UNDERSTANDING GENDERED ACTIVITIES FROM SURFACE COLLECTIONS: AN ANALYSIS OF THE PARKER FARM AND CARMAN IROQUOIAN SITES

by

Megan Willison

B.A. in Anthropology, University of Pittsburgh, 2013

Submitted to the Undergraduate Faculty of the

University Honors College in partial fulfillment

of the requirements for the degree of

Bachelor of Philosophy

University of Pittsburgh

2013

UNIVERSITY OF PITTSBURGH

University Honors College

This thesis was presented

by

Megan Willison

It was defended on

November 14, 2013

and approved by

William Engelbrecht, Professor Emeritus, Anthropology Department, SUNY Buffalo State

James B. Richardson III, Professor Emeritus, Anthropology Department, University of Pittsburgh

Marc Bermann, Associate Professor, Anthropology Department, University of Pittsburgh

Thesis Advisor: Kathleen Allen, Senior Lecturer and Chair of Undergraduate Anthropology Program, Anthropology Department, University of Pittsburgh

UNDERSTANDING GENDERED ACTIVITIES FROM SURFACE COLLECTIONS: AN ANALYSIS OF THE PARKER FARM AND CARMAN IROQUOIAN SITES

Megan Willison, BPhil

University of Pittsburgh, 2013

This thesis involves studying Iroquois female and male complementary tasks through the use of surface collection materials from two prehistoric Cayuga sites, Parker Farm and Carman. These economic behaviors, as primarily dictated via societal gender norms, are analyzed in regards to their spatial location in order to showcase economic activity areas and create a broader conception of how the Iroquois utilized their local landscape for daily, seasonal, and yearly projects. Systematic surface collections of lithics, pottery, and bone at both sites are employed to provide intra-site and inter-site comparisons of economic activities. This research has implications for understanding the spatial dynamics of gendered tasks at Iroquois sites and the nature of site occupation.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

PREFACE

I would like to thank my thesis and undergraduate advisor Dr. Kathleen Allen for all of her help and support throughout my undergraduate career and to especially thank her for all of the time she spent with me while working on this thesis; I wish to also thank Dr. Allen for permitting me the opportunity to work with the material remains recovered from her various field school seasons. Without her, this project would not have been possible. I would also like to thank the University Honors College for their generous funding opportunities via the Spring 2013 Brackenridge Fellowship and the 2013 Off-Campus Research Award, which permitted me to be involved in an interdisciplinary seminar with fellow, research-driven peers and allowed me to travel to the sites and conduct geophysical surveys. I would also like to thank my thesis committee, Dr. Richardson, Dr. Bermann, and Dr. Engelbrecht, for their help and advice with this project, and the Anthropology Department faculty, and most notably Dr. Drennan, for providing me with the skills and knowledge to complete the necessary spatial and statistical modeling for this project. I wish to also thank the First Year Experiences in Research Program for allowing me to start getting actively involved in the research process during my freshman year and Dr. Covington-Ward and Dr. Newell for providing me with their support and research opportunities. I would lastly like to thank my family and friends for their support and help.

1.0 INTRODUCTION

Gender is a dynamic component of every culture and permeates all aspects of a given society (O'Gorman 2001:23). It has also been noted to be "one of the most basic structuring principles of most societies, and as a social category it must be understood in order to grasp the cultural complexity of a society" (Moen 2011:3). This is especially true for the Iroquois of upstate New York who utilized gender and the concept of balance in their everyday living and sustenance. From their matrilocal, matrilineal social structure to their dynamic and gender-balanced economic, political, and spiritual systems, the Iroquois demonstrated a harmonious mode of life uncommon in today's society.

To study the gender systems and modes of life of this culture, one must gather historical, oral, and artifactual data. Utilizing these sources, I will study history through the lens of gender and the concept of the gendered landscape, and will specifically study the spatial distribution of surface collection artifacts and ecofacts from the Cayuga Iroquois sites of Parker Farm and Carman. Using this information as a point of reference, I will attempt to discover the material record of gender and determine the gendered activities and organization of labor from the spatial distribution of artifacts between and within the two aforementioned Cayuga sites.

The two sites, Carman and Parker Farm, are settlements from the mid to late sixteenth century and a variety of artifacts have been recovered from surface collection surveys and excavation at the sites. By analyzing the surface survey artifact and faunal material in regards to

count, weight, and other specific classifications for each category (i.e. lithics, pottery, faunal, ect.), I will discern where certain areas of activities occur and how this relates to Iroquoian gender, economics, politics, and the concept of the gendered landscape. For example, I hypothesize that lithic debitage, or the gender neutral byproducts of stool tool production, will be scattered throughout the settlement areas whereas pottery, which is most often equated to female activities, will be found mainly within or directly outside of longhouse structures and will be associated with cooking and containment of foods and liquids. Faunal assemblages, which can be viewed in different settings as related to male and/or female economic tasks, will most likely be within or directly adjacent to longhouses and will demonstrate such activities as butchering techniques and food preparation. Charred and calcined bone will be closer to longhouses, and therefore hearths, than unburned bone, and communal areas of processing and butchering may be found at other locations throughout the site and not necessarily within known and excavated longhouse remains.

Although many of the artifact categories may overlap in a number of locations across the two sites, revealing that life in a small village setting lends itself to overlapping areas of economic behaviors and tasks, some distinct task locations are identified. These tasks include cooking and storage (as evidenced by undecorated and decorated ceramic sherds and all categories of faunal remains), lithic tool manufacturing (lithic debitage and lithic tool concentrations), and the processing of food or hide items (unburned bone and lithic tools). This information is referenced to ethnographic and historical accounts of the Iroquois to indicate which genders took part in certain activities and how those activities relate to the broader economic, social, and political structure of the society. Similarly, to understand where longhouses and other such structures are located, the surface material remains and their locations

are cross-referenced with regard to the excavation and location of known structures. I will ultimately address the disparities in the distribution of artifacts and ecofacts from the two sites and extrapolate suggestions about the gendered activities and spaces at Carman and Parker Farm.

As of yet, little analysis has been completed with the surface materials for the Parker Farm and Carman sites. Although various research projects have been conducted by Dr. Allen and undergraduate and graduate students under her direction that deal with the site and its related assemblages (for example, Allen, Ventresca, and Lockard-Reed 2008; Allen 2010; Allen 2011; Allen and Sanft 2012; Conger and Allen 2012; Katz 2013; Stutzman 2002), the surface remains and their spatial distribution have yet to be fully analyzed and discussed. I am using surface collection materials in the hopes of demonstrating that although surface collection survey results have an inherent bias in their data, such information can yield valuable information on overall patterns of economic and social activity without the intrusive and destructive process of a full excavation. Excavating an entire site, although the best possible means of obtaining a less biased and more spatially accurate account of a society's lifestyle and economic, social, and political functioning, has itself a variety of limitations, including but not limited to: inaccurate and haphazard recording can distort the information, once a site is initially dug and its artifacts and ecofacts are exposed to environmental factors, some information can never be regained, and it is usually not possible to fully excavate a complete site. As Matyasowszky (2003) states, "It [excavation] is unfortunately, a destructive process in which the excavated site, object or feature is physically lost and preserved only by only by record. It should be carried out only when the avoidance of archaeology was not possible to adopt" (210). If excavation, therefore, should only be conducted once all other avenues of possible research have been exhausted, then it follows that surface collection surveys can yield a potentially great amount of information while still

preserving a given site. Thus the importance and usefulness of survey collecting as a means to understanding general spatial patterns and community functioning is also explored.

Gender is also a strong component of this research, for gender is an integral component of every society and, as such, cannot be ignored when studying the economic, social, political, and ecological ways in which individuals lived. By studying Iroquois gender systems through surface collection distributions at two Cayuga settlements, one is able to study the activities and gendered areas Iroquoians created and maintained. While I posit that there will be distinct clusters and patterns of gendered economic activity as evidenced by the spatial locations of surface remains, I also believe that any discrepancies within and between the two sites in regards to spatial patterning and the amounts and locations of material remains will indicate differences in site usage at Carman and Parker Farm.

1.1 FOUNDATIONS OF IROQUOIS CULTURE

Although the main focus of this paper is gender and artifact analysis, one cannot begin to study the complexities of the Iroquois without gaining a better understanding of their wider societal structure. The Iroquois people lived in northeastern North America in the area comprising modern New York, Pennsylvania, and Ontario. While the focus of this paper is on the New York Iroquois, the culture as a whole holds many of the same societal, political, and economic structures.

The term Iroquois "refers to the Five Nations (Seneca, Cayuga, Onondaga, Oneida, and Mohawk) while 'Iroquoian' is used for additional groups like the Huron, Neutral, and Susquehannock, whose members spoke a language belonging to the larger Iroquoian language

family. Each of the Five Nations Iroquois spoke a different, though related, Iroquoian language" (Engelbrecht 2003:3). The Five Nations Iroquois are also referred to as the League of the Haudenosaunee or the People of the Longhouse. This League was described in terms of a metaphoric longhouse stretching across the whole expanse of the Five Nations with the Seneca and Mohawk as the keepers of the western and eastern doors and the Onondaga as the protector of the central fire (Snow 1994; Morgan 1995; Mann 2000; Engelbrecht 2003). The date for the creation of this dynamic and wide-reaching League has been debated with differing dates from oral tradition and historic information. One scholar holds that it began in 1142 CE (Mann 2000), while others posit that it occurred later, such as between 1590 to 1605 A.D. (Kuhn and Sempowski 2001), nearer to the time of European contact. Whatever the exact date, however, it should be noted that the League was "more of a mutual nonaggression pact than a political union" (Snow 1994:62). The creation of the League permitted additional movement between and among villages and thus broadened the gendered landscape the Iroquois created and maintained.

The concept of the League's image as a longhouse is also noteworthy for it was the longhouse that was the basis of society. It was in the longhouse that family ties were dictated, economic, political, and spiritual activities enacted, and often where life began and ended. Sleeping, food storage, food preparation, storage of tools and raw materials, preparation of finished goods, childbirth, death, ceremonies, political meetings: in short, all activities occurred in the longhouse. The longhouse had a nonspecific-function interior (Kapches 1994) but could be adapted and changed to fit the needs of the residents and their activities (Allen 2010). The longhouse was also a space in which a multitude of families lived and resided within close proximity to one another. As Snow (1994:43) describes, "[. . .] each nuclear family area was about 2 meters by 6 meters. Each pair of nuclear families shared a main fire in the center of the

common aisle." The League as represented via a longhouse demonstrates that the League imagined itself as an intertwined family unit in which all important activities occurred.

Aside from the political undertones of the New York Iroquois, economically the Iroquois were a horticultural society and relied upon a variety of means to supplement their diet; they not only were hunter-gatherers but also practiced slash and burn farming. From the fifteenth to seventeenth century, the Iroquois lived in nucleated villages that were moved every fifteen to twenty years (Engelbrecht 1985, 1987, 2003; Allen 2000, 2010) with the average distance between nations being fifty-five miles (Engelbrecht 1985:220). This movement of villages resulted in village sequences, leading to the assumption "that the same population is, in general, moving from one village location to the next and therefore that there is continuity in population (ancestor/descendant) over time" (Allen 2000:104). Villages of the same tribe, however, were closer together in distance, as noted for Ontario Iroquois groups, "Most communities relocated no more than 5-10 km away and often upstream from the previous village site" (Birch 2012:650). Similarly, Engelbrecht (1985) notes, "Typically, historic Iroquois tribes were composed of two or more villages located not more than about 10 miles apart" (222). Within a single village complex of this era, a variety of longhouses were packed into an enclosed, palisaded area, which was in turn surrounded by burned and open fields (Jouvency 1710; Niemczycki 1984; Snow 1994; Morgan 1995; Engelbrecht 2003; Jordan 2008; Allen 2010). Defense and security also seemed to be a major concern with increased longhouse size and village positioning away from navigable waterways and onto hilltops (Trigger 1990; Hasenstab 1996; Engelbrecht 2003). This coincides with a shift to locating the village near rich, loamy soils that were high in lime content and conductive to growing maize, beans, and squash (Hasenstab 1996), also commonly referred to as the "Three Sisters." As further noted by Engelbrecht (2003), "As farmers, the Iroquois

were clearly aware of soil quality in choosing a location for both their villages and their fields. The siting of Iroquois villages evinces a clear preference for soils suitable for corn cultivation. The Iroquois preferred moist loam or sandy loam soils high in lime content" (30). They also chose areas that would have the most frost-free zones so as to have a slightly longer and more productive growing season (Engelbrecht 2003).

In regards to growing season, one of the main crops and staples of the Iroquois diet was maize; this food group was believed to have been utilized in Iroquois territory around 1000 A.D. and has been suggested to have "[. . .] spurred the development of matrilocality, matrilineality, and longhouse villages" (Brumbach and Hart 2009:369). Maize, in addition to a variety of other cultivated plants, composed a main part of the Iroquois diet, as Stutzman (2002) further elucidates with her statement, "The Iroquois were one of the few prehistoric Native American groups in Northeastern North America that relied on cultivated plants for a large portion of their diet" (39). When not consuming maize or its byproducts, beans and squash were eaten, in addition to a wide variety of meats, fish, fruits, vegetables, and nuts. Deer was one of the most importance meat sources in their diet, and deer bones are found at many Iroquois sites (Engelbrecht 1987, 2003; Jones 2010). The Haudenosaunee not only used the deer meat for consumption, but also used various other parts of the animal, such as its sinew for sewing, its bones and antlers for tools, and its hides for clothing (Engelbrecht 2003). The Cayuga, in particular, "had a heavier reliance on hunting than other groups," and the high proportion of deer remains at the Parker Farm and Carman Cayuga sites, "suggests that deer were the most important source of animal protein for the Cayuga" (Allen and Reed 2008:1). Stutzman (2002) also concurs that the Cayuga consumed a higher proportion of deer as compared to other animals. Elk, rabbit, woodchuck, muskrat, porcupine, squirrel, bear, frogs, ducks, geese,

passenger pigeon, and fish were also hunted and consumed. Animals with long bodies and/or tails including water animals (especially those with sleek bodies like the otter), were not eaten, however, because of their association with sickness (Engelbrecht 2003).

In addition to meat, dried fleshy fruits, which contain vitamin C and help prevent scurvy, were eaten and obtained via gathering tactics in the woods (Engelbrecht 2003). Gathered food items were particularly important to the diet as they could be easily obtained year-round and provided many nutrients essential to a well-balanced diet. Sap and bark would and could be eaten, in addition to nuts, although generally bark was only eaten in times of famine (Engelbrecht 2003). Their diet was also dictated by seasonality and surrounding ecological resources (Jordan 2008).

It was through hunting and gathering and the Haudenosaunee's knowledge of the natural landscape that the Iroquois were able to maintain balance not only in their socioeconomic and political structures, but also in their surrounding environment. "A temporary decrease in the availability of one resource could be made up by increased reliance on other species. Rituals were observed in order to maintain the proper relationship between humans and the spiritual forces felt to govern these resources" (Engelbrecht 2003:21). Balance and harmony, as core principals of the Iroquois mode of life, permeated all aspects and will be explored next through the concept of gender.

1.2 ROLE OF WOMEN AND MEN IN IROQUOIS SOCIETY

Women and men utilized their gender identification in pre-contact Iroquoian society to create political, economic, and social roles in their societal surroundings. But what exactly is gender?

Culturally constituted gender is a concept that permeates all aspects of life (O'Gorman 2001) and is created via assigning sex differences based on traits, actions, and roles (Hendon 1997); it is best understood, "as something that develops through particular practices engaged in by individual actors and evaluated differently in different cultures or cultural settings" (Classen and Joyce 1997:4). Gender can therefore have different connotations dependent upon spatial and temporal factors and is an internalized and societally-based attribute and identity marker. In Iroquois society, gender was based more on societal demarcations than strictly biological factors, as evidenced by third-gendered individuals and the ability to move fluidly across gender lines. One's gender could thus change and was reflected by the tasks one carried out. For the remainder of this paper the two genders that are focused on are women and those who fulfill the societal capacities of women, and men and those remaining who may socially viewed and treated as male. While among the Iroquois it was very rare for "two-spirits" to exist and thus be members of the community (Potherie 1722:41), many prehistoric North American communities had "two-spirits," or people who crossed conventionally understood gender lines, as functioning and important components of their communities (Carpenter 2011; Slater 2011). While there is next to nothing in regards to information on Iroquois two-spirits, a reference that it rarely occurred suggests it did in fact occur, and thus those individuals should not be left out of a cultural and gender analysis. For the sake of time and clarity and because of a lack of information on this group of individuals, however, their roles and functions will be included within the category of the gender whose economic tasks or functions they fulfilled.

