence for intra-household social ranking, suggested by unequal distribution of food resources and material items between domestic spaces (Ames et al. 1992; Coupland et al 2009; Gahr et al. 2006; Hayden 1997a, 2000b). In the Mid-Fraser, evidence for intra-household social ranking during the late prehistoric period occurs in some of the larger houses at the Keatley Creek site (Hayden 1997a, 2000b). Less in known about household organizations during the late period and Fur Trade period, mainly because archaeologists are more focused on earlier phases of Mid-Fraser prehistory. Hayden and Adams (2004) have excavated late period structures at the Keatley Creek site, but their agenda focuses on finding evidence for secret societies, thus our knowledge of basics, such as household organization is relatively limited. Our knowledge of household organization during the Fur Trade period is also fairly limited. Carlson (2006) has conducted research on colonial period households around Fort
Kamloops; and Prentiss (2013) is currently researching a colonial occupation of HP 54 of the Bridge River site, as part of a larger ongoing project. Housepit 54 is included in this study, and as it stands, it is the only well-sampled colonial-period house within peripheral areas of the trading posts.

For this study spatial analyses are conducted to investigate presence of intra-household ranking in HPs 1 and 54. Methodological approaches to this study are detailed in Chapter 4. In sum, organizational layout for each household occupation was assessed by analyzing spatial distributions of artifacts and features within floor contexts. Domestic spaces and activity areas are identified from these distributions; and overall, these patterns reflect household-level socioeconomic organizations. In thinking about the hypotheses, under conditions of hypothesis one, intra-household ranking developed during the Fur Trade period. Thus, late period Housepit 1 households were relatively egalitarian, while the Fur Trade period HP 54 occupation was socially stratified. Archaeological expectations of this include equal distributions of food and other resources in the HP 1 occupations, and unequal distributions of these in the HP 54 occupations. In the HP 54 occupation there will also be evidence for intensive bone processing associated with low-ranking families. According to hypothesis two, intra-household ranking persisted from the late prehistoric period into the late and Fur Trade periods. Under this scenario all households within HPs 1 and 54 were socially stratified. Archaeological expectations of this are unequal distributions of food and other resources in all occupations, along with intensive bone processing associated with low-ranking families. Results of these analyses are described below, in sections divided chronologically according to housepit and occupation.
**Housepit 1, Occupation 1**

HP 1 occupation, occupation 1 dates to 343±23 BP. Features associated with it include a central fire hearth/roasting feature and an earthen bench on the east side of the house (Figure 6.18). Intramural storage features were apparently not utilized at this time. Occupants may have used storage features located just outside of the house, or perhaps they used wooden storage boxes. Artifact distributions across the floor surface are presented in planview maps in Figures 18-23. Mammal bones are mainly concentrated around the central fire hearth, suggesting this resource was processed communally rather than in separate domestic spaces (Figure 6.19). Small mammal bone fragment (∑< 9mm/∑all bone fragments) abundances demonstrate that small fragments are similarly concentrated around the hearth and they too are distributed relatively evenly across the activity area, thus there is no indication of intensive bone processing amongst certain family members due to limited access to mammalian resources (Figure 6.20). Salmon bones are abundant around the central fire hearth but extend out beyond the periphery of the main mammal bone processing area (Figure 6.21). The general pattern is the same, however, and it appears that this resource was processed communally, mainly around the central fire place, rather than in separate domestic spaces. Debitage are clustered in three spaces around the interior periphery of the animal processing area. So, basic lithic reduction was as well relegated to designated activity areas (Figure 6.22).
Figure 6.18. Housepit 1, occupation, 1 planview.

Figure 6.19. Housepit 1, occupation 1, mammal bone distributions.
Figure 6.20. Housepit 1, occupation 1, small fragment abundance distributions.

Figure 6.21. Housepit 1, occupation 1, salmon bone distributions.
Lithic tools are abundant throughout the main central activity area (Figure 6.23). General purpose tools are scattered relatively evenly across the space and all other tools cluster according to functional type. Hunting and butchery tools are concentrated in an area north of the central fire hearth. Conversely, light duty tools are in an area south of the hearth. This pattern suggests that while animal processing activities were all concentrated in the center of the house, within this space there were two separate areas designated for butchering/food preparation and hide production. Artifacts associated with trade and high ranking households exhibit the same pattern. They too are concentrated in central activity areas (Figure 6.24), with one beaver bone recovered from the central fire hearth and a piece of pisolite debitage coming from the eastern side of the house, within a main lithic reduction area. Since most of the prestige and feasting-related artifacts come from roof contexts the sample size for the floor assemblage is low.
However, the central location of the beaver bone and pisolite suggest that all household members had access to them.

Overall, there is no evidence for intra-household ranking. In fact, the central fire hearth, coupled with centrally concentrated activity areas suggests that a single family occupied HP1 at this time (Hayden et al. 2000b; Prentiss et al. 2008). If only one family occupied the house then trade was definitely managed at the general household level. Based on the distribution of artifacts and features it looks like the occupants slept on the earthen bench on the east side of the house and that all other activities occurred in the center of the house. Tasks associated with animal processing took place directly around the fire hearth with food preparation activities occurring north of the fire hearth and hide production activities occurring south of the fire hearth. Basic lithic reduction activities took place in designated spaces as well, in three separate areas around the periphery of the main animal processing area.
Figure 6.23. Housepit 1, occupation 1, tool class distributions.
Figure 6.24. Housepit 1, occupation 1, prestige and trade variables distributions.

Housepit 1, Occupation 2

Occupation two of Housepit 1 dates to 305±26 BP. This floor includes four cache pits excavated into the north, south, east, and west sides of the rim and seven hearths or thermal features scattered across the floor, mainly around the outside edge, near floor and rim interfaces (Figure 6.25). It appears that occupants of this household covered the bench built during the
earlier occupation then used the space for a cache pit and a roasting feature that was built right into the bench surface. Without access to the original bench we can assume that people slept on wooden benches, though post holes or wooden planks associated with this type of feature have not been identified. Based on the number of cache pits and overall distribution of features it appears that more than one family was occupying HP 1 at this time (Hayden 2000b).

All other activities occurred in within domestic and communal spaces throughout the house, but not necessarily in designated activity areas, as was the case for the first occupation. Mammal bones are distributed across the entire floor but there are concentrations in the center of the house and near cache pits along the southern and western rims (Figure 6.26). Small bone distributions pattern relatively similarly (Figure 6.27). They are concentrated in the center of the house and near cache pit features on the north, south, east, and west sides of the house. Salmon bones are also distributed across the entire house floor. Concentrations of these bones are in the southeast quadrant and near cache pits features in the north, south, and west rims (Figure 6.28). Additionally, debitage are scattered across the entire house floor, with dense concentrations of these occurring near a thermal feature in the northwest quadrant and along the west rim (Figure 6.29).
Figure 6.25. Housepit 1, occupation 2, basic planview.

Figure 6.26. Housepit 1, occupation 2, mammal bone distributions.
Figure 6.27. Housepit 1, occupation 2, small fragment abundance distributions.

Figure 6.28. Housepit 1, occupation 2, salmon bone distributions.
Figure 6.29. Housepit 1, occupation 2, debitage distributions.

Tools occur all across the house floor as well (Figure 6.30). Dense clusters are in the center and in all quadrants of the house near the cache pit features. As with distributions of faunal and lithic debitage data, it appears that all activities took place within both domestic and communal spaces rather than occurring separately in designated activity areas. Some light duty tools cluster along the southeast rim and floor interface, and this space appears to be the only place in which single tool types are concentrated in one area. This may have been the one spot in the house designated for hide production and other light duty activities, whereas all other areas have clusters of mixed tool types.
Figure 6.30. Housepit 1, occupation 2, tool class distributions.
Apparently, in most spaces a wide variety of tasks were conducted, and in general, it appears that all families conducted similar activities. Sometimes the families conducted activities together in communal spaces, while other times they conducted activities separately, in their own domestic spaces.