Within Iroquoian society, women were held with the utmost respect and had great deal of economic, social, spiritual, and political power. As the Jesuit missionary Lafitau (1977) is quoted as stating on Haudenosaunee women in volume one of his two volume work:

> Nothing is more real than this superiority of the women. It is of them that the nation really consists; and it is through them that the nobility of the blood, the genealogical tree and the families are perpetuated. All real authority is vested in them. The land, the fields and their harvest all belong to them. They are the souls of the Councils, the arbiters of peace and of war. They have charge of the public treasury. To them are given the slaves. They arrange marriages. The children are their domain, and it is through their blood that the order of succession is transmitted. (66-67)

They had and maintained a plethora of control, yet that did not stop much of their power from being ignored by European observers. This is exemplified when it was discovered that wild plants played a more prominent role in native diets than previously imagined. "The lack of emphasis on gathered plants foods in these documents may be due to a bias on the part of male European observers who were more interested in native hunting, fishing, and farming practices, pursuits with which they were already familiar" (Engelbrecht 2003:19). While attending male Native American diplomatic or ceremonial functions, European males would not witness women in the center or spotlight as it was customary in Iroquois society to have a male speaker and delegate for the female Clan Mothers. As such, European men were likely to have believed women did not play a dominant role in Iroquois society and thus excluded them from many of the historic records. "European male explorers and chroniclers, seemingly more comfortable using native male informants, place an undue emphasis on male activities and are, with few exceptions, silent on the role of women and children" (Bendremer and Williams 1997:137). Their own gender bias and realization of the existence of a gender system so unlike their own may also have contributed to the omission of the female Iroquois from the written documents.

Iroquois women are infrequently mentioned in historic documents during the era of contact; in a society in which no records or information was written down, the amount of information one is able to garner about women is sparse. One is left to rely on the documents that were written by European observers. Despite their biases, it was quite evident that one

cannot speak of Iroquois society without mentioning the powerful female presence. Women were the cultivators of the land, the strong religious figures, and an integral half of the political Iroquois realm. Iroquois women sowed the land under the direction of a senior clan matron, gathered plants and nuts, created pottery, and resided in matrilocal residences (Mann 2000; Engelbrecht 2003).

Men also held great power within their culture. Selected males acted as chiefs, shamans, and ferocious warriors. They hunted, fought, smoked peace pipes, and traveled extensively in pursuit of war and trade (Engelbrecht 1987; Trigger 1990). Men "owned the forests, in which they often engaged in trade, diplomacy, or warfare for months on end" (Snow 1994:39). They also gained prestige through their war efforts and the taking of prisoners (Trigger 1990; Birch 2012). Similarly, "Men sought personal prestige by demonstrating their ability to hunt, fish, trade, clear trees, and provide feasts, and as orators" (Trigger 1990:133). It has been noted by the Jesuit missionary Joseph Lafitau (1977) that "They [men] like hunting and fishing which, after warfare, take their attention, only because they are the image of warfare" (98). Both male and female duties held enormous clout and respect in all aspects of life; female duties were public (Mann 2000), as were male, and both influenced the economic, religious, and political sectors.

1.2.1 Subsistence and Economics

As aforementioned, the Iroquois had a varied diet and were not only hunters and gatherers, but horticulturalists. While the women tended to the crops and gathered local, native foods, men hunted and fished game. Hunting, however, is not a singularly male domain (Zihlman 1997:101), and women also participated with the males in larger hunts by ensnaring game in nets

and traps. They, similarly, prepared all of the food, including the game caught by the males (Prezzano 1997:90). Women focused more of their energy on horticulture and food processing and distribution than hunting, while males focused more heavily on hunting than gathering procedures.

Women owned the food and land, and the power to distribute stemmed from them (Brown 1970; Prezzano 1997; Mann 2000; Noel 2011). They disseminated and cultivated the basis of subsistence, which helped to sustain the society (Prezzano 1997). As Noel (2011:60) states, "Women were the chief horticulturalists among the Haudenosaunee, and the maize they grew is estimated to have supplied about sixty-five percent of the diet. The earth's bounty itself was traced to a woman." Mann (2000:223) also notes the importance of women: "Women's agriculture formed the backbone of the Iroquoian economy." In Iroquois cosmology, as will be discussed shortly, a woman was the land, Mother Earth, and it was from her that all life and sustenance originated. Horticulture and cultivation were thus closely tied in Iroquois ideologies to the female gender and allows one to understand why females held sway over the power of food. As Prezzano (1997) wrote, ". . . the village and the agricultural fields were organized around women's work and women's lives" (90). The females dictated when people ate and who was permitted to consume, and village life revolved around this cycle.

Economically, women also held authority over the storage and placement of food via pottery. Pottery was primarily created by women and aided in their ability to cook, store, and distribute food to the community. Their influence over these resources gave them autonomy and independence, making all others dependent on what they provided (O'Gorman 2001). Pottery itself is also symbolic, in many cultures including the Iroquois, of the female gender. Pottery, "more than any other artifact [. . .] symbolize[s] the household and female activity. They are

also the most commonly studied Iroquois artifact" (Engelbrecht 2003:82). Pottery itself was also created from yet another female in Iroquois ideology, Mother Earth (Engelbrecht 2003; Venables 2010). Thus pottery not only was symbolic of the female, but gave women greater economic sway within their society.

1.2.2 Religion

Women, aside from wielding economic influence, held a prominent role in religion and Iroquois myth. The Iroquois believe, according to Barbara Mann (2000), that there are three epochs of history. The First Epoch follows the creation story of the Iroquois, the Second Epoch begins with the arrival of the Europeans, and the Third Epoch, which began in 1799, continues on to today. The First Epoch will be the current topic of interest, as it explains the Iroquois belief in a female Mother Earth.

There are many versions of the Iroquois creation story, and the following is the creation story according to Barbara Mann (2000). The world of the Iroquois began when Sky Woman, an individual from a world residing literally above the Earth, fell through a hole in Sky World; two birds saw her fall and caught her, carrying her to Turtle in the Water World. Turtle agreed to carry her on his back while various animals swam to the ocean bottom and subsequently drowned in their attempts to retrieve mud/earth from the ocean floor to deposit onto Turtle's back. Eventually mud was recovered and put onto Turtle's back, creating land. Sky Woman was pregnant prior to her descent and later gave birth to her daughter, the Fat-Faced Lynx. Sky Woman and the Lynx explored the newly created island, naming all that they saw. Eventually Lynx was impregnated and died while giving birth to her twin sons, Flint and Sapling. "The Lynx was buried on Turtle Island, becoming Mother Earth" (Mann 2000:33). Sky Woman

watched over her grandsons, who grew into rivals and complemented each other in their creations on Earth. Sky Woman later rose up to the moon and "The children of Sky and Earth become the Iroquois" (Mann 2000:34). This creation story was, in itself, gendered, for:

> The female pair, Sky Woman and the Lynx, came first and were responsible for putting down all of the cultivatable vegetation, as befitted the female (agricultural) half of gendered society. The male pair, the Twins, confined themselves to forestry, the gendered male complement of female agriculture. The trees, Our Guardians, stood as the male counterpart to the Three Sisters, Our Sustenance. The forest, home of the hunt, was the natural half belonging to men, just as the field was the natural half belonging to women. (Mann 2000:103)

The Iroquois utilized their creation story to support their gendered division of labor and loci of activities. With Sky Woman and Lynx cultivating the land, women in Iroquois society followed suit and were the caretakers of Mother Earth; and while the Twins handled forestry, so too did Iroquois males concern themselves with activities that took them into the woods and away from the village center.

Spiritually, one's gender also dictated an individual's spiritual power and prowess. "Native American gender markers place greater emphasis on supernatural endowment, preference for types of work, and temperament" (Holliman 2006:181). Women were able to be religious practitioners, "and the matrons helped to select all 'keepers of the faith'" (Brown 1970:156; Morgan 1995:179). Elder females, called *gantowisas* were "central to all spiritual endeavors. They maintained pivotal medicine societies, including the funeral *o'gi'wē* or death singers. They were responsible for the bones of the ancestors and acted as the primary dream readers among the living as well as the dead" (Mann 2000:294). Thus females were spiritually very important to the community and played an integral role not only in validating the creation story, but also in all spiritual affairs of their society. Males, however, were also equally important and held roles as shamans and spiritual healers.

1.2.3 Judicial and Legal Roles and Actions

As women were intrinsic parts of the economic and religious spheres, so too were Iroquois females respected and venerated legally and judicially. As noted on their political abilities:

> The *gantowisas* enjoyed sweeping political powers, which ranged from the administrative and legislative to the judicial. The *gantowisas* ran the local clan councils. They held all the lineage wampum, nomination belts, and titles. They ran the funerals. They retained exclusive rights over naming, i.e., the creation of new citizens and the installation of public officials. They nominated all male sachems as well as all Clan Mothers to office and retained the power to impeach wrongdoers. They appointed warriors, declared war, negotiated peace, and mediated disputes. (Mann 2000:116-7)

Women, similarly, had a separate council from the men and had a male speaker to speak at male council meetings on their behalf. They could urge or prohibit raids, initiate peace, and decide the fate of captives (Prezzano 1997; Noel 2011). Legally, a woman's life was also valued over that of a man's as evidenced in the distribution and amount of wampum, a tubular bead of spiritual significance to the Iroquois, required with the murder of a woman. "Because the murder of a woman also eliminated future children, the crime of killing a woman by a man was regarded as twice as serious as a man killing another man. [. . .]. Thus the compensation for a woman murdered by a man was twice that of a man murdered by another man" (Venables 2010:26). It has also been stated that, "Iroquoians preferred female babies to male ones, since they increased the membership of the extended family into which they were born" (Trigger 1990:131). Women were highly valued for their contribution to society, supposedly even more so than men if one considers the wampum required upon murder and the preference of female to male offspring.

Despite the apparent favoring of women, men held many important legal and judicial roles, and males held all public offices. Men convened war and peace councils, had their own male council with one male speaker to represent the female council, traded, and held the position of chief. Writing on the representative function of chiefs, Trigger (1990) states, "They [clans]

were internally self-governing in all matters and were represented at the village, tribal, and confederacy levels by their chiefs" (128). Men had a greater interest and voice in deciding relations outside of the village sphere (Trigger 1990:131), and, "The 'old men' in the village decided all matters within the village and their voice was tantamount to an order" (Tooker 1991:42). Although Tooker's research focuses mainly on the Huron, many of the same cultural and societal patterns are found between this group and the Iroquois. The men dictated, with the approval of women, how the village, larger tribe, and overall Iroquois Nation, functioned.

1.2.4 Social Roles and Complementary Tasks

Aside from gendered political, religious, and economic functions, gender also played a role in social dynamics and relationships. The female gender had power in regards to the movement of persons and residency. It has been noted, that the Iroquois were, "the quintessential matrilocal society" (Claassen 1997:66). The Iroquois were a matrilineal and matrilocal society, meaning that descent was traced through the female line and husbands moved into the longhouse of their wives. Children were members of the mother's matrilineage, which were, in turn, "grouped together into larger descent groups called clans" (Engelbrecht 2003:68). Everything in a longhouse, excluding the personal belongings of the males, belonged to the women (Morgan 1995). When a man married a woman, he moved into the longhouse of his new mother-in-law, and if the wife chose to divorce her husband, he had to return to his mother's longhouse. Native women, similarly, had control of their own sexuality via multiple suitors (Slater 2010). This society was not, however, a matriarchy or a patriarchy (Venables 2010) but was rather an egalitarian society focusing on gender complementarity and exchange. Women worked on certain tasks while men performed others, yet the jobs performed by one were intertwined in the

success of the other. Iroquois men and women held many roles within their society and were esteemed for their contributions.

This leads into the concept of complementary gendered activities. As was previously noted, women held a myriad of roles in Iroquois society, yet men were also an important part of the equation. As women planted, men hunted, just as when women created pots, men created stone tools, such as projectile points; women controlled the longhouses, yet males were the ones who built them (Engelbrecht 2003). Both sexes could perform the other's tasks, yet it was more common for one gender to participate in certain activities than the other. It was these two halves working together politically, economically, socially, and spiritually that created, "the functional whole of a healthy society" (Mann 2000:60) and supported the concepts inherent in Iroquois thought and spirituality of balance and reciprocity. "Men's councils await the decisions of women's councils. Women's planting assesses the strength of men's hunting. Gendering entirely permeates Iroquoian culture" (Mann 2000:98). Iroquois women thus were an essential, authoritative component of their culture, and their male counterparts worked with them to create a balanced society.

2.0 CONCEPT OF THE GENDERED LANDSCAPE

The concept of the gendered landscape suggests that the way one utilizes their immediate surroundings and environment is influenced and predicated by one's gender. It also suggests that some areas in an environment are dominated by one gender versus another. Landscapes, however, are not static entities, but are akin to gender in that they are capable of transformation. This transformation and the meanings endowed to a landscape, however, can be both collective and individual, with individual actors and larger societies able to endow landscapes with differential meanings, associations, and importance. Rotman (2009) posits that, "[. . .] landscapes are material, complex, and meaningful. Furthermore, they represent unique as well as collective experiences" (81). It has also been suggested that, "Landscape provides a focus by which people engage with the world, and create and sustain a sense of their social identity" (Knapp and Ashmore 1999:15). A landscape encompasses not only the surrounding trees, hills, and rivers, but the homes, hearths, and everyday objects with which one interacts. Landscapes can also encompass areas larger than immediate surrounding and have been suggested to be a record of social history (Moen 2011). Landscapes are also fluid and, "It is often difficult, if not impossible, to delineate where one landscape, one moment of material practice, ends and another begins" (Rotman 2009:81). The gendered landscape, then, is a versatile space which both shapes and is shaped by interactive agents creating collective and individual experiences, meanings, and power. A society both molds and is molded by its landscape, and as gender is an ideological

concept affecting all spheres of a society, it is no wonder that gender is fixed within landscape spaces. "Gender may also serve to structure spatial relations, [. . .] symbolically and on the ground" (Hendon 1997:40). The spatial analysis that follows utilizes this idea of the gendered landscape to help explain where and why areas of gendered economic activities are occurring.

For the Iroquois, the gendered landscape signified that certain areas of the environment were utilized by one gender more readily and commonly than another. This landscape was also highly influenced by seasonality. For all of the seasons, it is often stated that the domain of women consisted of the house, the village, and the nearby fields; the world of men involved movement into the woods and long-distance travel away from the local area (Trigger 1990; Prezzano 1997; Engelbrecht 2003; Allen 2010; Venables 2010). Women's tasks generally left them in the immediate surroundings of the longhouses, villages, and horticultural fields, while "men's work more often took them further distances across the landscape to engage in hunting, trading, and warfare at various times during the spring, summer, and fall. Men returned to the village for longer periods in the winter to engage in maintenance and feasting activities" (Allen 2010:62). During the winter, both sexes resided in and used the longhouse, while "during summer months, women were fully engaged in activities centered in the village landscape in and outside the house" (Allen 2010:66). While women's work and traveling is generally stated as occurring at the local scale, "Men's activities took place at every scale, with journeys to hunt, trade, negotiate, or wage war bringing them the farthest from home" (Jordan 2008:42). Thus men moved freely within the landscape between longhouse, village vicinity, and woods, whereas women typically stayed in the immediate area of the village and agricultural fields.

This is not to suggest, however, that women did not travel into the woods; on the contrary, many Iroquois women traveled for trade and other activities. "[. . .] it was quite normal

for Haudenosaunee women to venture beyond the villages to assume roles in the politics, diplomacy, warfare, and trade of their people" (Noel 2011:55). Women could travel to neighboring villages and nations to speak on behalf of their people. It has also been noted that, "Adults of both genders made trips of varying distances. [. . .] detailed consideration of documentary sources blurs the canonical division between the so-called women's space in the village clearing and the alleged men's space in the forest" (Jordan 2008:42). Women therefore, although generally residing and moving on the local scale, also moved regionally to influence the wider landscape outside of the palisaded villages in which they resided. For the remainder of this analysis and when studying the distribution of artifact and faunal remains, it will be assumed that both genders had some economic activity areas within the local, village sphere.