Items associated with trade and potentially of high rank were also recovered from all areas of the house (Figure 6.31). Non-local materials of obsidian and pisolite were identified in the northwest, southwest, and southeast quadrants; dentalium shells were recovered near cache pits in the east and west rims; and dog and beaver bones were identified in the northwest and southeast quadrants of the house. Cache pits associated with this occupation contained the original food contents, providing yet another opportunity to evaluate distribution of food. Mammal abundance indices ($\sum_{\text{mammal bones}}/\sum_{\text{mammal bones}}=\sum_{\text{fish bones}}$) calculated for all cache pits demonstrate that three of the four features had the exact same abundance of mammal bones (.08). The abundance index for the cache pit in the north rim was slightly less (.05) but overall it appears that all families subsisted mainly on dried salmon, followed by dried deer meat. Chinook salmon is a suggested prestige food during the ethnographic period (Romanoff 1992a), and all four cache pits contained some of this fish. To evaluate its concentrations in each cache pit an AI was used ($\sum_{\text{chinook salmon}}/\sum_{\text{all salmon}}$) and results of these show slight differences in Chinook salmon distributions. Cache pits in the north and west rims have the exact same abundance score (.01). The cache pit in the east rim has the highest score (.05) while the cache pit in the south rim has the lowest score (.009). It is possible there are actual variations in Chinook salmon abundances, however, this pattern may also be reflecting variation in sampling and faunal assemblage size (Figure 6.32). Based on all the data, there is no clear indication of craft specialization or specialized food production amongst the families.
Figure 6.31. Housepit 1, occupation 2, prestige and trade variables distributions.
Overall, it appears that there were multiple families living in the house at this time, as demarcated by cache pits, thermal features, and artifacts distributed across the floor surface. Based on the square footage of the floor space and distributions of features and artifacts there were likely two-to-four families, each with their own domestic space, along with a communal activity area that extended into the center and southeast quadrant of the house. All activities were conducted in domestic as well as communal spaces and there does not appear to be designated spaces for the different activities. Rather, tasks, including animal butchering, hide processing, and lithic reduction, all occurred within the same areas. There is a cluster of light duty tools along the southeastern floor and rim interface thus this may have been an area designated specifically for hide processing and other light duty activities. Cache pit contents and distributions of small bone fragments across the floor indicate that all household members had relatively equal access to the same food resources. Non-local items and other things associated with trade are also distributed relatively evenly across the house floor suggesting that trade was
managed at the general household level. By all indications, families were not socially ranked but instead were relatively egalitarian.

**Housepit 54**

Housepit 54 dates to 112±25 (Prentiss 2013). This occupation includes a central fire hearth and three cache pits located in the south central part of the house (Figure 6.33). Just above the cache pits, in the southwestern quadrant of the house, is a large kitchen midden. Although there was only one fire hearth, judging by the large kitchen midden and dense accumulation of debitage, it appears there multiple families occupied the house. Mammal bones are distributed across the entire floor with heavy concentrations in the southern portion of the house in Blocks A and B (Figure 6.34). Small bone fragments are also scattered across the floor, with are dense clusters in all four main blocks, suggesting relatively equal distribution of mammalian resources between families. Salmon clusters in two areas in the northern and southern portion of the house (Figure 6.35). Debitage is scattered across the entire house floor (Figure 6.36) and there are dense concentrations in Blocks B and D. Lithic tools are concentrated in the north central portion of the house, around the edge in Block D, and all across the southern half of the house (Figure 6.37). Tools associated with hunting and butchery activities are gathered in the cluster in the northern half of the house while mixes of all tool types occur throughout the southern part of the house. Many tools from this area were recovered from the kitchen midden and are more than likely secondary deposits. Trade and material wealth items are scattered fairly evenly across the house floor (Figure 6.38). Non-lithic raw materials, though they occur in small numbers, are distributed in all four of the main blocks.
Deer and dog bones are scattered across the entire floor, but are densely concentrated in the kitchen midden area.

In general, dense accumulations of debitage and cooking debris coupled with the three cache pits suggests there were multiple families living in Housepit 54 at this time. Like the first occupation of HP 1, tasks such as lithic reduction and animal processing were conducted communally in designated activity areas rather than separately in domestic spaces (cf Prentiss et al. 2013). Based in lithic tool distributions, hunting and butchering activities appear to have occurred in an area in the north half of the house while hide processing and other light duty
activities likely took place in the southern portion of the house. Mammal bones also occur in the southeastern portion of the house, suggesting that butchering activities took place there as well. A communal kitchen area was located in the southwestern quadrant of the house and there were designated lithic reduction areas mainly in the eastern half of the house. Inter-household analyses described in the previous section suggest that this household was active in interregional trade with specialized production of deer hides. Distributions of non-local goods and other items associated with exchange suggest that market economy activities were managed at the general household level, rather than by one particular family. Overall, there is no material evidence to indicate intra-household ranking.

Figure 6.34. HP 54, mammal bone distributions.
Figure 6.35. Housepit 54, small fragment abundance distributions.

Figure 6.36. Housepit 54, salmon bone distributions.
Figure 6.37. Housepit 54, debitage distributions.
Figure 6.38. Housepit 54, tool class distributions.
Figure 6.39. Housepit 54, prestige and trade variables distributions.
Synthesis and Summary of Intra-Household Analyses

In brief, it appears that during the first occupation of Housepit 1 there was only one family living in the house. Family members slept on an earthen bench constructed into the rim of the eastern side of the house and all other activities were conducted within the center of the house, in specialized activity areas. They do not appear to have used intra-mural cache pits to store food. It is likely that they used one of the many cache pits located just outside the house or that they used wooden storage boxes. During the second occupation of Housepit 1, it appears that multiple families occupied the house. Judging by the overall square footage of floor space and distribution of features a reasonable estimate would be between two-to-four families. The bench that was previously constructed was filled in during this occupation to make room for a cache pit and roasting feature. That said, food was stored in at least four intra-mural cache pits constructed into the house rim and wooden benches were likely used for sleeping during this time. Food remains recovered from the bottom of the cache pits suggest that families had access to the same subsistence resources. All household activities were conducted within domestic as well as communal spaces. Other than a possible light duty area along the southeastern rim of the house there does not appear to be any specialized activity areas, instead all activities apparently occurred within the same spaces. It seems as if trade was managed at the general household level and overall there is no evidence for intra-household ranking.

In HP 54 there appears to have been multiple families occupying the house, and like the first occupation of HP1, domestic tasks were conducted within designated communal activity areas. Cooking activities took place in the middle of the house, while butchery-related tasks were undertaken in the center of the north half of the house, as well as the southeast quadrant of the house. Light duty and other activities were mainly conducted in the southern portion of the
house. Throughout the eastern half of the house there were areas specifically for lithic reduction activities. Distributions of faunal remains and small bone fragments suggest that all families had similar access to subsistence resources. Items associated with prestige and trade are additionally distributed fairly evenly across the house floor. In general, it appears that trade was managed at the household level rather than by specific families and there is no evidence for intra-household ranking.

**Summary of Household Socioeconomical Comparisons**

In sum, presence of non-local items suggests that households were involved in regional trade during the late and early colonial periods, though it appears that trade patterns changed through time. During the late period, the time in which HP 1 was occupied, goods came from the coast and from east of the study area. By the time HP 54 was occupied in the Fur Trade period it appears that items coming from the coast declined while items coming from the interior, east of the study sites, increased. Interior posts such as Fort Kamloops were also flourishing at that time and the maritime economy had for a while been in decline due to near extinction of otters and seals. It appears that because trade was more concentrated in the interior posts and around peripheral areas, numbers of Euro American exchange items and lithic raw materials coming from these areas increased, while at the same time, traditional goods from the coast decreased.

Exchange item production also increased amongst households in the Mid-Fraser during the Fur Trade period. Dried salmon and animal hides were the two main trade items produced by St’át’imc people for exchange (Drake-Terry 1989). These goods were part of the trade economy for millennia, but during the Fur Trade period it appears that production of these items increased.
as more people became involved in market economy. Just prior to the Fur Trade period, it appears that production of exchange items was minimal. In the HP 1 occupations, most activities focused on day-to-day domestic undertakings such as preparation of salmon for daily consumption, tool refurbishment, and hide production. By the time HP 54 was occupied, during the early colonial period, there was increasingly more attention on the burgeoning trade economy. As discussed before, a variety of items were produced for exchange during Fur Trade period, but Housepit 54 in particular specialized in producing deer hides. Chances are other houses specialized in different trade items such as dried salmon or beaver hides, depending on the location of the house and overall access to the resource at the time. Craft specialization may have existed at the household level, with HP 54 specializing in buckskin hide production, but without data from contemporaneously occupied houses we cannot know for certain. This is something that should be addressed in future research.

During the big village period, around 1200 BP, social ranking persisted along with material-based wealth as exemplified by unequal access to food resources and prestige items. Although this pattern is documented in ethnographic literature it may not have existed just prior to and during the early colonial period, at least according to data from HPs 1 and 54. In the HP 1 occupations, prestige items and foods are minimal and do not appear to have factored in the regular household economy. In the Fur Trade occupation of HP 54 these items increase in abundance although other indicators of material-based wealth, such as resource narrowness and high utility ungulate elements do not. Some high-utility ungulate elements actually decrease in HP 54, but this appears to be indicating changes in logistical hunting strategies during the Fur Trade period rather than lack of material-based wealth. According to our expectation, HP 54 does not appear to have been high-ranking, yet the occupants still had access to prestige items.
Prestige items during the big village period, circa. 1200 BP were just that—items of limited access that embodied elite status (Hayden and Schulting 1997). During the Fur Trade period, however, it appears that they may have taken on new meaning, as items used for social signaling to assert ones’ position in society. Currently, we do not have the evidence to suggest that prestige items were limited to or controlled by elites, though we need to collect data from other Fur Trade period households to know for certain.