3.0 ANALYSIS OF ARTIFACT REMAINS

3.1 METHODOLOGY

As can be viewed thus far, gender is an important component of Iroquois culture and is a means to understanding the socioeconomic and political underpinnings of Iroquois society. From the concept of the gendered landscape to the economic behaviors dictated by one's gender, conceptions of work and spatial location are inherently connected to one's biological and cultural identity as male or female. To study gender archaeologically, one must rely upon historical narratives and artifact remains. For this paper, surface collection material is utilized as an indicator of society and gender.

One must first begin a micro-scale analysis through the study of local communities, and specifically on individual sectors of space and economic activity areas within the greater village arena. As Birch (2012) notes, "The local community is one of the most meaningful contexts for social interaction and identity formation" (Birch 2012:649), and therefore it is at the local community level that we shall begin to analyze gendered economic activity areas. This particular analysis studies the spatial distribution of cultural material at two Cayuga settlements dating to the mid to late sixteenth century also referred to as the Late Prehistoric Iroquois period (Niemczycki 1984:42). Each site will be studied separately per artifact category, and then similarities and differences between the two settlements are noted. Before a discussion of the

spatial distribution of survey collection materials begins, the location and a brief history of the Cayuga people will be highlighted.

3.2 BACKGROUND ON THE CAYUGA AND THE SITES

The Cayuga tribe has a variety of names, including Onoiochrhonons, Oniontcheronons, and Oniontcheronons (Tooker 1991:18). Morgan (1995), explaining the etymology of their tribal name, wrote, "*Gue-u-gweh-o-no*, the name of the Cayugas, signifies 'the people at the mucky land;' the root of the word literally meaning 'the mucky land.' It doubtless referred to the marsh at the foot of the Cayuga lake, near which their first settlement was, in all probability, established" (49). Engelbrecht (2003) describes a different, yet related, etymology for the Cayuga: "The Cayuga called themselves Kayohkno'nq?. The etymology of this is uncertain, but one possibility is 'where the boats were taken out' or 'People at the Landing'" (119). Both root names and possible origins posited by Engelbrecht and Morgan suggest that the Cayugas resided near Cayuga Lake and had ties to waterways. It is suggested by one scholar that the Cayugas had an in-situ development along the eastern periphery of the lake and were closely connected to the neighboring Senecas (Niemczycki 1984:20). Historic accounts suggest that the Cayugas were a more peaceful tribe than their neighbors the Senecas, as when the Jesuit missionaries Raguenaue and Lalemant wrote, "Ragueneau proceeds to describe the negotiations for peace between the Hurons and Onondagas. This latter tribe, and the Cayugas, seem well-disposed thereto; but the Senecas and Mohawks will not listen to talk of peace; and various intertribal jealousies render the undertaking a difficult one" (Lalemant and Ragueneau 1898:12).

Regardless of their apparent propensity for peace, the Cayuga's homeland was within the immediate vicinity of Cayuga Lake.

The two Cayuga sites to be analyzed, Carman and Parker Farm, are located on the south-western side of Cayuga Lake, near present day Ithaca, New York. Movement of this western group is recorded, for "It seems highly likely that the western Cayuga move around the tip of Cayuga Lake to join the eastern Cayuga sometime after AD 1550" (Niemczycki 1984:74). Iroquois settlement groups generally moved their villages every fifteen to twenty years (Engelbrecht 1985, 1987, 2003; Allen 2010), and these two sites were previously thought to be consecutive village sites; recent research, however, has indicated that this may not be true (Allen and Katz 2011; Allen and Sanft 2012), mainly due to the fact that Parker Farm appears to be a much more dispersed settlement than Carman. The sites are located roughly one mile apart and are both large enough to be considered permanent settlements (Allen and Sanft 2012). Parker Farm is larger than Carman, as Allen (2010) further elucidates, "Compared to the Carman settlement, the evidence for occupation is more dispersed at Parker Farm and site size estimates are correspondingly larger (3.5 acres at Parker Farm vs. 2 acres at Carman). Several longhouse structures have been identified at these sites and household middens are found on the slopes and ravines adjacent to them" (58). Despite its larger area, however, Parker Farm has a far lower surface collection artifact density when compared to Carman, which may be due to the fact that it is a potential dispersed settlement with occupants living there a shorter amount of time than those residing at Carman.

Both sites are located "on well-drained soil in the Allegheny Uplands of central New York" and "Parker Farm sit[s] on [a] bluff above the creek while Carman is on a bluff along a small tributary that flows west for less than a mile before joining Taughannock Creek" (Allen

and Katz 2011:1). The current land use fluctuates between agricultural uses and grazing land. As Allen (2010) states about the land at the sites, "The territory around the sites is primarily rural and current land use is agricultural. In the last two years [2008-2010], the land on which Parker Farm is situated has changed hands and cattle are currently grazing on a large portion of the site" (60). Currently, Parker Farm is used for agricultural farming, and Carman is owned by an archaeological conservancy agency and is not being utilized by any outside parties. Despite the current land usage, the current and previous landowners have permitted field work to occur for five field seasons at each site. In addition to the extensive surface collections, excavation units (usually 1 m by 1 m) have been integral components of each field school season. At Parker Farm, part of the site is in the woodlands and no surface collections have been conducted in that specific region of the site; as a result, shovel pit tests (50 cm by 50 cm) were used to garner more information during two field seasons. Both sites have been plowed, although there is a wooded area on the western edge of Parker Farm that has received less plowing than other portions of the site. "All features are thus truncated and identification of specific functions based on feature content has been difficult" (Allen and Katz 2011:2). Nevertheless, at least one structure has been found per site and a variety of artifactual and faunal remains have been recovered.

It should be noted that both sites are believed to be relatively similar in regards to topography and spatial patterning of open fields and woodlands today as they were at the time of occupation in the sixteenth century. While at Carman there was once a gravel road constructed through part of the site and at Parker Farm a drainage system was at one point in the twentieth century implanted into portions of the open field, the general layout of the land at both sites is thought to have remained unchanged; therefore both sites have exhibited limited forms of modification over the ensuing centuries since the Cayuga Iroquois inhabited the vicinity. It

should also be noted for those not familiar with the two sites in question that only subsurface features remain, and through plowing and other natural processes, some artifacts and ecofact remains, which are the focal study topic of this paper, have risen to the surface of the soil.

The focus of this paper, while utilizing excavated features as reference points for economic activity areas, primarily concerns the surface collection material from Parker Farm and Carman. At the beginning of each of the five field seasons at Carman and once at Parker Farm, surface collection surveys occurred on the plowed surface. Surface collections were done in 5 meter by 5 meter grids with surveyors given a set number of minutes (for timed collections it was generally ten minutes) to view and locate artifacts per grid square. "The systematic timing of each collection in a delineated collection unit was done to make sure that all parts of the site were collected evenly. At the very least, it made sure that each collection team had the same type of bias since the same amount of time and space was covered in each collection unit" (Stutzman 2002:50). At Carman, during one field season, a surface collection was conducted twice over the same transect to discover the amount and size of artifacts recovered during a second timed survey test; this aided in noting discrepancies and trends in the surface discovery methods. A two-timed survey involves collecting and surveying each five-by-five meter grid for a total of twenty minutes with each timed survey occurring for ten minutes. At Parker Farm, due to the limited surface collection finds and the wooded area at the western edge which did not permit plowing, shovel pit tests were used to garner additional, comparable information. As Allen and Sanft (2012) recorded on the disparate amount of surface information from Parker Farm, and thus the need to utilize shovel pit test results:

> The surface collection was limited to the eastern section of the site, where ground surface was visible. The western section of the site, currently covered by trees and dense undergrowth, encompassed about one third of the site area and had extensive evidence of

> occupation. The STPs were excavated in both the eastern and western portions of the site to obtain comparable samples. (4)

Although there may appear to be inherent and logical discrepancies in utilizing plowed surface collections as evidence of economic activity areas because of the apparent displacement of artifacts as a result of plowing, it has been suggested that:

> In general, lateral displacement of artifacts due to plowing has been shown to be relatively minor. While artifacts move vertically throughout the plow zone, they reach an equilibrium point after which they move very little horizontally from their original position. Due to these factors, the spatial relationship between artifacts may still be gleaned from plow zone assemblages. (Bradbury et al. 2008:14)

Others scholars argue, however, that surface collection methods have a number of limitations (Ammerman and Feldman 1978; Baker 1978; Shott 1995). Some of these limitations include the results of pedroturbation through rodent, tree root, and other natural causes resulting in the displacement and unrecorded movement of artifact remains (Baker 1978:292), the results of visibility on the day of collections and the bias towards finding larger artifacts in lieu of smaller in a given amount of time (Ammerman and Feldman 1978:736), the inherent random variation of surface collection procedures (Shott 1995), and fact that natural processes such as erosion and snow melt are able to move items on the surface of the soil various distances away for their location of original deposition. Despite these limitations, I posit that surface collections can yield a variety of useful information about site size and general economic activity areas. As Bradbury et al. (2008) stated, "[. . .] one should not assume *a priori* that surface collected artifacts cannot reveal much about site occupations" (34). I believe that the aforementioned factors affecting surface collection proceedings, while certainly plausible and most likely moved the artifacts from both sites to a degree, did not move the artifacts so greatly from their primary location of deposition as to invalidate the idea of regarding the spatial location as possible areas of gendered economic activities. At the beginning of each field season, surface collection

proceedings occurred to determine where large concentrations of artifacts were recovered, which in turn determined where to excavate. This process led Dr. Allen to find that concentrations of surface collection findings generally correlated well to comparable amounts of excavated artifact and ecofact remains. To me, this suggests that while plowing and other factors certainly moved the surface collection findings to the top of the soil and possibly a small distance away from the original position of deposition, the spatial location of the studied material remains correlate well with underlying trends and features.

It is also generally held in archaeology that the artifacts and ecofacts one recovers both at the level of surface collection findings and excavations are the result of the discard process and are in plain terms, trash or garbage. While I am sure this is certainly true for some of the artifacts and ecofact groupings studied, I still posit that these spatial areas of artifact clusters are more representative of activity areas than simply a random scatter of prehistoric Iroquois garbage. Middens were excavated at both sites, and while not every piece of trash was added to a midden, I hold that to find large concentrations of artifact groupings well outside of the size of a midden in certain sectors of the site is suggestive of more than trash deposits but is the location of gendered economic activity areas. Thus, surface collections have the potential to describe and elucidate spatial and cultural patterns.

For the remainder of this paper, only the first timed surface collection of each unit is displayed by total weight per category per provenience unit. It should be noted that at Carman, there was one transect in which students on their first surface collection spent double the amount of time collecting as compared to other transects. For this reason, the counts and weights utilized for mathematical and spatial operations for this transect were divided in half so as to make the data more comparable and less biased. This means that the mean weights and spatial distribution

maps were modified to accommodate for this discrepancy, but I did not change the proportions, frequencies, or other graphs showing the general counts of artifacts and their related attributes. While these counts still represent the first surface collection procedure per 5m by 5m grid unit, I thought it would be arbitrary to determine which complete flakes or decorated pottery sherds to not include in the analysis for the one transect that was divided in half. Thus, **Tables 1-5** and **Figures 2-5** showcase all of the attribute data from the first pass at Carman; all other figures of Carman will demonstrate the artifact and ecofact weights and counts as slightly less than they are in actuality due to the one transect that was divided in half.

For the Parker Farm and Carman sites, all of the recorded surface collection materials were coded and classified according to a wide array of coding schemes, which will be discussed on an artifact class basis. Three main material culture groupings were delineated—lithic debitage, pottery, and faunal remains. In addition to these three classes, other miscellaneous artifacts, such as shell and stone beads, were recorded with their spatial location, count, and weight, although they will not be discussed at this time. For each artifact class, the remains were counted and weighed according to their provenience number. With the lithic debitage, coding was completed to identify stages of reduction as outlined in the typology created by Sullivan and Rozen (1985) in conjunction with a limited and modified size analysis (Ahler 1989) where only two size categories are recorded. For pottery, the size, color, temper type, and thickness, among other variables, were recorded to identify variability within the assemblage that corresponds to different activities. Pottery was also separately recorded for decorated and undecorated sherds. The faunal remains were categorized as either burned or unburned, counted and weighed, and further classified by bone type if possible. Many of these codings are based on presence/absence variables and measurements, although a number are also categorical variables (**Appendix A**).

3.3 LITHIC ANALYSIS

Lithic debitage has the ability to explain much about a given society, from its mobility patterns (Cowan 1999) to its economy and economizing endeavors (Jeske 1989). At the two sites in question, the lithic material remains were created primarily by using local chert cobbles, called Onondaga chert, which could be easily obtained and fashioned into a variety of products, including such items as projectile points, utilized flakes, scrapers, and drills. Onondaga chert has been noted to be "a common material on other Iroquoian sites and found throughout this region [of New York]" (Stutzman 2002:80); at Parker Farm less than one percent (0.2%, or n=2) of recovered lithics, including complete flakes, broken flakes, flake fragments and debris, were made of a raw material other than Onondaga chert (n=1319). The same scenario also occurs at Carman with less than one percent (0.2%, or n=10) of surface collected lithics being made of a material other than chert (n=5004), with the usual other raw material being quartz. This fact is important to note because it demonstrates that this group of Cayuga Iroquois used local raw resources to fashion their tools. The major focus of this section is not necessarily on the tools, however, but the lithic debitage that was discarded as a result of tool-making. Lithic debitage is studied more intensively than actual tools, such as projectile points, because for the surface collection remains at the two sites, much more debitage was recovered (Carman n=5004; Parker Farm n=1319) than tool remains (Carman n=301; Parker Farm n=143). Similarly, by studying lithic debitage, one can answer questions related to manufacture and maintenance activities (Ahler 1989). It is also paramount to this study to analyze the debitage more so than the actual tool products because, as Ahler (1989) discusses, "As waste product from past human activities, flaking debris is likely to have been deposited at or very near its locus of origin within past cultural systems. This is in contrast to stone tools which may have been deposited at the last of a

long sequence of production and use locations" (86). Since the study concerns surface collections and their spatial distribution, studying debitage would better allow one the opportunity to make inferences about areas of flintknapping activities whereas studying tool location has the potential to show only one area of tool production and/or use of a possible multitude.

For this analysis, as mentioned earlier, debitage was classified according to the typology created by Sullivan and Rozen (1985) and was also differentiated by those pieces smaller than one-quarter inch and larger than one-quarter inch. While I did not necessarily perform a complete mass analysis as instructed by Ahler (1989), I still viewed the objects as belonging to the two size grades—those smaller than one-quarter inch screen size and those larger, to aid in determining the relative size of lithic debitage recovered from each site. Debitage was first separated into four groupings (complete flakes, broken flakes, flake fragments, and debris/shatter) according to the outline provided by Sullivan and Rozen (1985), from which all pieces were counted, weighed, and studied to find possible heat fractures and evidence of raw material type. Complete and broken flakes were then further studied in regards to dorsal morphology, striking platform surface, dorsal cortex, core/face trim, and platform grinding. Complete flakes were also measured in regards to height and width. Dorsal morphology, striking platform surface, and dorsal cortex were measured utilizing a set of categorical variables, whereas core/face trim, platform grinding, and heat fracture evidence were recorded as presence/absence variables (**Appendix A**). Although there was considerably less information recovered from Parker Farm (**Table 1**), as will be evidenced in later faunal and pottery analyses, comparisons were still made between the two sites. While there is the issue of replicability because coding lithics can be a subjective process, by following the typology created by Sullivan

and Rozen (1985), the intention of the coder was to make the data more standardized and thus more able to be replicated, to a degree. The lithic debitage were recorded in order to understand the types of general activities and phases of lithic reduction occurring within and between the two Cayuga settlements. A general overview of all the finds from each site will be analyzed and then will further be elucidated by specific economic activity areas within each site.