Archaeological evidence suggests that ritualistic feasting occurred during the big village period around 1200 years ago and ethnographic literature also documents that these events took place sometime in the ethnographic present. Holding lavish feasts was one way by which people asserted their positions in the community, so evaluating the degree to which households participated in this activity during the late period and Fur Trade period was an important part of this study. As discussed previously, feasting indicators are difficult to sort out from other types of intensive cooking activities; and although some form of ritualistic feasting could have occurred among HPs 1 and 54 households, we simply do not have enough evidence to say one way or another.

Spatial analyses of feature and artifact distributions suggest that intra-household ranking did not exist just during the late period or during the Fur Trade period. Families all had similar access to food and other resources, and trade items production and exchange was managed at the general household level, rather than by particular families. Moreover, craft specialization did not exist amongst the families. In HP 54, however, occupants focused on deer hide production for exchange, so it is possible that craft specialization did exist at the household level. Depending on location of the house and general access to resources it may be that other houses specialized in the production of different items such as dried salmon; but we will need data from other Fur
Trade period houses to verify this. Indeed, this is an interesting question, one that certainly should be addressed in the future research.
CHAPTER 7
DISCUSSION AND CONCLUSION

The goal of this research was to investigate the effects of the Fur Trade on indigenous households in the Middle Fraser region of British Columbia, in order to evaluate the ways in which early colonialism possibly shaped social patterns described in local ethnographic literature (Hill-Tout 1978; Kennedy and Bouchard 1978; Teit 1900, 1906, 1909). Narratives describing social structures of the St’át’imc people during the ethnographic present, indicate these hunting-and-gathering communities were hierarchically organized, with social classes that included hereditary and achieved chiefs, elites, commoners, and slaves (e.g. Teit 1906). Hereditary chiefs and their families constituted an aristocracy of sorts, but it apparently afforded them no significant privileges (Teit 1906:254). Achieved chiefs and elites reportedly gained and maintained their status through a variety of ways, such as great oratory skills and generosity. Wealthy people often expressed their liberality through competitive feasting events, during which surpluses of food and other items, acquired through control over food resource locales (Kennedy and Bouchard 1992; Romanoff 1992a; Teit 1906:255) and possible control over trade networks (Hayden and Schulting 1997), were given away. Feasts not only elevated the status of the hosts, due to the fact that guests were obligated to reciprocate in the near future, they guaranteed that their surpluses would at some point be replenished.

Although the antiquity of social organizations described by Teit (1906) and others (e.g. Kennedy and Bouchard 1978) is unknown, ethnographic data are commonly utilized to describe cultural patterns of the more ancient past, namely, the height of the big village period, which
took place approximately 1200 BP. Archaeologists (e.g. Hayden 2000b) suggest that ethnographic patterns can be traced back to this period, regardless of the fact that after the big village period there was an approximate 500 year hiatus of village occupations, followed by late period (600 BP to European contact) village occupations, during which populations were disbursed into small villages, and finally, European colonialism. This is also assumed despite our lack of knowledge about the effects of colonialism on local populations, and its possible role in creating these patterns in the first place.

Unraveling these cultural patterns to sort out which aspects of them can be attributed to colonialism, and which can be identified as part of the more ancient past was the goal of this research. In order to evaluate the effects of the Fur Trade on indigenous households in the Mid-Fraser, two hypotheses were tested. Hypothesis one describes conditions in which there was cultural change, suggesting that colonialism did effect social organization, such that hierarchical structures, based upon control over food resources and trade, and maintained through material-wealth and competitive feasting activities, developed during the colonial period, and cannot be traced to the more ancient past. Hypothesis two states that there was cultural continuity. Thus patterns described in ethnographic literature developed during the late prehistoric period, circa 1300 BP, and were maintained once villages were re-established around 600 years ago, and continued well into the colonial period (Prentiss et al. 2007, 2011).

To test these hypotheses, archaeological data were collected from two housepits located in winter villages above the Bridge River and Fraser River confluence. Housepit 1 is a late period house located in the S7istken village, with two occupations spanning approximately 343 to 305 cal. BP (Smith and Mattes 2014); and HP 54 is a Fur Trade period house located in the neighboring Bridge River village, whose occupation dates to approximately 112 cal. BP (Prentiss
2013). Data from late period occupations of HP 1 were used as a baseline from which to measure changes that possibly occurred in the Fur Trade period, as expressed through data of HP 54 (Lightfoot 1995, 2006).

Housepit 1 of the S7istken Site

The first occupation of HP 1 dates to approximately 305 cal. BP and is distinguished by a central fire hearth /roasting feature and an earth bench on the east side of the house. Intra-mural cache pit features were not identified, so it appears that food was either stored in wooden boxes and baskets, or, in one of the many large cache pit features located outside. Faunal remains recovered from the house indicate that occupants had a relatively narrow diet, consisting mainly of salmon, supplemented by deer meat. Lithic tools suggest that domestic tasks were conducted mainly in support of the household, and included such activities as animal butchering, food preparation, hide processing, and tool production. Most household activities were conducted around the fire hearth. Butchering activities took place in an area north of the hearth, while hide processing activities were relegated to a space south of the hearth.

The second occupation of HP 1 dates to 343 cal. BP, and was marked by extreme modifications, including structural and organizational changes. Instead of being in the center, hearths and other thermal features were placed around the edges of the house, and the earthen bench constructed during the previous occupation was filled in to make room for a cache pit and roasting feature. At least three other cache pits were constructed into the interior rims of the house, and in the bottom of all four were remnants of the original food remains, including articulated salmon skeletons and butchered deer bones. As with the previous occupation, lithic tools suggest that most activities were conducted in support of the household, and included daily
tasks, focused on food preparation, hide production, and tool manufacturing. All activities appear to have been conducted in communal as well as in separate domestic spaces; and unlike the first occupation, there does not seem to be clear evidence for distinct activity areas.

**Housepit 54 of the Bridge River Site**

Housepit 54 of the Bridge River site dates to approximately 112 cal. BP (Prentiss 2013), and is marked by a central fire hearth and a large cooking midden just southwest of the hearth. Portions of three small cache pit features have been identified in the southern half of the house and a relatively artifact and ecofact free zone suggests that a wooden bench may have been located on the western side. Faunal remains recovered from the house reveals that occupants were more focused on large terrestrial mammal resources and less focused on salmon resources than were occupants of HP 1. Lithic tools indicate that tasks such as food preparation and tool production were conducted in basic support of the household. Additionally, evidence for intensive hide production activities, implies that there may have been household-level craft specialization associated with participation in the trade economy. Spatial organization of this house was similar to the first occupation of HP 1, with designated activity areas for different tasks, from lithic reduction to animal butchering.

**Interpretation of Data Relative to Research Agenda**

To evaluate the degree to which aboriginal households in the Mid-Fraser were affected by the Fur Trade, I looked for evidence for three patterns described in the ethnographic literature: participation in regional trade networks, presence of material-based wealth, and involvement in competitive feasting activities. The first portion of the study assessed the level at which
households were involved in regional trade. Archeological expectations for this include presence of non-local raw materials and goods, and evidence for intensive production of trade items.

Goods produced for trade by the St’át’imc included copper plates, animal hides, dried salmon, and salmon oil (Drake-Terry 1989; Teit 1906; Smith 1998); and in return they received things such as dried huckleberries, black-tail deer hides, dentalium shells, and cedar bark (Teit 1906). Lithic raw materials were also acquired through exchange, and they included obsidian, pisolite, and Hat Creek jasper (Hayden 2000b; Prentiss et al. 2009; Prentiss et al. 2010). Obsidian likely came from the closest source, which was located approximately 200 kilometers away, near the coast. Pisolite and Hat Creek jasper both came from within the Plateau area; their sources were located east of the study sites on Fountain Ridge and in Hat Creek. After contact, Euro American goods were acquired from trading posts to the east and south. Items widely distributed from posts included iron tools, blankets, glass beads, cloth, tobacco, rum, and, muskets (Fisher 1992:4-7; Teit 1900, 1906, 1909). Wike (1951) describes that iron tools, cloth, and muskets were among the items most demanded by Native populations, while goods such as buttons, and in many instances, beads, were secondary or gift items (c.f Fisher 1992).

Non-local raw materials and items are present in both HP 1 occupations and in HP 54, demonstrating that regional trade occurred during the late period, right after re-establishment of pithouse villages, and during the Fur Trade period. Interestingly, in HP 54 obsidian and marine shell concentrations go down while pisolite and Hat Creek jasper go up. Based on this evidence, it would appear that coast-to-interior trade declined, concomitantly, interior-concentrated trade increased. Considering the temporal context within which HP 54 was occupied this makes sense. According to historic documents, by the time this household was active there were several well-established trading posts in the interior (Auge et al. 2013; Fisher 1992; Prentiss 2013:45), while
simultaneously, maritime-based aspects of the economy were dwindling due to overhunting of otters and seals. Overall it appears that basic trade operations were concentrated inland. Furs were eventually transported to the coast to be exported to markets in China and Europe; but many other items produced by First Nations peoples were retained by local settlers around Forts Kamloops, Hope, and Yale (Drake-Terry 1989; Fisher 1992; Teit 1900, 1906, 1909). Trading posts were expected to be self-sustaining, so were provided minimal support by Hudsons Bay Company. As a result, traditional subsistence resources such as salmon, over time became keystone food items for settlers around these posts. Moreover, during the later years of the Fur Trade, as beaver and other fur bearing animals declined, Hudson’s Bay Company posts desperate for commodity items began to acquire dried salmon for the trade market (Drake-Terry 1989:26). During years of lean migrations the added demand for salmon created hardships for aboriginal communities dependent on this resource, including the St’át’imc. A journal associated with Fort Kamloops describes that in 1829 there were salmon shortages, resulting in local Native populations being in “such as state of starvation that it is impossible that they can survive” (Johnson 1932:127, as cited in Drake-Terry 1989:26).

Nonetheless, by-and-large, Native peoples controlled many aspects of the Fur Trade from its beginning to end (Fisher 1992:24). Regional trade networks were established at least 2400 years ago (Hayden and Schulting 1997; Rousseau 2004); thus routes used to transport furs and Euro American items were already thoroughfares, through which traditional goods were distributed across the entire region (Carlson 2006). All evidence suggests that aboriginal people were already well-versed in facilitating and maintaining exchange; and although it was previously established, the exchange economy did grow significantly as a result the Fur Trade. Consequently, there were internal effects on indigenous populations. For example, on the coast
there is documented evidence for development of specialized roles associated with trapping and trading (Fisher 1992:20), such that groups embroiled in these activities did so at the expense of other activities associated traditional subsistence. Along with this, wealth and power disparities grew. Managers of trade operations were the most prosperous, with practically unlimited access to Euro American goods and local food resources. On the other hand, people outside the realm of trade were less fortunate, and in fact, some had limited access to the most basic necessities. Wealthy or not, all Native people’s paid greatly for the bustling exchange economy, because all were effected one way or another by Western diseases that swept the communities.

We have less documentation of internal relations in the Mid-Fraser during the Fur Trade period. According to data from HP 1, prior to this period, households were involved in regional exchange, however it appears to have been secondary to traditional subsistence activities. This pattern seemingly changed during the Fur Trade period, based on evidence from HP 54, which suggests that households were more focused on exchange-related activities, perhaps at the expense of undertakings related to traditional subsistence. Considering that exchange operations were concentrated around neighboring trading posts and peripheral areas, it is safe to assume that, as documented on the coast, new roles associated with trapping, production, and exchange probably developed. In HP 54 in particular, occupants concentrated on deer hide production, and based upon these findings, there may have been household-level craft specialization occurring during this period. Other households may have been involved in various forms of specialization, such as dried salmon or beaver pelts, depending on the household’s location, or, availability of resources. Although by the time HP 54 was occupied it appears that local beaver populations had declined dramatically. In 1822 Indian trappers provided 2200 beaver skins to Fort Kamloops and by 1825 the number dwindled to less than 900; and within a few years after
that, beaver populations were reportedly “on the verge of extermination” (Johnson 1937:173, as cited in Drake-Terry 1989:24).

With such sharp decline in beaver populations, it appears that trading ventures in the interior became more focused on dried salmon and buckskin hides. For example, for six sticks of dried salmon (100 salmon per stick), people received in exchange one secondhand flintlock gun and one two-year old horse, and for one large dressed buckskin, they received a long list of items, which included one Hudson’s Bay tomahawk, an iron axe, one copper kettle, an old musket, a canoe, and a large cedar root basket (Teit 1900:261). Commodities were indeed acquired in large numbers in exchange for prepared deer hides, and because of this, chances are household labor became increasingly organized around production of these items. Teit (1900:248) describes that men did most of the hunting, though women and boys occasionally participated as drivers for corraling deer. Back at residences, women typically oversaw hide production activities and men were on charge of making all tools necessary for hunting and hide production (Teit 1900:295). In HP 54, it is easy to imagine a household in which there were large numbers of adult males capable of securing enough deer necessary to acquire important commodities. Sufficient enough, that salmon was not as important to subsistence or trade as is may have been for other households. Other members of HP 54 also likely participated in the endeavors. Young boys may have acted as deer runners for the men, while women and girls had active roles as producers of final hide products. Women and girls additionally would have provided hunting parties with necessary food supplies, such as service berries, for times in which the men felt emaciated (Teit 1900:245).

Presence of material-based wealth was also evaluated for this research. For this study, material-based wealth is defined according to ethnographic literatures (Kennedy and Bouchard
1987; Romanoff 1992a; Teit 1900, 1906, 1909) and archaeological data stemming from the late prehistoric period, which suggest social ranking existed, and was underscored by asymmetrical distribution of subsistence resources and prestige items (Hayden 2000b; Prentiss et al. 2012). Archaeological expectations for this include low resource diversity and evenness (Prentiss et al. 2012), presence of high-utility ungulate elements (Romanoff 1992a), and presence of prestige items, foods, and lithic raw materials. Artifacts identified as prestige items in Mid-Fraser archaeological contexts include nephrite adzes, beads, stone pipes, and digging stick handles (Hayden 2000b; Hayden and Schulting 1997). High-utility elements are those which produce the most calories after handling costs (Binford 1978; Madrigal et al. 2002), and according to studies by Madrigal and colleagues (2002), these include femur, thoracic, and pelvis elements. Prestige foods include deer, goat, Chinook salmon, and dog (Crellin and Heffner 2000; Hayden 2000b; Romanoff 1992a, 1992b); and identified prestige raw materials are nephrite, pisolite, Hat Creek jasper, and obsidian (Hayden 1997c, 2000b; Spafford 2000b).

During the late period in both HP1 occupations, people maintained a narrow diet-breadth, mainly consisting of salmon and deer meat, and only on rare occasions were small or medium-sized mammals consumed. Overall, salmon was eaten significantly more than all other resources. In HP 54’s Fur Trade occupation, there was noteworthy increase in resource richness and evenness, with greater consumption of small and medium-sized mammals. Moreover, deer was consumed more frequently than salmon, but unlike HP 1, the two resources were distributed relatively evenly. High-utility ungulate elements occur in relative abundance in HP1 and decrease somewhat in HP 54. Upon further evaluation, decreases mainly come from axial portions of the animals, while, high-utility upper limb portions remain relatively high. Considering this, element distributions do not appear to reflect HP 54’s limited access to
ungulate resources during the Fur Trade. Instead they possibly highlight logistical hunting strategies perpetuated by this household. Typically, absence of axial elements suggests animals were field processed before they were transported back to residential camps (e.g. Binford 1978). Transport decisions were made in consideration of costs, as related to available packing labor (i.e. people, dogs, horses, etc.) and travel distance. Extensively transported assemblages may indicate that there was depletion of local deer populations. Possible causes for this include overhunting (Broughton 1994) or fluctuations due to natural causes.

Based on element distributions of HP 1, people in the late period hunted within surrounding areas. Then by the time HP 54 was occupied, it appears that at least some households hunted away from residential areas. As far as we know, HP 54 was the only house of the Bridge River village occupied during the late Fur Trade period (Prentiss 2013). Other houses were occupied throughout the canyon, but overall, population densities were apparently low. If radiocarbon dates are any indication, during the late period it appears that population densities were slightly higher (Prentiss et al. 2008; Smith and Mattes 2014), yet, people continued to hunt within surrounding areas. That said, if deer populations were affected by overhunting during the Fur Trade period, it does not appear to have been subsistence-related. Instead, it was possibly connected to production of buckskin hides and other deer products that were in high demand in the exchange economy.