Table 1: Artifact and Ecofact Frequencies

Material Remain	Carman (UB 642) Frequency	Parker Farm (UB 643) Frequency
Lithics	5004	1319
Pottery	1175	48
Faunal Remains	18191	1198
Total	24370	2565

Table 2: Lithic Debitage Proportions

Lithic Debitage Type	Carman Proportion (n=5004)	Parker Farm Proportion (n=1319)
Complete Flake	20.6%	9.7%
Broken Flake	25.5%	14.1%
Flake Fragment	36.2%	37.5%
Debris/Shatter	17.7%	38.7%
Total	100.0%	100.0%

As can be viewed from **Figure 1** the two sites were compared in regards to their mean weights to discover if the sample mean weight was representative of each site as a whole or could have been the result of the vagaries of sampling. A higher confidence interval for each category suggests that although this analysis only focuses on surface collection material, one is fairly confident that the mean weights given are accurate and representative of the sample as a whole. This, in turn, suggests that proportions given for mean weights are also fairly accurate and representative of each site. This mean weight chart also suggests the general range of weights expected to be found per site as representative of the whole collection at two different confidence intervals. For only the debris categories at the two sites, one is over 95% confident

that the mean weights are not the results of the vagaries of sampling; for all other categories one is less than 95% confident that the mean weights are not the results of the vagaries of sampling. This leads one to conclude that overall, lithics between the two sites experienced similar reduction strategies, as evidenced by similar mean weights of lithic debitage categories, and the debris mean weight is an accurate suggestion of an average debris flake weight found at each site.

Mean weights were found by finding the mean of the whole given artifact category by adding up all the systematic weights and dividing by the systematic counts. It is interesting to note that on the whole, the mean weight for lithics at Parker Farm are lower than those at Carman with the exception of the debris/shatter and flake fragment grouping (**Figure 1**). As can be shown in **Table 2**, out of all of the lithic debitage recovered at each site, both sites had comparable amounts of flake fragments recovered while Parker Farm had much more debris/shatter categories than those found at Carman. Debris/shatter pieces are generally larger, chunky pieces with a higher mean weight, which is one possible reason for the disparity in mean weights between the two sites. Another possible reason is the disparate amount of time spent surface collecting at each site. At Carman, there were five surface surveys that occurred over a span of days, whereas at Parker Farm, only one surface survey was conducted in the span of one day. It would follow that as larger pieces are more easily identifiable and more likely to be retrieved, heavier mean weights and larger debitage pieces were recovered more readily than at Parker Farm than at Carman.

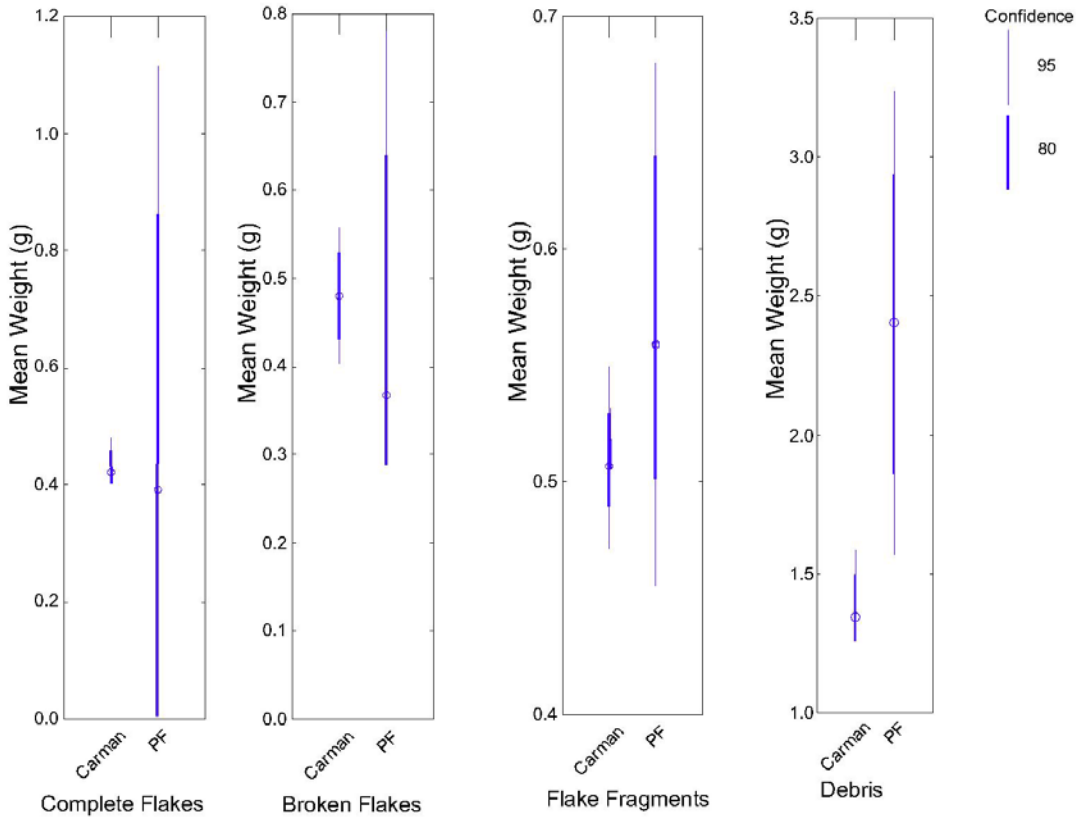

Figure 1: Lithic Mean Weight Confidence Intervals

For lithic debitage, there are three stages of reduction, or reducing a cobble of rock into a finished product: primary, secondary, and tertiary. Primary reduction comprises the beginning stages of reduction and is experienced by such characteristics as high cortex amounts, no dorsal scars, or very angular ones, and cortical platform or single, flat platform surfaces. As the stages progress, more complex and smaller pieces are recovered with less cortex, smoother dorsal surfaces with many dorsal scars, and multi-faceted striking platforms. It has been noted that, "As the stone tool decreases in size it necessarily follows that the debitage removed from the tool during production also grows progressively smaller" (Andrefsky 96). At Carman, 94.3% of complete and broken flake fragments (n=2309) had no cortex, 3.9% had less than half of the piece covered in cortical matter, and 1.8% had more than half of the specimen filled with cortex.

For the dorsal morphology of the complete and broken flakes, the majority of complete and broken flakes had a smooth, multi-faceted flake scar exterior (46.8%) with angular, one to two flake scar facet being only one percentage point lower (45.7%) and cortex (7.4%) and indeterminate (0.1%) comprising the minority (**Figure 2**). In regard to platform surfaces of complete and broken flakes, the vast majority (83.5%) of remains had a single striking platform with complex platforms (12.7%), cortical platforms (0.8%), and absent or indeterminate platforms (3.0%) creating the minority (**Figure 3**). This information and data suggests that an intermediate phase of reduction was occurring at the Carman site (**Figure 4**), which translates into debitage that are the result of both the formalized and expedient tool-making process. The later stages of formalized tools, which include projectile points that are commonly associated with males and hunting practices in Iroquois society, are evidenced by small, thinner, and more "complex" pieces of debitage; expedient tools, such as cores and utilized flakes, are more commonly associated with females and are evidenced in the debitage record by larger, chunky pieces with earlier stages of lithic reduction. Thus to determine that an intermediate stage of lithic reduction was occurring across the site as a whole is suggestive of a variety of flintknapping and tool-production activities occurring, which are in turn gender neutral.

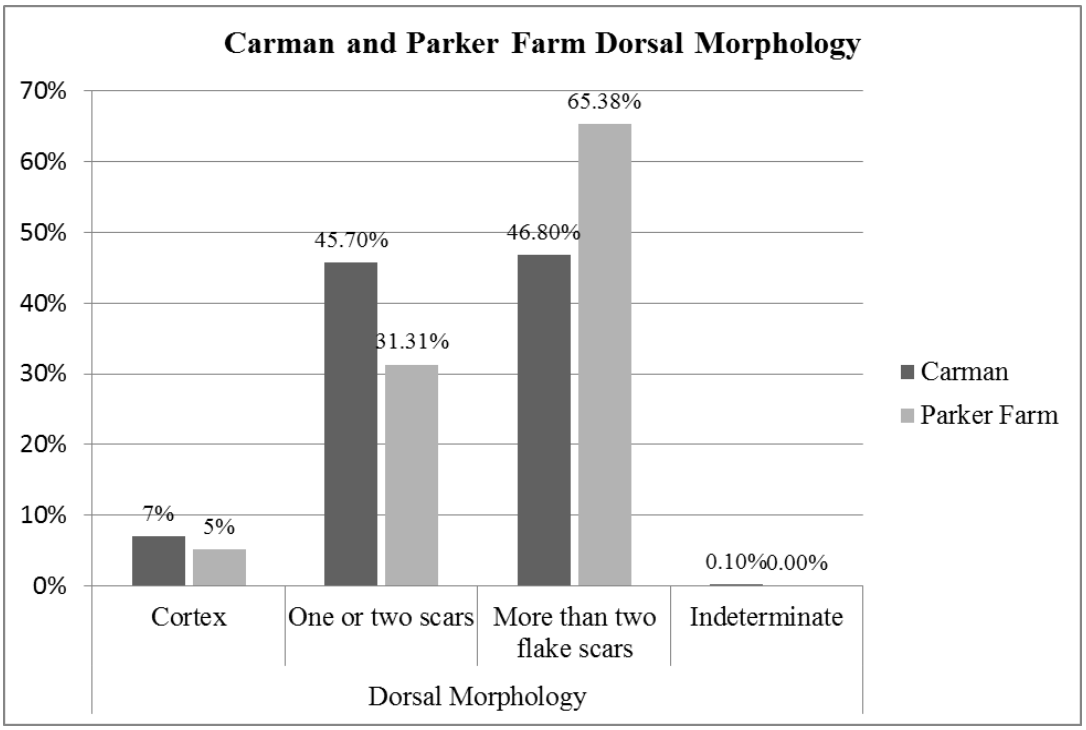

Figure 2: Carman (UB 642; n=2309) and Parker Farm (UB 643; n=313) compared in regards to dorsal morphology

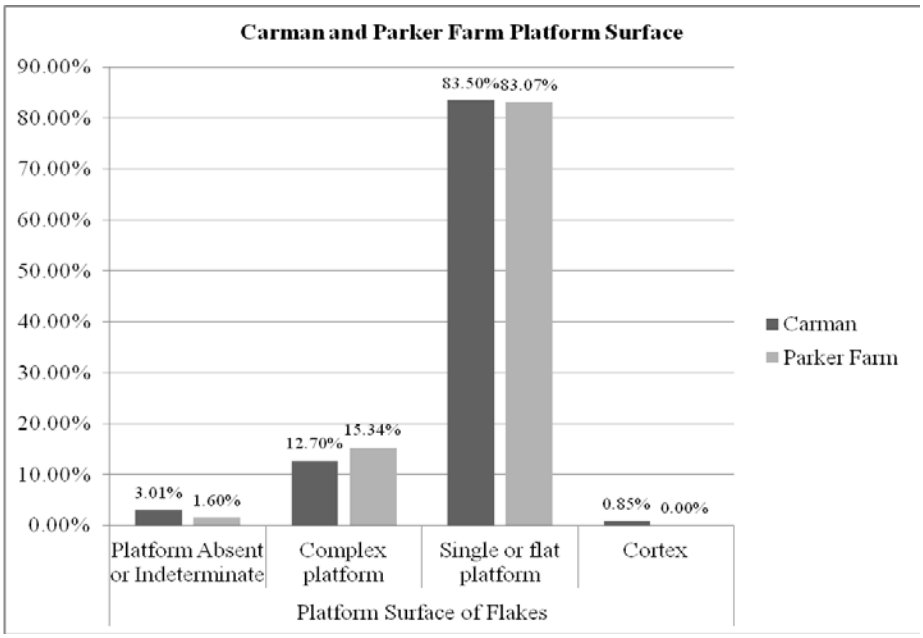

Figure 3: Carman (UB 642; n=2689) and Parker Farm (UB 643; n=313) platform surface treatment comparison

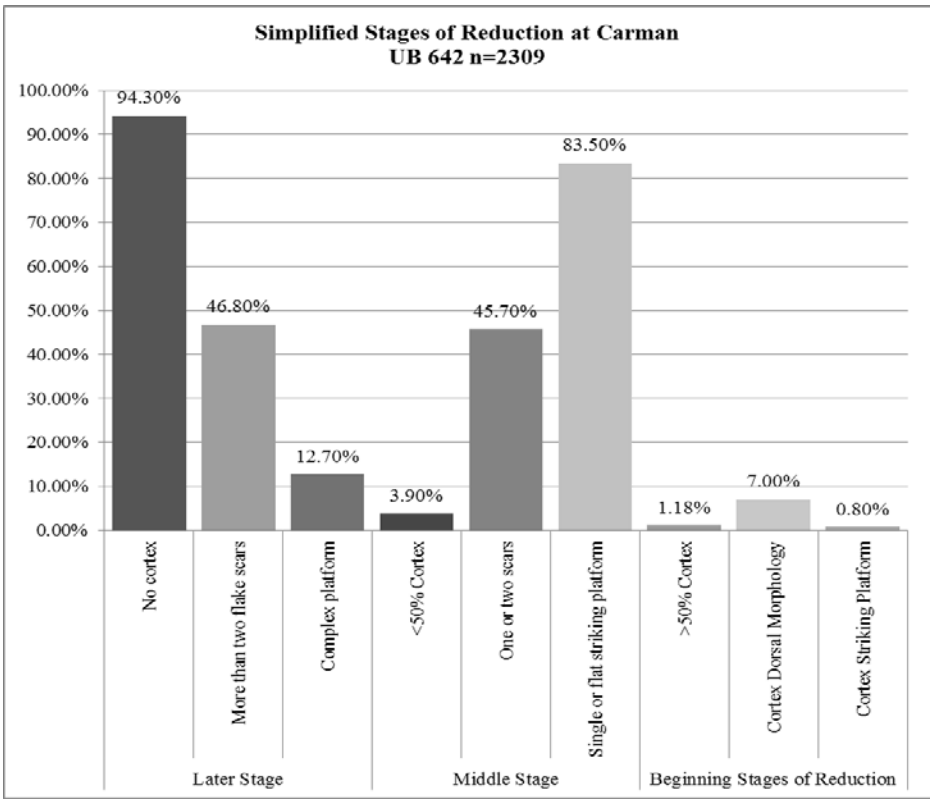

Figure 4: Carman phases of lithic reduction and accompanying characteristics.

I came to this conclusion of an intermediate stage of lithic reduction at Carman due to the majority of recovered lithics were debris and flake fragments, most flakes were of a larger size proportion, and there were almost equal percentages of multi-faceted flake scar and angular, one to two flake scar faceted exteriors with only a small percentage of complete and broken flakes demonstrating signs of cortex; similarly, the vast majority of complete and broken flakes had single striking platforms. Later stages of reduction typically have multiple flake scars, are smaller, and have a complex striking platform. Cortex is not always a direct indicator of the phase of lithic reduction, for as Sullivan and Rozen (1985) note: "Because a variety of independent technological and nontechnological factors influence cortical variation, it is misleading, [. . .] to use it exclusively to describe prehistoric technology" (756). Utilizing cortex

amounts in conjunction with the other attributes, however, provides the same conclusion that an intermediate stage of reduction was occurring across the site at various locations.

At Parker Farm, most of the recovered lithic debitage (n=1319) were pieces of debris (75.9%) and flake fragments (17.0%), which is similar to the trend found at Carman of less complete and broken flakes recovered than shatter and flake fragments. Of the almost seven percent of combined complete and broken flakes (n=313), 98.7% exhibited no signs of cortex and 1.3% had less than half of the flakes showing traces of cortex. In regards to the dorsal morphology of the complete and broken flakes, almost two-thirds had a smooth, multi-faceted flake scar exterior (63.58%); close to one-third of flakes (31.31%) exhibited angular, one to two flake scar facet, and no dorsal scars or cortex (5.11%) comprised the minority (**Figure 3**). This is a minor contrast to the Carman site which had almost equal frequencies of multiple and single flake scar counts. At Parker Farm, complete and broken flakes (n=313) had a majority of single striking platforms (83.07%), with complex platforms (15.34%) and absent or indeterminate platforms (1.60%) comprising the minority (**Figure 4**). A great portion of recovered lithic debitage (n=1319) were also larger than ¼" screen size (99.70%). This is similar to the Carman site for its largest frequency of striking platforms were single, flat platforms and almost all of its debitage was larger than the ¼" screen size. It is understandable and makes sense that almost all of the recovered lithics from both sites had high percentages of debitage greater than the one-quarter screen size because one would suspect that larger pieces would be recovered in a surface survey more readily than smaller and less easy to identity, remains. Similarly, Parker Farm exhibits signs suggesting an intermediate phase of reduction taking place across the whole Parker Farm site (**Figure 5**).

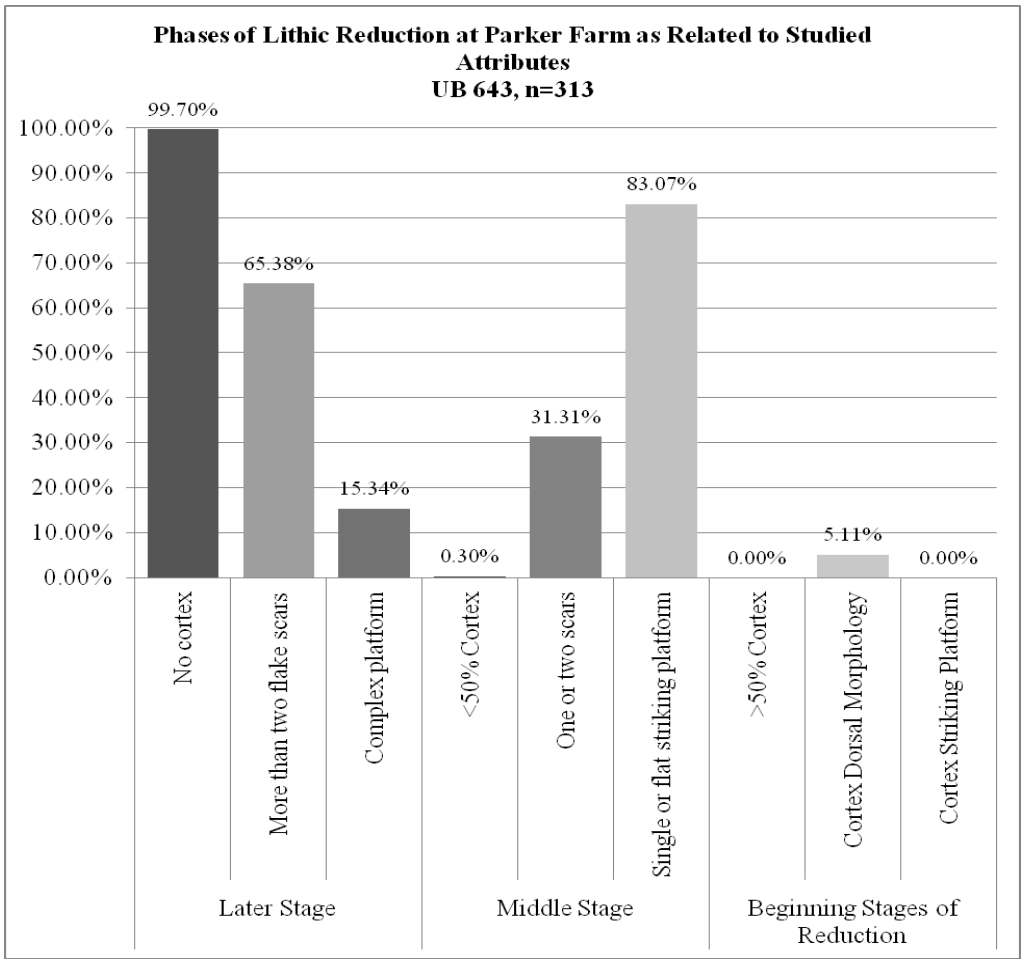

Figure 5: Parker Farm phases of lithic reduction.

The lithic debitage from the Parker Farm site as a whole shows attributes of an intermediate phase of lithic reduction as evidenced by the majority of recovered lithics classified as debris and flake fragments, most flakes were of a larger size proportion, and there was almost two-thirds multi-faceted flake scar exteriors with no complete and broken flakes having signs of cortex; the vast majority of complete and broken flakes also had single striking platforms. With the exception of a single striking platform and the almost one-third percent of singular, angular dorsal morphologies, the lithic debitage found on the surface of Parker Farm is suggestive of a later stage of reduction. Due to these two classifications, however, I posit that on the whole, Parker Farm is similar to Carman in being a site with an overall intermediate phase of

flintknapping occurring. As mentioned previously, this is again suggestive of gender neutral lithic processes in which both males and females participated.

To highlight the spatial dynamics and distribution of artifact and ecofact remains, lithics, ceramics, and faunal assemblages were mapped according to the overall weight found per surface collection grid square. The artifacts and faunal remains are mapped according to weight because weight is a more direct and informative measure of surface collection findings than count; count can be distorted by factors such as plowing, environmental forces, and tredding over the sites in general. Areas of higher weight concentration are darker shades of red. It should also be noted that each grid square represents a 5m by 5m area, and large blue circles are used to draw the reader's attention to large clusters of higher overall weight per artifact and faunal category. These delineations are not meant to suggest that huge areas are one economic activity area, but instead are general areas filled with multiple, smaller spaces with high concentrations of material remains suggesting similar, if not the same, general economic activities. At Carman, the black rectangle in the center portion of the site represents the excavated longhouse structure. No longhouse are identified at Parker Farm because, as of yet, no excavated longhouse has been found or recorded in the open field portion of the site.

For the lithic debitage categories at Carman (**Figure 6**), all pieces had a high concentration within the eastern and southern portions of the site. Complete and broken flakes had higher concentrations near the center of the surface survey, while debris and flake fragments had high weight distributions across surveyed area, including near the peripheries of site. This would suggest that flintknapping occurred across the site, with debris and flake fragment high weights and concentrations scattered throughout, but also that at the center of Carman, lithic reduction was a prominent activity.

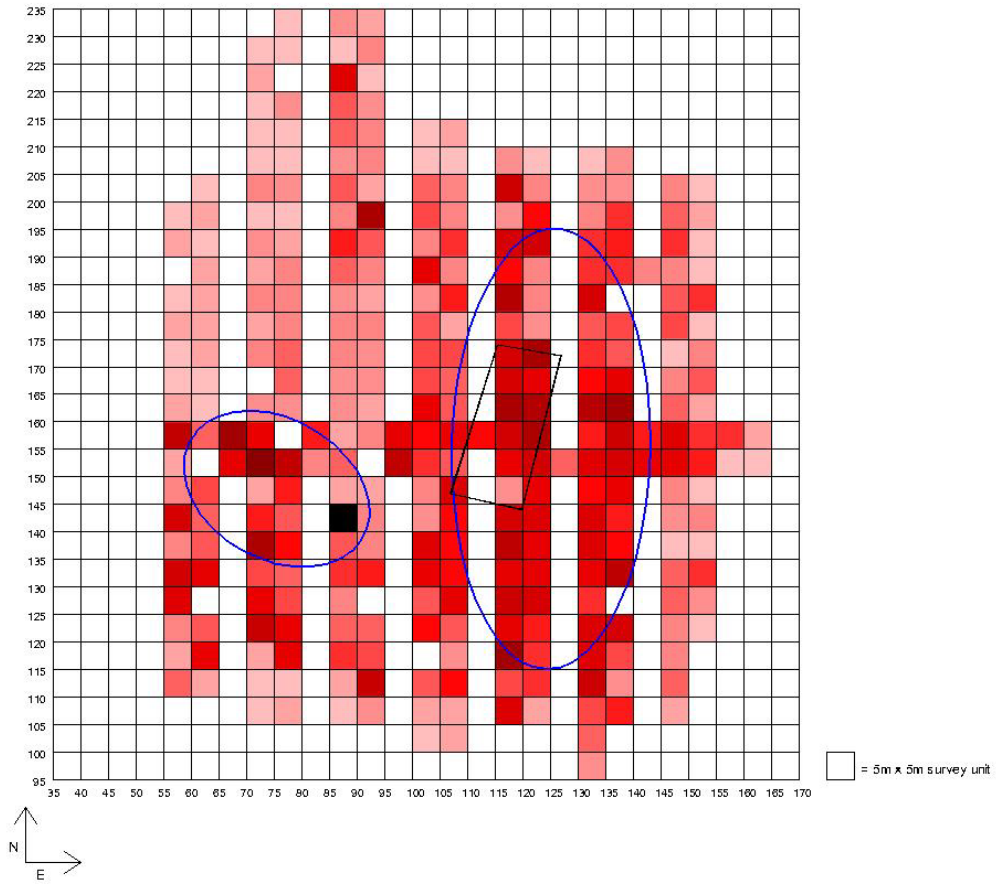

Figure 6: Carman (UB 642) lithic debitage (complete flakes, broken flakes, flake fragments, and debris) weight (g) distribution. Weight ranges from 0.0 – 77.4 grams.

Lithic tool categories were also viewed, and of those labeled, the majority were biface and projectile points, with a handful of scrapers also included. Lithic tools were scattered throughout the site, but had a higher concentration in the southeastern region of Carman. It should be noted that while some grid units had up to four tools recovered, the majority (81%) of first-pass lithic tools (n=301) found per grid square was one. Thus this graph, while showing where some clusters of lithic tools are located, mainly demonstrates where single tools where found as plotted by their weight. While expedient tools are not listed here, including the categories of cores and utilized flakes, they were recovered throughout Carman. The mixture of these formalized and expedient tool groups across the site, in addition to the conclusion that there

was an intermediate stage of lithic reduction, suggests that a variety of activities were occurring at various energy investment levels at Carman. While stone tool production, and specifically formalized tools such as projectile points and bifaces, have commonly been associated with males, females also utilized stone tools for food processing, food preparation, and clothing production (Gero 1991). While it cannot be determined with certainty which stone tools and debitage clusters are associated with which gendered group, I hypothesize that more formalized tools associated with hunting, a primary male-dominated activity, can be equated with males, while the more expedient stone tools, which are not included in this analysis, such as cores and utilized flakes that aid in cutting, scraping, and processing materials, can be associated with females (Sassaman 1992; Stutzman 2002; Allen and Conger 2012). While both genders could make the stone tools associated with the other, and certainly females were just as capable as males to make formalized tools (Gero 1991), Iroquois males are more commonly associated with the more formalized tools, such as projectile points, than females. Although the majority of lithic tools showcased in **Figures 7** and **9** are more formalized tools, such as projectile points, the fact that scrapers are included in this classification, and due to the fact that projectile points may have been lodged into killed animals that were later butchered and processed within the village complex by females, I cannot hypothesize with certainty that those lithic tool concentrations are more gendered as male or female. Thus, akin to the lithic debitage, the lithic tool spatial distribution is also gender neutral.

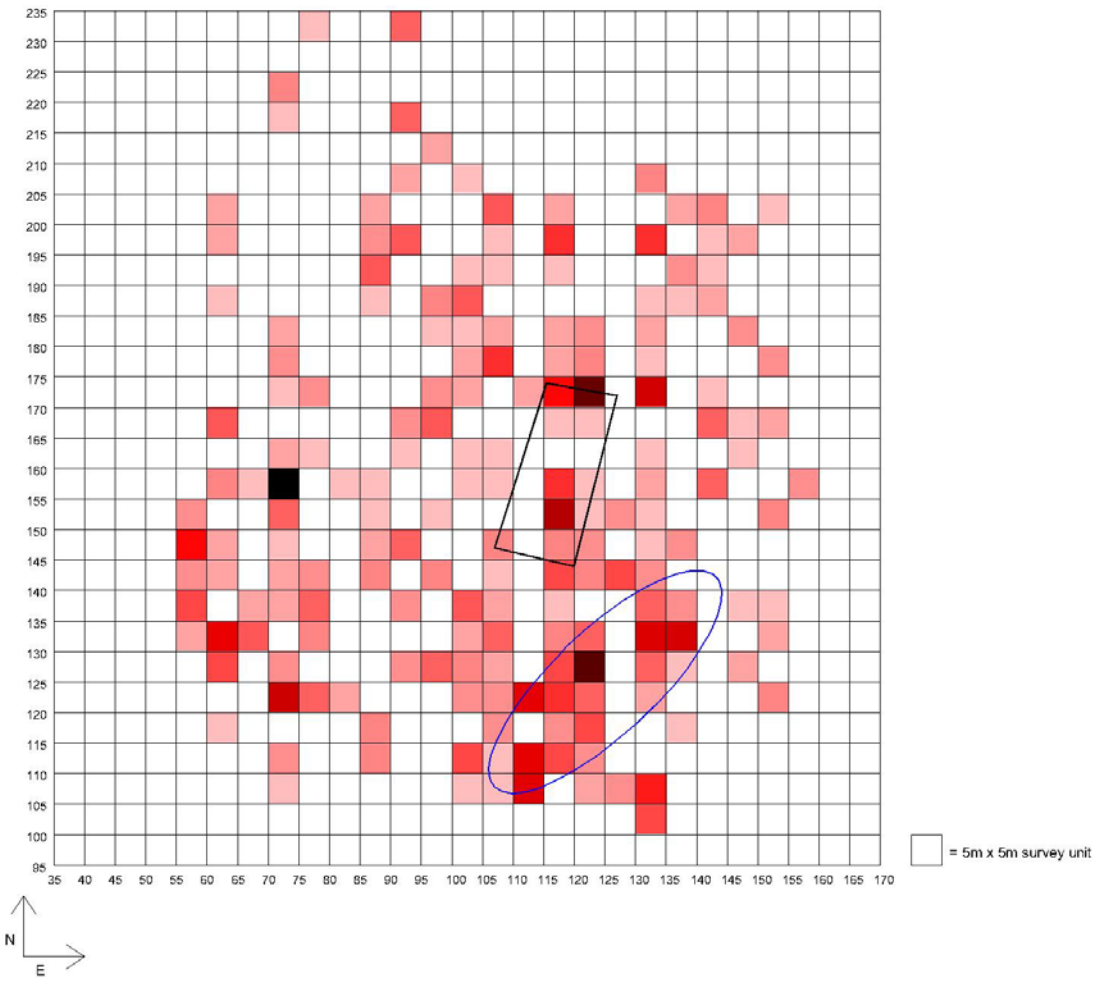

Figure 7: Carman lithic tool (mostly bifaces and projectile points) spatial distribution. Weight ranges from 0.0 – 67.65 grams.

At Parker Farm, on the other hand, the lithic concentrations of weight are distributed across the site, although there is a trend in the central and north-central portions of the site for high proportions of all lithic remains. Similar to Carman, at Parker Farm there is more debris and flake fragments scattered in high concentrations across the whole of the site, while for complete and broken flakes, the majority of high weight clusters occur at the center and northern central portion of the settlement (**Figure 10**). Lithic tools (many of which were not designated as certain tool types), are also in the southwestern and north-central areas (**Figure 11**).

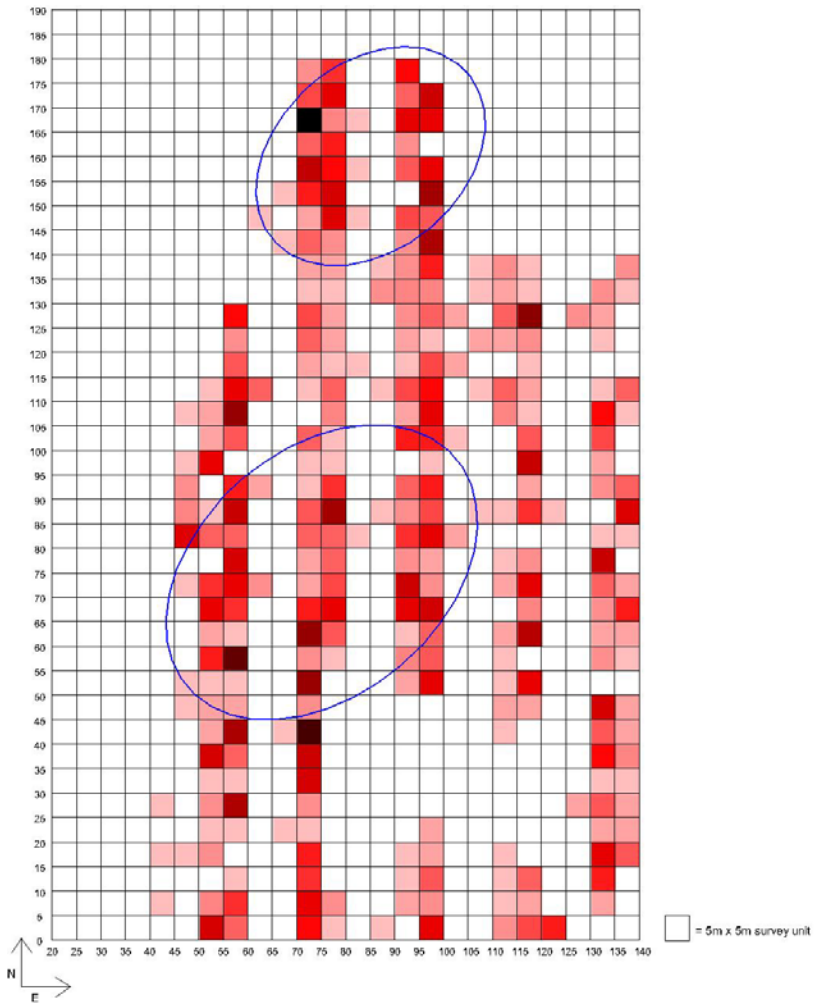

Figure 8: Parker Farm (UB 643) lithic debitage distribution. Weights range from 0.0 – 60.6 grams.