In sum, the previously described analysis shows that resource richness and evenness, and high-utility abundances go down in HP 54, while, prestige foods, goods, and raw materials go up. Together these results do not meet our archaeological expectations of material-based wealth, evidenced by low richness and evenness, abundances of high-utility of ungulate parts, and presence of prestige items. Based on these data, this form of material-based wealth does not
exist in either time periods, though it is possible that perceptions of “wealth” could have changed through time. Prestige items abundances do go up in HP 54, but we cannot say for certain that they were prestigious in the sense that they are associated with elite ownership, since other aforementioned wealth indicators are not present. Additionally we do not have data from other houses to make inter-household comparisons.

One thing we can say certain is that increased use of deer in HP 54, coupled with lack of axial and cranial elements in the assemblage, suggests that deer intensification occurred during the Fur Trade period. Due to low human population densities at this time, it appears that local deer herds faced increasingly more pressure from overhunting possibly because prepared hides were such an important trade item. An alternative explanation for deer intensification may have been due to reorganization of subsistence and craft-related activities after contact. Ethnohistoric documents describe dried salmon as being the most important exchange item during the end of the Fur Trade (Drake-Terry 1998:26). If ownership of salmon locales, along with dried fish production and distribution became consolidated around specific households, it may be that others, such as HP 54, transitioned their attention onto deer products. Thus, intensive focus on deer may have been an unforeseen consequence of growing demand for salmon by local settler populations. From this, there may have been development of household-level craft specialization, where HP 54 became deer hide specialists, while others specialized in producing and trading dried salmon.

Another notable pattern is the presence of material-based items possibly used for social signaling, which go up considerably during the Fur Trade period. Embedded meanings of material objects are in constant flux (Silliman 2001a, 2001b), and as archaeologists it is difficult to interpret their significances in any given place and time, especially without oral traditions or
written documents that describe them. Given there were higher abundances of material items in HP 54 as compared to HP 1, we can make that case that amassing these objects was possibly more important during the Fur Trade period. By all indications HP 54 was not necessarily a high-ranking house, so material markers do not appear to have asserted elite status, in the sense that occupants of this structure controlled distributions of glass beads and the like. On the other hand, if HP 54 was the only house occupied in the village at that time, standard ranking models used during the late prehistoric period may not be applicable for the study at hand. Housepit 54 was most certainly involved in exchange through deer hide production, making it plausible that material items were used to mark their participation in the Fur Trade. Teit (1906) describes that there were many ways by which people could earn prestige in the community, including generosity and good oratory skills. Being a good hunter was another avenue through which people could gain prestige, so it is entirely possible that occupants of HP 54 used material items as a way to “show off” the fact that they excelled at this task and were viable players in the market economy. Overall, the Fur Trade may have been a catalyst for creating the many opportunities that Teit discusses, for individuals and families to enhance their statuses in the community.

Competitive feasting activities occurred throughout the Pacific Northwest, and in the Middle Fraser region there is evidence that some form of feasting took place as early as the late prehistoric period, around 1200 BP to 1300 cal. BP (Hayden 2001a; Prentiss et al. 2013). Ethnographic documents describe that deer meat was the most important feasting food (Kennedy and Bouchard 1978; Romanoff 1992b; Teit 1900, 1906, 1909), and archaeological evidence suggests that dogs (Cail 2011; Crellin and Heffner 2000; Hayden 2000b; Prentiss et al. 2013) and salmon heads (Hayden and Adams 2004; Prentiss et al. 2013) may also have been consumed at
these events. Goat hair blankets were the main give-away items (Kennedy and Bouchard 1978; Romanoff 1992b); and other prestige items such as nephrite adzes are assumed to be give-away items as well, though this is based on broad ethnological studies of feasting, not on empirical evidence from the Mid-Fraser (Hayden 2000b). On the other hand, wealthy families commonly held feasts (Teit 1900, 1906, 1909) and they also owned prestige items (Hayden 1997a, 2000b). So, within contexts of houses in which feasting occurred, it makes sense that these goods would also have been present. Whether or not they were given away during feasts we cannot say for certain.

For the sake of this study, to evaluate feasting I drew from previous ethnographic and archaeological research (Hayden 2000b; Hayden and Adams 2004; Kennedy and Bouchard 1978; Prentiss et al. 2012, 2013; Romanoff 1992b) to establish archaeological expectations, which include high abundances of feasting foods (deer, dog, goat, salmon heads) and prestige items. According to these data, prestige items, and feasting foods of deer, dog, and goat go up through time, while salmon heads go down. During the late period in HP 1, occupants were not involved in competitive feasting events, at least not as far as we can see materially. Housepit 54 data do meet most of our expectations, though the assemblage lacks high abundances of salmon heads. However, feasting is not necessarily predicated on presence of salmon heads, but without these or other indicators (e.g. bowls, masks, and other items specific to feasting), we cannot rule out the possibility that deer, dog, goat, and prestige items were associated with other activities, namely trade. As discussed previously, HP 54 conducted intensive hide production activities, which explains the presence of deer and goat remains. Dog remains as well likely reflect trade activities, since they were raised for various reasons (e.g. wool, packing, food, etc.), most important of which appears to have been hunting (Kennedy and Bouchard 1978; Teit 1900, 1906,
Since HP 54 manufactured buckskin hides chances are they also hunted deer and maintained pack dogs.

According to local ethnographic literatures hunting was the most important occupation among all the Mid-Fraser groups that lived in the Lillooet region (Kennedy and Bouchard 1978; Romanoff 1992b; Teit 1900, 1906, 1909). Narratives of elite hunters are pervasive in these documents and are used as analogs to interpret conditions of the late prehistoric past (e.g. Hayden 2000b:24), despite the fact faunal assemblages demonstrate that salmon was the most important dietary resource of the time (e.g. Prentiss et al. 2009, 2010). Harris (2012) suggests that high-status among hunters increased during the Fur Trade period, once the exchange economy took off, and more households supported themselves through hunting and trapping activities. According to our data there was increased focus on hunting from HP 1 to HP 54, which supports Harris’ argument.

The final portion of this study evaluated intra-household social organization of HPs 1 and 54. Overarching goals of this analysis were to investigate the ways in which domestic activities were spatially organized and to look for evidence of intra-household social ranking. Overall, intra-household social ranking does not occur in any of the households. It appears that a single family lived in HP 1 during the first occupation, so it could not have possibly existed amongst this group. In this occupation most activities were conducted around a central fire hearth, while sleeping took place on an earthen bench on the east side of the house, and food was stored either in cache pits outside of the house, or, in wooden boxes (Teit 1906). Multiple families lived in HP 1 during the second occupation, and this time activities were conducted throughout the house within communal and domestic spaces. Food was stored in intra-mural cache pits distributed around the interior rim of the house and appears to have marked domestic spaces. Contents
within these features demonstrate that families had similar access to keystone salmon and deer resources.

During the Fur Trade occupation of HP 54, multiple families lived in the house and converged around a central fire-hearth. Artifact-free zones suggest that sleeping occurred along the north side of the house; and like the first occupation of HP1, there were activity area designated for particular tasks. Mammal and fish bone concentrations suggest that processing occurred mainly in southern portions of the house, surrounding a kitchen midden area, and debitage distributions demonstrate that basic lithic reduction activities occurred in spaces in the eastern half of the house. According to lithic tool distributions and geochemical analysis of floor sediments (Prentiss 2013), butchering-related activities took place mainly in the north-central portion of the house, while all others, including light duty, heavy duty, and tool production activities were concentrated in an area of the southeastern portion of the house. Food was stored in rafters and cache pits in the southern half of the house. Overall, this house was not organized according to separate domestic spaces. Instead it was patterned communally with places for sleeping, food storage, and domestic activities.

**Interpretation Relative to the Hypotheses**

Based upon our findings, neither of the hypotheses is fully supported. Cultural change did occur during the Fur Trade period, however, it was not as expected according to hypothesis one, as predicated on development of regional trade, material-based wealth, and competitive feasting. Regional trade persisted before and during the Fur Trade period, but according to this study, prior to the colonial period, household socioeconomies were mainly based upon traditional subsistence activities, while exchange appears to have been a supplementary means by which
people supported their households. As the trade economy grew during the early colonial period, the focus of traditional subsistence activities changed. Household socioeconomies instead were increasingly focused on exchange through production and distribution of trade items, possibly resulting from changing trade operations, which overtime became concentrated in the interior Plateau, after maritime mammal resources on the coast declined due to overhunting. Household labor also likely changed, becoming increasingly more organized around activities associated with trade item production.