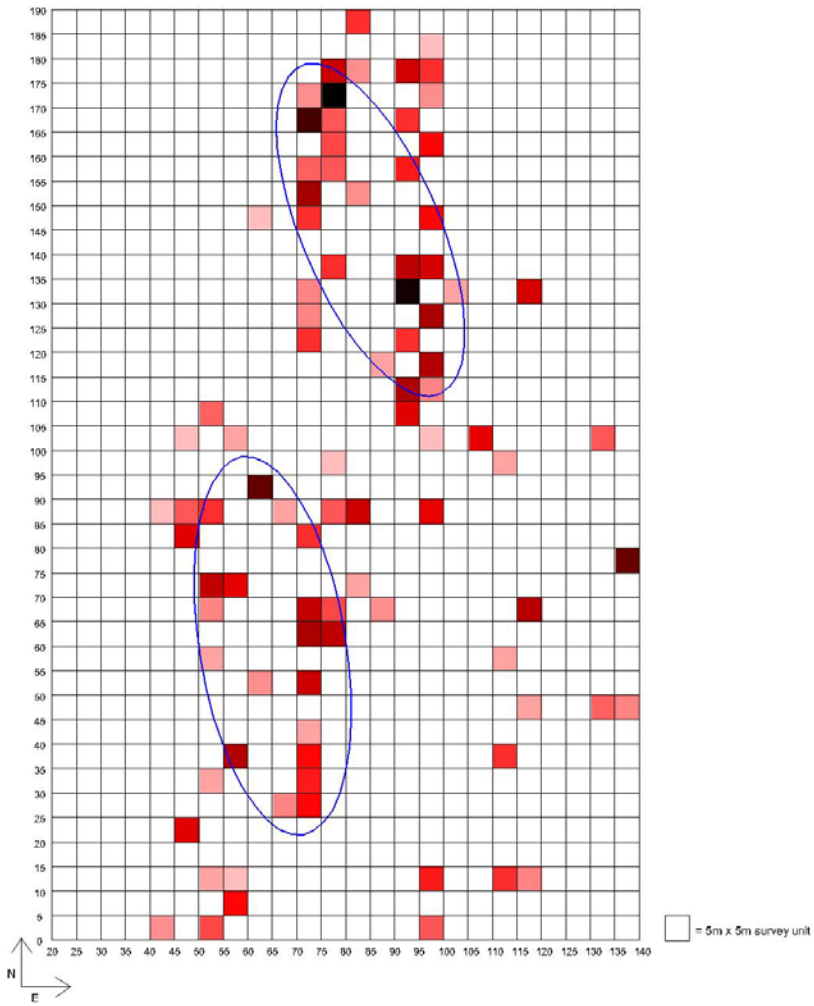

Figure 9: Parker Farm (UB 643) lithic tools spatial distribution. Weight ranges from 0.0 – 16.6 grams.

At both Carman and Parker Farm, lithic debitage and tools could be found throughout the site. Within each Cayuga settlement, however, there appeared some distinct clusterings of economic activity areas. While I had originally postulated that there would be distinct gendered economic activity areas as could be studied through the stage of lithic debitage reduction and overall patterning of lithic tools, the intermediate stage of reduction and complications with lithic tool analysis resulted in the discovery of an overall gender neutral lithic economic activity areas. In regards to site usage and function, this translates into males and females participating in different lithic economic tasks that are not easily identifiable with the given assemblages from

either site. The various concentrations of lithics in general also suggest where areas of communal activity occurred and help structure the remainder of the artifact and faunal analysis to determine where cooking, food storage, and food processing areas may have been located.

3.4 CERAMIC ANALYSIS

Although much can be gleaned from lithic remains, ceramics also offer an insightful look into the past. Ceramic assemblages may correlate with social identity (Gosselain 1998), socioeconomic variation in a population (Arthur 2009), and to the mechanical restraints placed upon vessels during manufacture and use (Braun 1983); they, similarly, provide insight into the cultural choices of the people who created them and can provide context on the social and political structures of the societies in which they are created (Sinopoli 1991). For the Iroquois, pottery was used to cook, store and distribute food, share tobacco through the use of ceramic pipes, and symbolize the values of family and hospitality (Engelbrecht 2003:87). At the Carman and Parker Farm sites, a variety of pot sherds were recovered from surface collection surveys, although at both sites pottery comprised the smallest percentage by weight of artifacts recovered. This may be due to the fact that many of the pottery pieces were fragmentary, and a study by Allen, Lockard-Reed, and Ventresca (2008) demonstrated that during a repeated, timed surface collection, pottery pieces were found at Carman with a 67% increase, suggesting that more time spent surface collecting pottery sherds yields significantly more artifacts. The recovered sherds from the Allen, Lockard-Reed, and Ventresca (2008) study were screened to see if size was an important factor in identifying pottery; they found that there were more larger pieces, in general, found during the second collection, and there was only a slight decrease in number with

screening. One reason pottery may have been found in such small proportions as compared to the other groups is that avocational archaeologists and collectors have been known to have visited the sites and take pottery and other remains with them. It would follow that these individuals could have removed, over time, the bigger and more recognizable sherds from the sites, and thus left the much harder to recognize, small and fragmentary sherds, for field school participants to identify. Pottery hue, especially these pottery pieces that are the same shades of brown as the underlying soil, also make finding pottery sherds much more difficult than other material remain categories, such as bone, which stand out more starkly from the ground with its white coloration. These are only a handful of possible suggestions as to why pottery was recovered from both sites in such low quantities.

At Carman and Parker Farm, attributes such as weight, thickness, relative size, sherd type, surface treatment, decoration, temper, temper type, sooting, pitting, and type of decoration were studied (**Appendix A**). All of these variables were presence/absence variables, with the exception of the size category being categorical and weight and thickness being the two measurements. For the size category, individual pottery pieces were categorized by size using a size box template. The small size category was determined by any artifact that was the same size or smaller than a five millimeter by five millimeter area, while the medium category included all items fitting between a ten millimeter by ten millimeter area and the aforementioned small area. Large items were those ranging in size from a fifteen by fifteen millimeter area to the medium one hundred millimeter squared area. Extra-large were those pieces that were slightly over the large categorized area, and extra-extra-large pieces were huge pottery pieces that extended well beyond the fifteen by fifteen millimeter dimensions.

While I had originally separated the two groups of pottery into decorated and undecorated (**Table 3**), it later came to my attention that because the pieces were so fragmentary and it was often hard to decipher where pottery sherds were located on the vessel, that I should merge the two categories together and simply study pottery as one collective artifact category. I will note on the amount of decorative motifs discovered and the amount of rim sherds, but area of location and the differences between decorated and undecorated will not be explored at this time.

Table 3: Pottery Proportions

Pottery Type	Carman Proportion (n=1405)	Parker Farm Proportion (n=48)
Undecorated	83.6%	54.2%
Decorated	16.4%	45.8%
Total	100%	100%

At the Carman site, surface collection surveys recovered a total of 1405 decorated and undecorated pottery sherds with a collective weight of 2,299.5 grams. As can be viewed in **Table 4**, the various attributes studied between Carman and Parker Farm are viewed together to make an easy comparison between the various groupings studied. The amount of sooting and pitting found at Carman suggests that many pot sherds recovered were used for cooking purposes and were blackened as a result of being used over a fire. The relative thickness and temper type also suggest that these recovered pottery sherds were for the most part utilized for cooking and food processing, as wall thickness and temper material are often indicative of pot function (Rice 2005). For all but one of the forty-six found examples of pitting, soot marks were also evident.

Table 4: Pottery Attributes

Pottery Attributes	Carman (UB=642; n=1405)	Parker Farm (UB=643; n=48)
Complete Sherds	71.5%	83.3%
Exfoliated Sherds	28.5%	16.7%
SIZE		
XXL	0.4%	0%
XL	5.0%	10.4%
L	32.4%	62.5%
M	53.7%	25%
S	8.5%	2.1%
SHERD LOCATION		
Body	95%	58.3%
Rim	4.3%	8.3%
Collar	0.7%	33.4%
TEMPER MATERIAL		
Coarse	37.2%	69%
Fine	62.8%	31%
TEMPER TYPE		
Grit	87.6%	77.1%
Sand and Grit	5.7%	0%
Sand	4.3%	22.9%
Shell	1.1%	0%
Shell and Grit	0.5%	0%
Indeterminate	0.3%	0%
SOOTING OR PITTING		
Evidence of Sooting	60.9%	90%
Evidence of Pitting	2.9%	0%
Of Complete Unbroken Sherds:	n = 1005	n = 40
SURFACE TREATMENT		
Smooth	83.5%	65%
Rough	16.5%	35%
Average Thickness	5.85mm	7.1mm

Out of the 230 pots that showed signs of decoration at Carman, 72% had indented straight lines with the average amount of lines between two to three, 12% were decorated solely with indented dots with the average amount of dots ranging being between one and two, 10% were identified as rim or collar sherds without signs of decoration, 3% were decorated with both indented straight lines and indented dots, 2% with only indented diagonal lines averaging

between two and three lines per sherd, and less than one percent had other types of decoration or were decorated with both indented straight lines and indented diagonal lines.

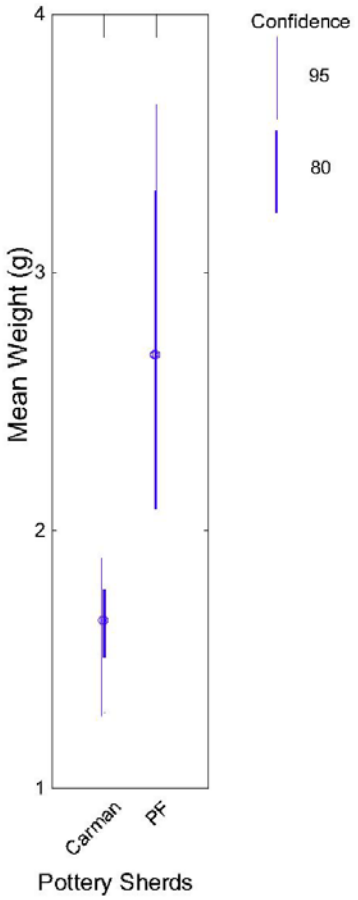

Figure 10: Pottery Sherd Mean Weight Confidence Intervals

Meanwhile, at Parker Farm, 22 decorated and 26 undecorated pottery sherds were found with a collective weight of 143.9 grams. Forty percent of this total weight was composed of undecorated pottery pieces with the remaining sixty percent comprising the decorated pottery sherds; to view a distribution by frequency, please refer to **Table 3** and to view the proportions of pottery sherds attributes please refer to **Table 4**. As at Carman, the relative amount of sooting, dense grit temper material, size grades, and thickness suggest that many, if not all,

recovered sherds came from cooking vessels. The greater percentage of coarse temper and sooting also suggests that of the pottery sherds recovered, more were used for cooking purposes than those found at Carman. For the twenty-two decorated sherds, 50% had only indented straight lines, 18% had indented diagonal lines, 13% were rim or collar sherds with no evidence of decoration, 9% had indented dots, 5% had indented straight and diagonal lines, and 5% had indented straight lines, diagonal lines, and dots. This suggests that there were a variety of pottery decoration styles used by the Cayuga.

When comparing the mean weights between the two sites in **Figure 10**, it is found that one is more than 95% confident that the mean weights for undecorated and decorated pottery at the Parker Farm and Carman sites are not the results of the vagaries of sampling. It makes sense that Parker Farm has a higher overall mean weight of pottery sherds than those at Carman due to the nature of surface collection procedures and the fact that less time was spent collecting at Parker Farm (one day) versus at Carman (multiple days over a span of years), and thus larger and heavier pieces were more easily identifiable and recovered leading to a higher overall mean weight.

At Carman (**Figure 11**), decorated and undecorated sherds were found throughout the settlement with concentrations in the north-central, south-central and east-central areas of the site. This suggests that cooking and storage activities were a main activity in the central regions of the site near the identified, excavated longhouse structure. The main users and producers of pottery in Iroquois society were women, although even in other societies it is assumed "that women made and used most of the pottery in [. . .] prehistoric societies" (Sassaman 1992: 161). The clay that formed pottery came from Mother Earth and "More than any other artifact, they

[pot sherds] symbolize the household and female activity" (Engelbrecht 2003:82). It follows then that clusters of pottery are also areas of female economic activities.

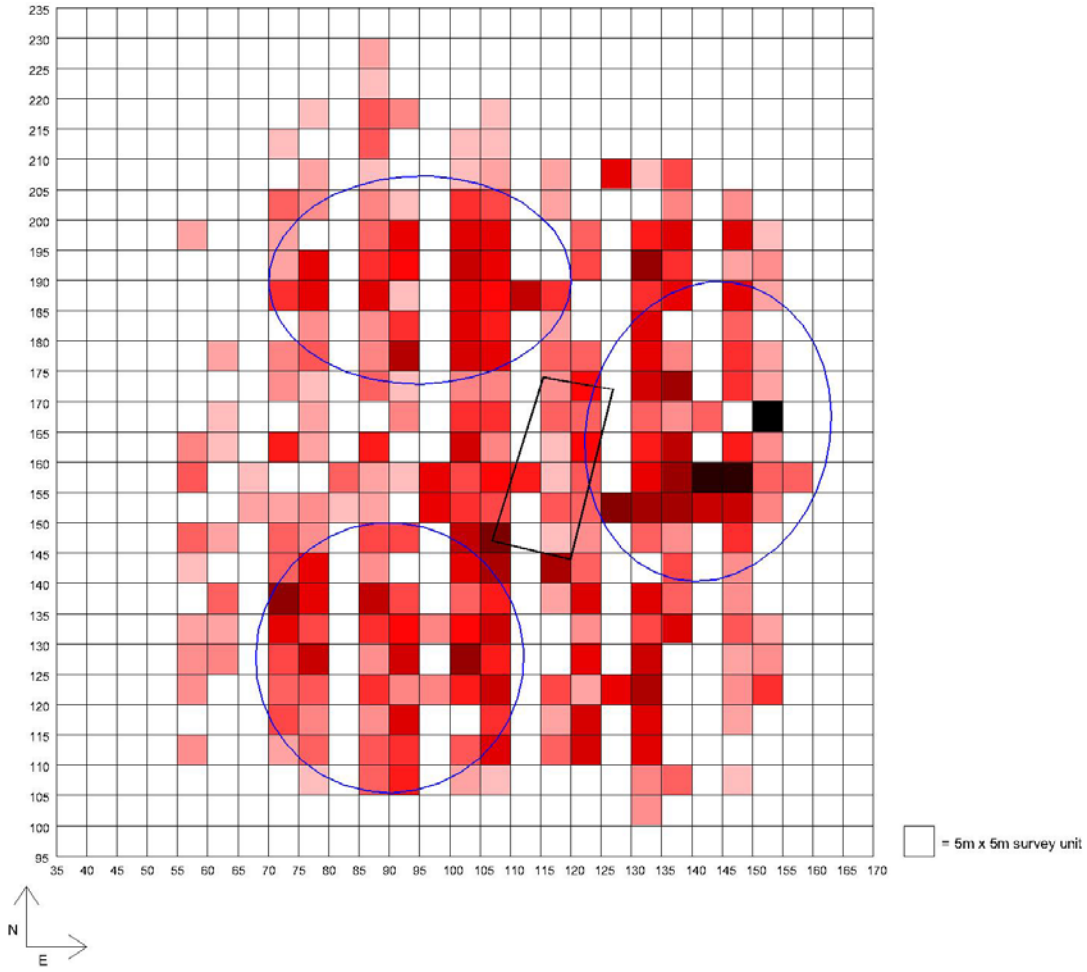

Figure 11: Carman (UB 642) pottery (decorated and undecorated) spatial distribution. Weight ranges from 0.0 – 53.7 grams.

Unlike at Carman where pottery is found in various locations, at Parker Farm ceramic sherds were found only in certain sectors (**Figure 12**), although it should be noted that this spatial distribution map is not showing concentrations of pottery at Parker Farm; rather, it is demonstrating where one to two sherds were recorded and their weight. Despite this, the map still demonstrates where general clusterings of sherds were discovered. The tendency is for undecorated and decorated pottery sherds to be recovered in the southwestern to northeastern

sector of the site; those pots that did exhibit traces of decoration, in addition to rim sherds without decoration, on the whole were recovered just in the northern portion of Parker Farm. Much less information was recovered at Parker Farm than at Carman, mainly due to the time spent surface collecting at Parker Farm in relation to Carman in addition to the aforementioned hypothesis that Parker Farm is a dispersed settlement. Even though the weight of recovered remains is more than three times greater at Carman than Parker Farm, there is still an evident trend and loci of pottery sherds, suggesting female areas of food storage and cooking.

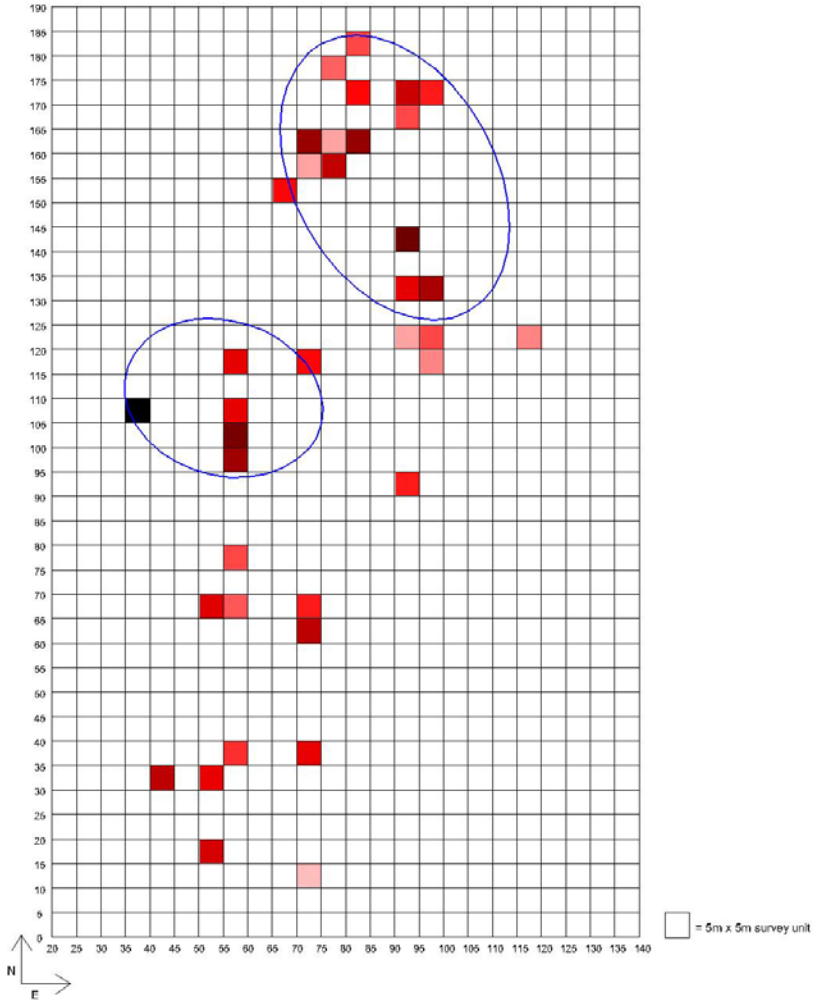

Figure 12: Parker Farm (UB 643) pottery (decorated and undecorated) spatial distribution. Weight ranges from 0.0 – 15.5 grams.

This distribution of sherds at Parker Farm supports the hypothesis by Allen (2010) of the site being a possible dispersed settlement as there are no high concentrations of pottery remains. Even if Parker Farm is a dispersed settlement, both sites have comparable types of pottery sherds to suggest the sherds recovered came from types of cooking vessels. As women were the owners of the food and the primary gender in charge of making and distributing food items, it follows that the locations of these pottery sherds highlights areas of female economic activities, which for Carman are in the central regions of the site near the known excavated longhouse structure, and for Parker Farm to be in the southwestern to northeastern areas of the site.

3.5 FAUNAL ANALYSIS

While lithics elucidate information on tool-making activities and spaces of lithic production and ceramics showcase locations of pot production, storage use, and food preparation, faunal material remains highlight where individuals consumed meat and what animals they hunted or scavenged. Through the knowledge of what individuals ate, sections of the body consumed, and the temperatures at which they cooked their meat (Nicholson 1993), to the important fat and grease that can be rendered from bones, faunal material and its accompanying fractures types can yield a variety of information about a community's subsistence patterns (Outram 2002). At the Cayuga sites in question, many bone fragments were recovered, and in fact comprised the second highest category of remains recovered by weight at Carman and Parker Farm. These artifacts are showed by weight because, as aforementioned weight is an arguably more substantive measure of surface collection findings than count.

At Carman and Parker Farm, a variety of attributes were studied for charred, calcined, and unburned bone and teeth, including if cut marks were evident, if there was evidence of modified bone, if any identifiable bones were presents, and if the artifact pieces were smaller or larger than a ¼" screen size in an attempt to hypothesize about economic activity areas within and between the two Cayuga settlements. The bones from the surface collections were already sorted into calcined and unburned bone. Bones were classified as charred when there was over fifty percent blackened, charred coloring on the exterior of the bones. Each category was counted and weighed collectively by provenience number, and the remaining categories were recorded using a presence/absence variable (**Appendix A**). These specific attributes were studied in the hopes of discovering what types of animals were generally being consumed and where areas of certain activities were occurring. As the recorder has had no extensive experience studying faunal remains and has not yet had the opportunity to take an in-depth zooarchaeology course, only two types of animal bones with which the recorder was familiar were noted, including long bones and deer metatarsals. These were identified in a previous data analysis course; there may be more identifiable bones within the surface collections of which the recorder was unaware or may have believed to be a certain type of bone but wished not to make any assumptions. Further analysis in this field may be taken to uncover more information about the taxa of animals and parts of animals consumed at the two Cayuga sites.

At Carman, the majority of faunal pieces recovered were unburned (n=9835), with calcined bone (n=5510), charred bone (n=2328), and teeth (n=518) listed in descending order.

Table 5: Faunal Assemblage Proportions

Faunal Remain Category	Carman Proportion (n=18191)	Parker Farm Proportion (n=1198)
Charred Bone	12.8%	11.9%
Calcined Bone	30.3%	72.2%
Unburned Bone	54.1%	14.5%
Teeth	2.8%	1.4%
Total	100%	100%

The largest category by weight also correlates with number of finds, as unburned bone, whose weight composed 76.35% of the combined faunal weight of 6,658.2 grams, had the greatest combined weight. The next highest category was charred bone which comprised 10.5% of the total weight of recovered surface finds, while calcined bone was 9.95% and teeth had the lowest percentage by weight at 3.7 percent. Eighty-four surface collection units (5m by 5m) had 129 bones with evidence of at least one cut mark; all of these were unburned bone with the exception of one calcined bone which demonstrated evidence of cut marks. It makes sense that one would find more unburned bone with cut marks than calcined or charred bone with cut marks as unburned bone is generally associated with butchering and meat processing, and therefore the meat could have been cut off the bone prior to being cooked and consumed. Burned bone categories, on the other hand, presumably would have been within the meat while the meat was being cooked and later consumed and would therefore explain the greater proportion of unburned bone cut marks than calcined bone cut marks.

There were five modified bones found, which are not included in total counts or weights. These included two worked bones weighing a collective 0.8 grams, one polished bone weighing 0.2 grams, one bone tool weighing 0.3 grams and one incised bone weighing 0.6 grams. Only two of these five modified bones were recovered in surface units adjacent to one another; the remainders are spread across the site suggesting that bone tools and pendants were created and

used in a variety of areas across Carman. In regards to size, 148 surface units with an area of 25 meters squared, recovered faunal material that was recorded as less than a one-fourth inch screen size. Of those one hundred and forty-eight units, 1.6% of the total recovered faunal weight (6658.2 grams) were charred bone, 3.9% were calcined bone, 4.6% were unburned bone, and 0.03% were teeth remains. Bones by nature are fragmentary and especially those that are surface collected and have a greater propensity for being further fragmented by such processes as plowing and tredding, yet it is interesting to note that despite these processes, much of the bone was still larger than the ¼" screen size. With respect to bone location and animal taxa, one hundred and twenty-four unburnt long bones were identified weighing 249.9 grams, 37 unburned deer metatarsals weighing 138.5 grams, one dog canine weighing 2.2 grams, eight calcined long bones weighing 2.3 grams, and one deer jaw weighing 3.9 grams. From these percentages and assemblages, in addition to past studies suggesting the Cayuga consumed a large proportion of deer meat as related to other animal species (Stutzman 2002), it can be further validated that occupants at Carman consumed local deer meat; areas of larger meat content that were easier to transport back to the village from kill sites, namely the ligaments, are also found via the fact that longbones and metatarsals were identified. Carman and Parker Farm had similar proportions of teeth and charred bone.

At the Parker Farm site, the majority of faunal pieces recovered were calcined bone (n=865), with unburned bone (n=173), charred bone (n=143), and teeth (n=17) in descending order. The largest category by weight correlates with the second largest number of finds recovered, and the underburned bone weight composed 74.5% of the combined faunal weight of 1118.9 grams. The next highest category was calcined bone comprising 13.1% of the total weight of recovered surface finds, while teeth were 8.5% and charred bone had the lowest

percentage by weight at 4.0 percent. These percentages are suggestive of possible differences in site usage, with Parker Farm partaking in more butchering and processing activities as evidenced by a large proportion of unburned bone in relation to other bone categories.

Out of the unburned bone artifacts, one has at least one cut mark and weighs 10.3 grams, while two calcined bones show evidence of having at least one cut mark and weigh a collective total of 0.9 grams. Two modified bones were located, and included two bones marked as modified bone with a collective weight of 1.2 grams. In regards to size, there are no recovered faunal material less than a one-fourth inch screen size, which makes sense considering that bone categories are easy to identify and more so when they are a larger size. Thus, the systematic survey at Parker Farm recovered easily identifiable, large bone pieces. Nine unburnt long bones were identified weighing 601.4 grams, one unburned deer metatarsal weighed 2.5 grams, one dog canine weighed 2.2 grams, and two calcined long bones weighed 0.7 grams. As with Carman, this correlates with prior knowledge that the Cayuga consumed larger portions of deer meat than other animal groups.

When viewing the mean weight charts (**Figure 13**), one is more than 95% confident that the unburned bone mean weights at both sites are not the result of the vagaries of sampling, while the remaining categories lead one to be less than 80% confident that the mean weights are not the results of the vagaries of sampling. Many of the bones found per site were of a similar size and fragmentary nature, and thus it is understandable that the mean weights for almost all of the faunal categories are overlapping and very similar. This mean weights chart therefore gives a general range of possible mean weights per faunal category and demonstrates that both sites had almost identically weighted amount of faunal byproducts.

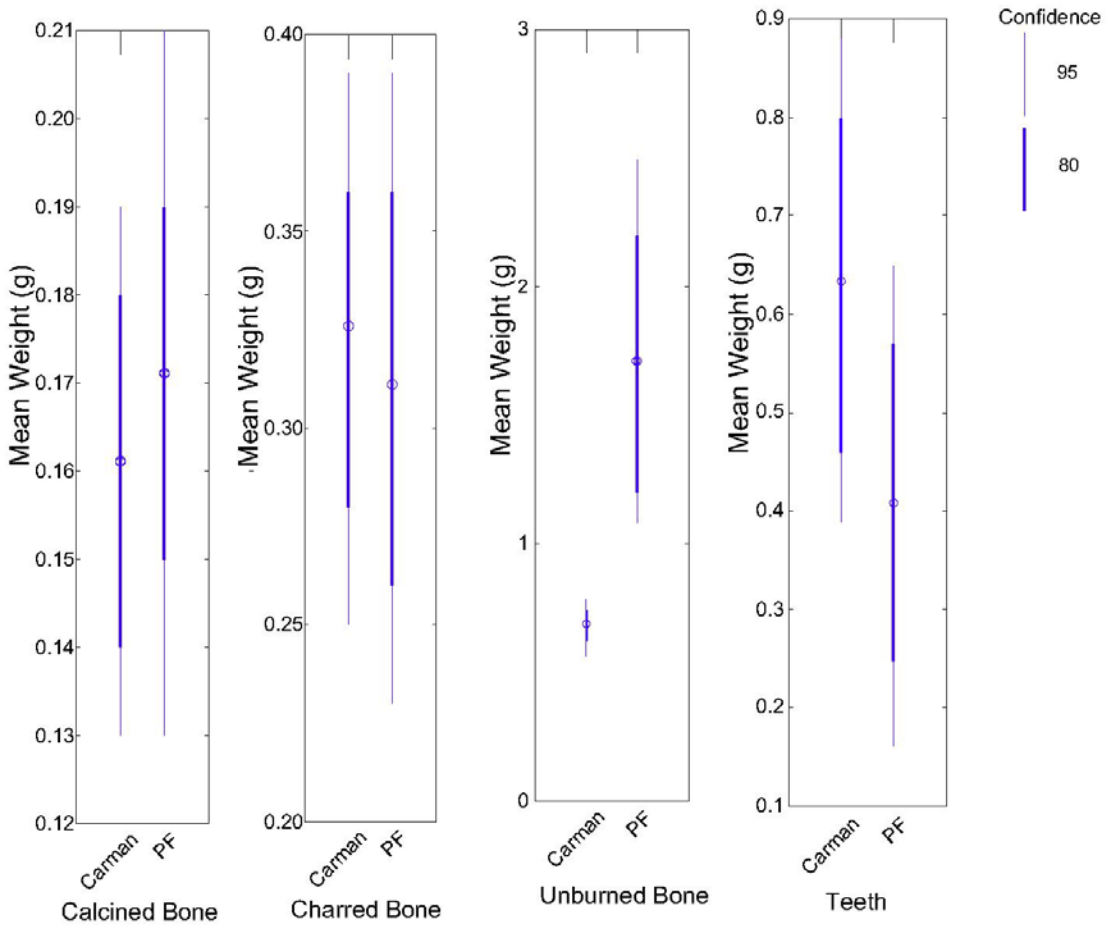

Figure 13: Faunal Mean Weight Confidence Intervals

When viewing the spatial distribution of faunal remains, for all faunal categories at Carman there was a high concentration of remains found in the central portion of the site with few remains recovered at the peripheries. This suggests that cooking and food preparation and consumption occurred in the central region of the site with little differences evident in spatial distribution between burned and unburned bones, with the exception of a cluster of burned bone categories in the southwestern region of Carman. An interesting trend to note, however, is that burned bone is found mainly in the surface collection survey transect where there was also evidence of an underlying excavated longhouse structure. Unburned bone, however, is found in higher concentrations on either side of this transect. This could suggest that butchering and food

processing activities occurred directly outside of the longhouse, or that meat processing activities occurred within the longhouse but were swept and cleared away to the edges and outsides portions of the house structure.