According to our analyses, social ranking as expressed through material-based wealth and maintained by competitive feasting, did not exist at an archaeologically measurable level during either periods. Inter-household analyses of social ranking were beyond the scope of this study. However, we were able to evaluate presence of intra-household social ranking, which according to Hayden (1997a, 1997b, 2000b), occurred concomitantly in the late prehistoric period. According to our results intra-household ranking did not exist in either period. “Prestige items” do increase in HP 54’s colonial occupation, though I cannot say for certain whether they were prestigious in the sense that some households could own them, while others could not. Although it does appear that increase of prestige items during the Fur Trade period, may possibly reflect growing application of material markers used for the purpose of social signaling. While it is difficult to get at embedded meanings of artifacts at any one given point in time, considering the context of HP 54, these items may have been used to assert their role in the Fur Trade. As discussed previously, Teit (1906) describes that traditional St’át’imc society was marked with chiefs that had inherited status and those that gained prestige through wealth and prestige. In the case of HP 54, occupants of this household may have displayed material items, or possibly even
given them away, as a way to maintain their position in the community. Thus they may have been aspiring elites, or possibly, *nouveau riche* members of society.

**Ethnographic Literature as Direct Analog**

To place this study in broader temporal contexts, during the late prehistoric period, at the height of the winter village pattern around 1200 BP, there is evidence for intra-and-inter-household social ranking, evidenced through unequal distributions of keystone subsistence resources and prestige items (Hayden 2000b; Prentiss et al. 2007, 2012). Elite households are said to have maintained their positions through control over food resources (e.g. Hayden 2000b), control over trade goods production and distribution (e.g. Hayden and Schulting 1997), and through competitive feasting activities used to form debt relations amongst other people in the community (e.g. Hayden 2005). Much of this interpretation is drawn from local ethnographies (e.g. Kennedy and Bouchard 1978; Teit 1900, 1906, 1906; Romanoff 1992b) and from ethnographic literatures from other places such as New Guinea (Hayden 1997b, 2000a, 2000b; Hayden and Schulting 1997).

According to our analyses, some of these patterns did not exist, at least in archaeologically measureable ways, during the late period or early colonial period, while others possibly did. Evidence for competitive feasting does not occur in any of the assemblages, nor does evidence for intra-household ranking. Regional trade persisted over these times, and as evidenced by HP 54, production and distribution of goods such as buckskin hides were possibly controlled at the household level. Although without data from other co-occurring households, we cannot be certain that items were controlled in such a way that certain households were not able to own them. Thus there is a possible temporal gap between the “Classic Lillooet” big
village period and the ethnographic present, in which typical patterns of social complexity in the Mid-Fraser may not have existed. Which begs the question, how appropriate is it to use ethnographic data as analogs for the more ancient past?

At the outset of this research I argued that use of ethnographic data for direct interpretation of the late prehistoric period implies that St’át’imc culture remained relatively unchanged for over a millennium, until advancement of European colonialism, which is a notion I reject. Not only is it evolutionarily impossible, it downplays dynamic local and regional social interactions that occurred prior to European settlement. Furthermore, while non-local ethnographies are useful for interpreting overarching behavioral patterns associated with certain activities, such as hunting, for example, I reject the notion that embedded meaning of activities and artifacts in the Mid-Fraser can be derived from ethnographic data of completely different cultures, such as societies in New Guinea and the Near East, as suggested by Hayden (Hayden 2000b:269; Hayden and Adams 2004:86). In my opinion this is an outdated and inappropriate way to use ethnographic data. This approach falls into the trap of Orientalization, by reinforcing concepts of the other, along with western and non-western dichotomies (Said 1978), by assuming that in non-western societies, cultural patterns and their embedded meaning are all exactly the same.

As for the local ethnographies, it is indeed possible that some patterns described in the literature have been passed down from generation-to-generation and are part of deep social memory, becoming reintroduced into actual practice during colonialism, once exchange of material goods became amplified. Ancient practices may not always develop and play out consistently through time, though they do create social constructs that are maintained, even if they are not always materially manifested. However, with limited knowledge of the entire
colonial period and its possible effects on aboriginal populations we are merely making assumptions. We also have to consider alterity and how it affects the way in which the past is remembered (Dirks 2001). Were Teit’s informants describing an actual present and past or an idealized version of the present and past? Thus ethnographies used purely as direct interpretive analog has the potential to force archaeological data to fit the chosen narrative. On the other hand, when used as in conjunction with archaeological data, ethnohistoric literatures, and Native oral traditions, they become useful tools with which to formulate hypotheses and test expectations.

Based on this study, not all ethnographic patterns associated with social ranking, such as competitive feasting and intra-household ranking, developed during the Fur Trade, though they may have become established some time later, once the trade economy surpassed the traditional subsistence economy. Early developments of these pattern may have been in place, but without their associated material expressions. An alternative explanation is that these behaviors were in fact rooted in social memory from the late prehistoric period and were re-manifested by the colonial experience. I believe it was probably a combination of both, but with limited knowledge (archaeological) of the effects of the later gold rush and Euro Canadian settlement we cannot know for certain. Either way, cultural patterns do evolve through time, so traditions such as competitive feasting and others, which were practiced during both the late prehistoric and ethnographic periods, surely were qualitatively different from each other. As discussed above, one thing that stands out from this research is increased emphasis on hunting during the Fur Trade period. Relative to ethnographic patterns, this may have been the reason deer meat was a prestige and feasting food (Kennedy and Bouchard 1978; Romanoff 1992b), in which case this possibly was not part of late prehistoric traditions.
Conclusions

The goal of this study was to evaluate the effects of the early colonial period on socioeconomic organization of aboriginal households in the Mid-Fraser. Ethnographers describe an *ethnographic present* in which social ranking of households persisted, underwritten by elite-control over trade, subsistence resources, and material items, and maintained through activities such as competitive feasting (Kennedy and Bouchard 1978; Romanoff 1992b; Teit 1900, 1906, 1909); and scholars have used what is essentially a direct historical approach, by projecting these patterns back to the late prehistoric village period (e.g. Hayden 2000b), despite the likely repercussions of colonialism and its possible role in creating the ethnographic patterns.

This study looked specifically at potential effects of the Fur Trade on aboriginal households by evaluating indicators of participation of regional trade, presence of material-based wealth, and involvement in competitive feasting activities. Based on our data, regional trade existed before and during the Fur Trade, though it became much more pronounced as a result of the Euro-American market economy. During the late period, household socioeconomies were mainly organized around traditional subsistence activities, while after contact, they became increasingly more focused on trade, especially once operations became consolidated in the interior after maritime fur bearing animal populations collapsed. On the coast it is documented that new roles developed around trapping and exchange, and that wealth became consolidated around individuals and families most successful at these endeavors (Fisher 1992). There are fewer ethnohistoric records describing conditions in the interior, though it is possible to imagine that the same results occurred there as well. In the case of HP 54, it appears that household-level craft specialization developed and was organized around deer hide production. In fact, it looks as if deer intensification took place during the Fur Trade, possibly as a result of shift from beaver
trapping to hunting once local beaver populations declined. Other households may have specialized in different exchange items production, namely dried salmon, which was reportedly in high demand by local settler populations (Drake-Terry 1989; Duff 1998). Near the end of the Fur Trade, dried salmon was collected for the market economy, so it may be that high demand for salmon originally caused household labor to become organized around production of specific trade items.

Material-based wealth reflected through intra-and-inter household social ranking and maintained through competitive feasting events, among other things, reportedly occurred during the late prehistoric period (e.g. Spafford 2000b) and the ethnographic present (Teit 1906). During the late period and Fur Trade period competitive feasting activities apparently did not take place and intra-household social ranking did not exist, at least, not on a materially measurable level. Inter-household social ranking was beyond the scope of this study, though development of material-based wealth through time, evidenced through increased uptake of material markers possibly used for social signaling was evaluated for this study. According to data from HP 54, potential prestige items, raw materials, and foods increase during the Fur Trade, suggesting that at very least, there was indeed growing uptake of social material markers. It is possible that this pattern is reflecting one of many avenues described by Teit (1906), through which households achieved high status in the community. In the instance of HP 54, abundances of material items were likely used to assert their hunting success and achievements in the market economy. This is further supported by ethnographic data, which suggests that hunters maintained high levels of prestige in Mid-Fraser communities (Teit 1900, 1906, 1909). Similar to late prehistoric archaeological patterns (Hayden 2000b; Morin 2012), HP 54 occupants may
have controlled deer hide production and distribution in the local area; though without data from other co-occurring households we cannot say for certain.

In this study, ethnographic data were not used as direct interpretive analogy, but rather, in conjunction with archaeological and ethnohistoric data, and Native oral traditions to form testable hypotheses and archaeological expectations. I believe this study securely demonstrates that this is the most effective way to utilize ethnographic data, because it allows researchers to compare and contrast archaeological data with combined data sets, instead of forcing archaeological data to fit into the selected ethnographic narrative. As for ethnographic patterns of the Mid-Fraser, it appears that they were formed through combination of deeply embedded social memories and unforeseen consequences of European colonialism. Regional trade is certainly a product of the more ancient past, while importance placed on hunting roles, development of deer meat as a prestige food, and feasting as described by Teit (1906), were possibly later developments. Increased uptake of material markers during the Fur Trade may indicate that social ranking started to develop during this period, however it may also have been part of embedded social memory, becoming reintroduced into actual practice during colonialism and after exchange of material items became amplified.

**Future Research**

In terms of understanding the effects of colonialism on households in the Mid-Fraser, this study just scratches the surface. While interesting findings were revealed about changes in socioeconomic organization within households and across time, it was limited by the fact that there was only one house for each time period. According to this study, the exchange economy did become more prevalent during the Fur Trade period, possibly with some effects on the
traditional subsistence economy. At the same time, there may have been variation in the uptake of this form of economic support, but due to the research design, this analysis was beyond the scope of the study. Clearly, occupants of HP 54 were active in the trade economy as hide production specialists. However, concomitantly other households may have been supported through differential means, namely traditional hunting and gathering or varying levels of trade participation. Moreover, intra-household ranking and material-based wealth apparently did not persist in houses included in this study. But due to lack of case studies, evaluation of inter-household variation of social-ranking and material-based wealth was beyond the scope of this study. Thus to bring this study to the next level, future research requires that we must first gather data from other houses occupied concurrently.

In general, late period and colonial period studies in the Mid-Fraser are still in their infancy; and both are in dire need of in-depth study. As for late-period, this was the time during which winter villages were re-established after an approximately 300 year hiatus, and should be such an interesting period for archaeologists to study, yet, we know so very little about it. Recent work of this period is focused on peripheral houses of the Keatley Creek site with an agenda to identify secret societies (e.g. Hayden and Adams 2004; Muir et al. 2007). Because research itineraries have been so particular we lack broad knowledge of the most rudimentary things. For example, we do not have in-depth awareness of variation in subsistence practices, or, household social organization, for that matter. We also have limited information about broader organizational patterns since the S7istken and Bridge River sites are among the few well-dated late-period villages in the entire area.

As for colonial period studies, we also have very limited archaeological knowledge, all of which is based in the Fur Trade period. To my recollection, HP 54 is the only colonial-period
housepit in the Lillooet area that has been thoroughly excavated (Prentiss 2013). Others were excavated in Kamloops under the direction of Cathy Carlson (2006), but these are located within close proximity to Fort Kamloops, making HP 54 the only excavated Fur Trade period house from an outlying area. Beyond that, we have limited archaeological data from houses occupied during later colonial periods. Relative to the agenda of this study, without this information we cannot say for certain that the gold rush and later Euro-Canadian settlements had absolutely no bearing on cultural patterns described in ethnographic literatures. To settle this issue we need to learn more about these points in history.

Finally, to understand broader patterns associated with both of these periods we need to look beyond winter villages (Prentiss et al. 2011). Our interpretations for the most part are based upon very narrow windows of time, since for approximately eight months out of the year people occupied logistical camps in upland areas within close proximity to seasonal resources (Alexander 1992a, 1992b; Kennedy and Bouchard 1994; Lepofsky and Peacock 2004; Teit 1900, 1906, 1906). Identification of hunting and trapping camps associated with the Fur Trade period would be especially useful for our interpretations, by helping us better understand specialized roles and logistical organization associated with these occupations, since for all we know, some levels of trade may have been managed from logistical camps rather than in domestic spheres. Hopefully future research will allow us to fill in some of the gaps in the interpretive narrative of Mid-Fraser history.
REFERENCES CITED

Alexander, D.


Alexander, R.T.

Ames, K.M.


Ames, K.M., and H.D.G. Maschner
1999 Peoples of the Northwest Coast: Their Archaeology and Prehistory. Thames and Hudson Press Ltd., London.

Anderson, T.W.

Andrefsky, W.J.

2005 Lithics. Cambridge University of Press.
Armstrong, D.V.  

Arnold, J.E.  


Arnold, J.E., and A.P. Graesch  

Auge, C.R., M. Bobbott, K. Dixon, and T.A. Foor  

Bamforth, D.B.  

Bancroft, H.H.  

Barbeau, M.  

Barnett, H.G.  

Bateson, G.  

Bayham, F.  

Beaglehole, J.C.  
Beals, R.

Bean, L.J., and C.R. Smith

Becker, G.S., K.M. Murphy, and R.F. Tamura

Behrensmeyer, A.K.

Bender, B.


Bender, D.R.

Betts, M.W., and T.M. Friesen


Binford, L.R.


Burley, D. B. 1980 Marpole: Anthropological Reconstruction of a Prehistoric Northwest Coast Culture Type. Department of Archaeological Publication, 8. Simon Fraser University, Burnaby, B.C.
Butler, V.L.

Cail, H.S.

Cannon, D.Y.

Carlson, C.C.

Carlson, E.S.
2010a  *Subsistence Change and Emergent Inequality at the Bridge River Site*. Poster presented at the Society for American Archaeology Conference, St. Luis, MO.

2010b  *Subsistence Change and Emergent Social Inequality in an Early Complex Hunter-Gatherer Winter Village: A Zooarchaeological Assessment of the Bridge River Site (EeRI4)*, Middle Fraser B.C. Unpublished M.A. Thesis, Department of Anthropology, University of Montana.

Carlson, R.

Champian, T.C.

Chatters, J.C.


Chatters, J.C., and W.C. Prentiss

Chesson, M.
Chrisholm, M.  
Clark, J., and M. Blake  

Clemmer, R.O.  

Codere, H.  

Cohen, M.N.  

Collins, J.M.  

Conkey, M.W., and J.D. Spector  

Coupland, G.  

Coupland, G., T. Clark, and A. Palmer  

Cowen, I. McT., and C.J. Guiguet  

Crellin, D., and T. Heffner  

Crespi, J., and T.D.I Pena  
Cromwell, A.

Cusick, J.C.


Darwent, J.

Deagan, K.

Deetz, J.

Dietler, M.

Di Peso, C.C.

Dirks, N.

Dozer, E.

Drake-Terry, J.
1989 *The Same as Yesterday: The Lilooet Chronicle the Theft of Their Land and Resources*. Lilooet Tribal Council.


Galm, J.R., and R.A. Masten (editors).  

Geertz, C.  

Giddens, A.  

Gosden, C.  


Gottman, J.  

Grayson, D.K.  


Grier, C.  

Guilfoyle, D.R., W. Bennell, V. Gillies, and J. Strickland  


Haggett, P.  
Hall, T.D., and C. Chase-Dunn

Hallett, D.J., R.W. Mathewes, and R.C. Walker

Harris, L.E.

Hastrup, K. (editor)

Hayden, B.


Hayden, B. (editor)  
2000c *The Ancient Past of Keatley Creek, volume II: Socioeconomy*. Archaeology Press, Simon Fraser University, Burnaby B.C.

Hayden, B., and R. Adams  

Hayden, B., E. Bakewell, and R. Gargett  

Hayden, B., and A. Cannon  

Hayden, B., M. Eldridge, A. Eldridge, and A. Cannon  

Hayden, B., and R. Mathewes  

Hayden, B., and J.M. Ryder  

Hayden, B., and R. Schulting  

Hayden, B., and J. Spafford  

Hebda, R. J.  
Herskovits, M.J.


Herzfeld, M.

Hill, J.D.

Hill, J.N.

Hill-Tout, C.

Hodder, I.
1982 *Symbols in Action*. Cambridge University of Press.

1986 *Reading the Past: Current Approaches to Interpretation in Archaeology*. Cambridge University of Press.


Hodder, I. (editor)
1987 *Archaeology as Long-Term History*. Cambridge University of Press.

Honigmann, J.

Hoover, R.L.

Hough, R.  

Howay, F.W.  

Huelsbeck, D.R.  

Jenness, D.  

Johnson, A.W., and T. Earle  

Johnson, F.H.  

Johnson, M.O.  

Juen, R.B., and M.S. Nassaney  
2012 The Fur Trade. Fort St. J. Western Michigan University.

Kennedy, D., and R. Bouchard  


Kew, M.  
Knight, R.  

Kuhn, T.S.  

Kuijt, I.  


2009 What do We Really Know About Food Storage, Surplus, and Feasting in Pre-agricultural Communities? *Current Anthropology* 50(5): 641–644.

Kuijt, I., and W.C. Prentiss  

Kusmer, K.D.  

Lamb, J.  

Lamb, W.K. (editor).  

Langmann, E.G.  

Lawhead, S., and A.H. Stryd  
1985 *Excavations at eh Rattlesnake Hill Site (EeRh 61), Ashcroft B.C.*

Lenert, M.  
Lepofsky, D., K. Lertzman, D. Hallett, and R. Mathewes

Lepofsky, D., and S.L. Peacock

Lightfoot, K.G.


Lightfoot, K.G., and A. Martinez

Lightfoot, K.G., A. Martinez, and A. Schiff

Lightfoot, K.G., T.A. Wake, and A. Schiff

Linton, R.
1940 *Acculturation of the Seven American Indian Tribes*. D. Appleton Century, New York.

Lyman, L.

MacDonald, D.

MacDonald, G.F., and D. Sanger
Madrigal, T.C., and J. Zimmermann Holt

Malaspina, A.
1789 *Politico-Scientific Voyages Around the World*. Translated. TS, UBCL.

Martindale, A.R.C.


Marx, K.

Marx, K., and F. Engels

Maschner, H.D.G., and J. Patton

Mathewes, R.W.

Mathewes, R.W., and M. King

Matson, R.G.

Matson, R.G., and G. Coupland

McDonald, A.
McLeod, J.

McNickle, D.

Meares, J.
1790 Voyages Made in the Years 1788 and 1789, from China to the North West Coast of America. London: Logographic Press.

Milanich, J.T.

Miller, D.

Mitchell, D.H.
1971 Archaeology of the Gulf of Georgia, a National Region and Its Cultural Types. Syesis 4(I).


Mitchell, W.R., and R.E. Green

Morin, J.

Muir, R., J.E. Sheppard, M. Knighton, H. Newton, and R. Dickie

Murray, T.

Obeyesekere, G.
Odell, G.  


Ormerod, P.  
2002 Reading the Earth: Multivariate Analysis of Feature Functions at Xa:ytem (the Hatzic Rock site, DgRn 23), British Columbia. Unpublished PhD Dissertation, Department of Anthropology and Sociology, University of British Columbia, Vancouver.

Orser, C.E. Jr.  

Pokotylo, D.L., and D.P. Froese  

Post, R.  

Prentiss, A.M. (editor)  
2013 *Report of the 2012 University of Montana Investigations at the Bridge River Site (EeRI4): Housepit 54 During the Canadian Fur Trade Period*.

Prentiss, A.M., H.S. Cail, and L.M. Smith  

2009 *Report of the 2008 University of Montana Investigations at the Bridge River Site (EeRI4)*. On file, Department of Anthropology, University of Montana.

Prentiss, A.M., J.C. Chatters, N. Lyons, and L.E. Harris  

Prentiss, A.M., G. Cross, T.A. Foor, M. Hogan, D. Markle, and D.S. Clarke  


Quimby, G.I., and A. Spoehr

Ray, V.F.

Redfield, R., R. Linton, and M.J. Herskovits

Reininghaus, L.

Reitz, E.J., and E. Wing
2008 *Zooarchaeology*. Cambridge University of Press.

Renfrow, C.

Rice, P.M.

Richards, T.H., and M.K. Rousseau
1982 *Archaeological Investigations on the Kamloops Indian Reserve, no. I: Kamloops, British Columbia*.

1987 *Late Prehistoric Cultural Horizons on the Canadian Plateau*. Department of Archaeology, Simon Fraser University Publication Number 16.

Roberts, M.

Romanoff, Steven


Ryder, J.M.

Ryerson, S.B.

Sadak-Kooros, H.

Sahlins, M.

Sakaguchi, T., J. Morrin, and R. Dickie

Salmon, M.H.

Samuels, S.R.

Sanger, D.


Santley, R.S., and R.T. Alexander

Schaepe, D.M.
1998  Recycling Archaeology: Analysis of Material from the 1973 Excavation of an Ancient House at the Maurer Site. Simon Fraser University, Burnaby B.C.

Schalk, R.L.

Schortman, E.M., and P.A. Urban

Schuyler, R.L.

Sellen, D.W., and R. Mace

Shanks, M., and C. Tilley
1987  Reconstructing Archaeology. Cambridge University of Press.

Sheets, P.D.

Shennan, S.J.

Sherratt, A.

Shipman, P.

Shott, M.J.


Smith, L.M., and E.S. Carlson 2011 *Report of the 2010 University of Montana Investigations at the S7istken Site, Mid-Fraser, B.C.*


Smith, L.M., A.M. Prentiss, D. Lepofsky, E.S. Carlson, and N. Endo Resource Intensification at the Bridge River Site: A Case Study in Subsistence Practices of Complex Hunter-Gatherers. Poster presented at the Society for American Archaeology conference, St. Luis, MO.


Smith, T. 1998 *Our Stories are Written on the Land: A Brief History of the Upper St’at’imc*. Upper St’at’imc Language, Culture and Education Society, Lillooet BC.


Spicer, E.H.


Stevenson, H.
1943 *The Economics of Central Chin Tribes*. Bombay: Times India Press Strathern.

Steward, J.

Storey, G.R

Stryd, A.H.


Stryd, A.H., and J. Baker
Stryd, A.H., and S. Lawhead

Stryd, A.H., and M.K. Rousseau

Teit, James


Terrell, J.E.

Thomas, D.S., and R.S. Nishimoto

Torrence, R.

Torrence, R.

Trigger, B.G.

Tringham, R., G. Odell, R. Voytec, and A. Whitman

Turner, N.J.

Wallerstein, I.


Warburton, R., and S. Scott

Warren, C.

Watson, P.J.

Weissner, P.

White, J.R.

White, L.A.


Widmer, R.

Wilke, R. R.

Wilke, R., and W. L. Rathje

Willey, G.R., and J.A. Sabloff

Wilson, I. R.
1991  *Excavation of EdQx 41 and 42, and Site Evaluation at EdQx 43 Monte Creek, B.C.*

Wilson, R. L.

Wilson, S.M., and J.D. Rogers


Wike, J.A.

Winterhalder, B. and E.A. Smith

Wolf, E.R.

Wylie, A.


Yanagiasako, S.

**APPENDICES**

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Appendix A. Inventory of Stone Tool Assemblages by Functional Categories.

<table>
<thead>
<tr>
<th><strong>Hunting/Butchery</strong></th>
<th><strong>HP 1, occupation 1</strong></th>
<th><strong>HP 1, occupation 2</strong></th>
<th><strong>HP 54</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>biface, misc.</td>
<td>2</td>
<td>11</td>
<td>42</td>
</tr>
<tr>
<td>biface, scraper-like</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>biface, knife-like</td>
<td></td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>biface, Key-shaped</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>knife, misc.</td>
<td>1</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>knife, bifacial convergent</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>knife, bifacial</td>
<td>4</td>
<td>12</td>
<td>41</td>
</tr>
<tr>
<td>knife, unifacial</td>
<td>2</td>
<td>19</td>
<td>96</td>
</tr>
<tr>
<td>knife, unifacial convergent</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>projectile point, misc.</td>
<td>5</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>projectile point, Kamloops</td>
<td>13</td>
<td></td>
<td>66</td>
</tr>
<tr>
<td>projectile point, Shuswap</td>
<td></td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>projectile point, Plateau</td>
<td></td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>chopper</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>spall tool</td>
<td>3</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>total</td>
<td><strong>30</strong></td>
<td><strong>66</strong></td>
<td><strong>340</strong></td>
</tr>
</tbody>
</table>

**Light Duty: Hide/Fiber**

| **scraper, misc.** | **16** | **71** | **240** |
| **scraper, bifacial** | **1** | **2** |           |
| **scraper, concave** |       | **4** |           |
| **scraper, convex** |       | **1** |           |
| **scraper, convergent** | **2** | **2** | **22**   |
| **scraper, double** | **2** |       | **9**    |
| **scraper, end** |       | **2** | **12**   |
| **scraper, inverse** |       |       | **9**    |
| **scraper, alternative** |       |       | **9**    |
| **scraper, single** |       | **4** | **109**  |
| **scraper, end** |       |       |           |
| **flake truncation** |       |       | **8**    |
| **spindle whorl** |       |       | **1**    |
| **matate** |       | **5** | **1**    |
| **perforator** |       | **1** | **2**    |
| **piercer** |       | **1** | **29**   |
| total |       | **21** | **93** | **451** |

Appendix A. (continued).
<table>
<thead>
<tr>
<th>Heavy Duty: Wood/Bone/Antler</th>
<th>HP 1, occupation 1</th>
<th>HP 1, occupation 2</th>
<th>HP 54</th>
</tr>
</thead>
<tbody>
<tr>
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Appendix B. Resource Diversity and Equitability Calculations.

Resource Diversity Calculations

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Appendix B. (continued).

Resource Equitability (Shannon-Weaver Formula)

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Appendix C. Inventory of Prestige Items, Raw Materials, and Foods.

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