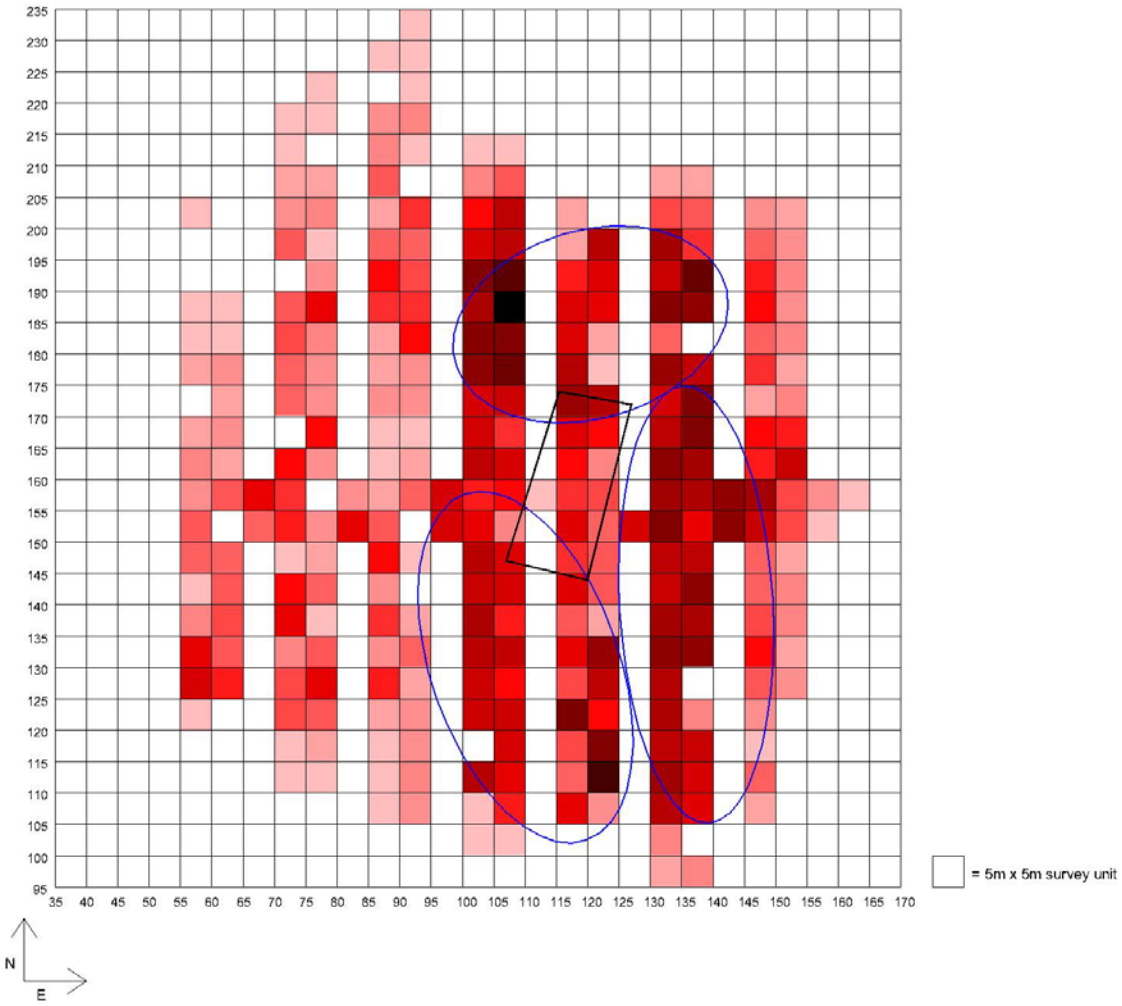

Figure 14: Carman (UB 642) unburned bone and teeth. Weight ranges from 0.0 - 112.3 grams.

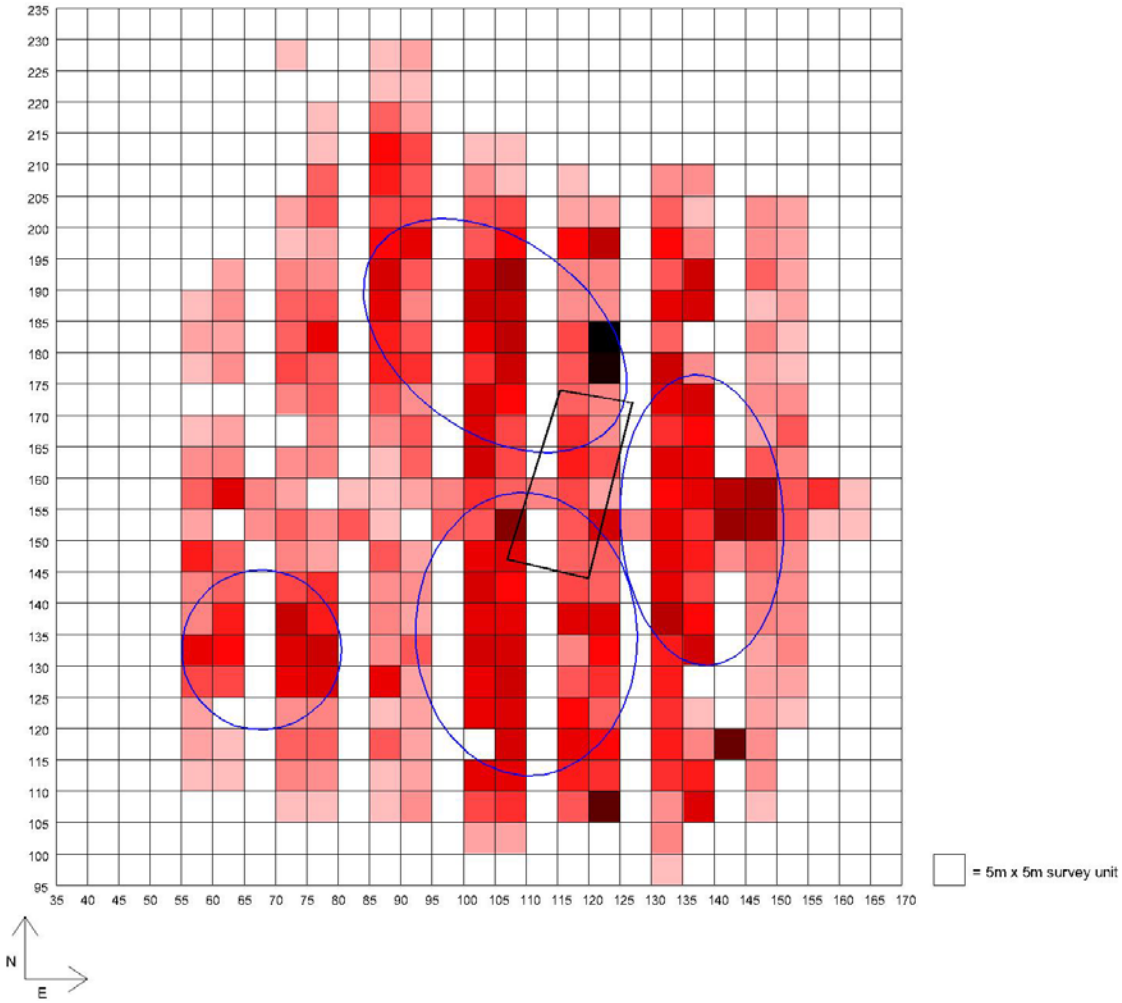

Figure 15: Carman (UB 642) charred and calcined bone. Weight ranges from 0.0 - 37.4 grams.

As Iroquois women were mainly responsible for food distribution, it would suggest that charred and calcined bones are associated with females, as they would have more often than not been the gender to cook the meat. These categories could also, however, be easily associated with food consumption in which both genders participated. Calcined bone concentrations could also be indicators both of gender neutral eating areas or burned trash deposits. Unburned bone and teeth associated with food processing, I posit, are more of a gender neutral category as both men and women used and worked with unburned bone and teeth. Males dealt with unburned bone when hunting and bringing back meat to the settlement, whereas females aided in butchering the meat for eventual cooking procedures. "It has been noted that Iroquois women

would accompany males on hunts to do initial processing of animals before bringing them back to the household for further processing" (Stutzman 2002:126). This suggests that females, in addition to the males who primarily hunt the meat, can be associated with unburned bone clusters. As with the ceramic and lithic spatial distributions, female dominated activity areas appear to occur near the longhouse structure and around it in the south-central and west-central portions of the site. Male activity areas as evidenced by some lithic and unburned bone assemblages appear to occur throughout the site and mainly in areas not directly associated with the underlying longhouse structure.

At Parker Farm both bone categories appear to cluster in the northern and central areas of the settlement. For charred, calcined, and unburned bone and teeth there is a larger clustering of weight and remains in the northern-central area of the site. This patterning could mean that food processing, cooking, and consumption occurred in the northern and western areas of the open-field portion of the site. As no structure has been identified in this area, no comparisons can be drawn between areas of high weight concentration and known longhouse or hearth features. It appears that this area of the site is the location of multiple economic activities, and thus is an area where both females and males carried out their tasks, consumed their food, and processed the meat.

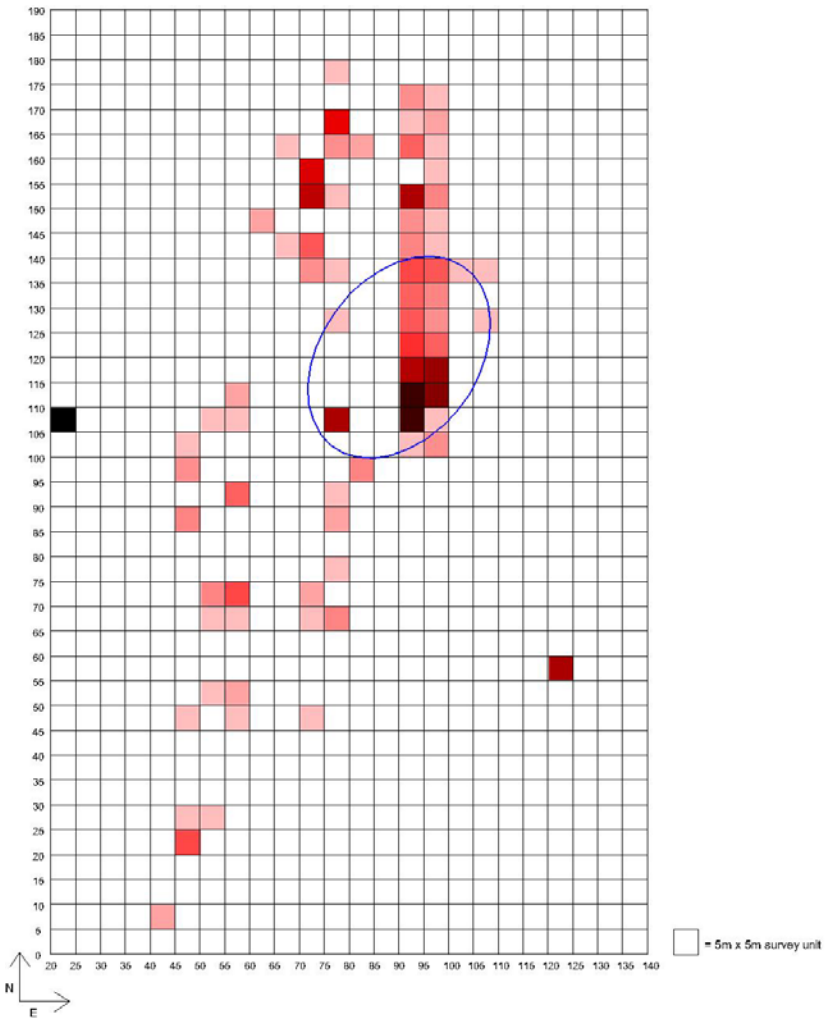

Figure 16: Parker Farm (UB 643) unburned bone and teeth. Weight ranges from 0.0 - 37.6 grams.

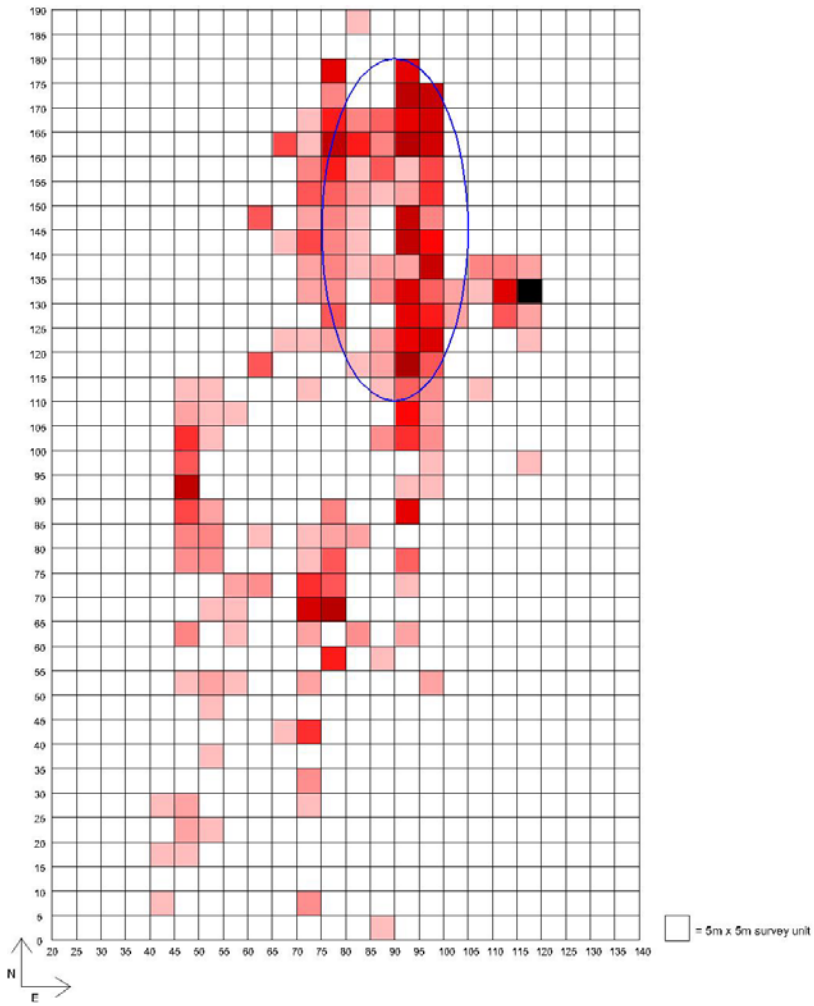

Figure 17: Parker Farm (UB 643) charred and calcined bone distribution. Weight ranges from 0.0 - 11.3 grams.

Therefore, there are overlapping concentrations of economic activity as evidenced by faunal assemblages. While unburned bone and teeth can be viewed as gender neutral artifacts, the concentration of burned bone remains, and especially charred bone, may correlate with areas of female activity. These areas would also relate to portions of the site where cooking and food consumption occurred, as demonstrated by areas of sherd concentration.

4.0 INTERPRETATIONS AND CONCLUSIONS

While surface collection remains are fragmentary and have a variety of associated limitations, they can provide insightful patterns and information about a culture. Despite the disparate amount of surface survey remains recovered between the two sites (**Table 1**), the remains that were recovered highlight that similar activities were occurring at the Carman and Parker Farm Cayuga sites. From the intermediate stage of lithic reduction to the pottery sherd and faunal assemblage compositions, individuals at the two sites appeared to engage in similar economic activities that produced comparable types and amounts of artifacts and ecofacts. While Parker Farm may be a dispersed settlement (Allen 2010), there still appears to be some spatial patterning of gendered spaces and economic activities.

Although artifact categories do not correlate precisely with gender identification and gender markers, the historic and ethnographic accounts of the Iroquois suggest that certain genders engaged in one type of economic activity over another. Females engaged in activities related to the land, as they were connected ideologically, spiritually, and metaphorically with Mother Earth; as thus, females cooked and distributed food and farmed the soil. It follows, then, that females would and could be associated with artifacts and faunal remains relating to food production, storage, and processing. Males during the spring, summer, and fall months, however, engaged in war, trade, and hunting activities that took them away from the village

center, and thus they are commonly associated with formalized tools and other gender-neutral artifact groupings.

At Carman (**Figure 18**), there seems to be clustering and gender-specific economic activity areas, with female activities associated with expedient tools, pottery, and burned bone remains, and especially charred bone, occurring in the central and southwestern portions of the site near a known longhouse structure. Male activities were not as easy to identify with the available assemblages and thus no known exact male economic activity areas were discerned. This corresponds with Venables (2010) concept of the gendered landscape and areas of Iroquois gendered activities, with males participating in more events towards the area known as the Woods and women participating more in activities within the Village complex. Overall, however, many artifacts and faunal remains at Carman had overlapping concentrations and densities, suggesting that males and females interacted and utilized similar areas for their daily, yearly, and seasonal activities.

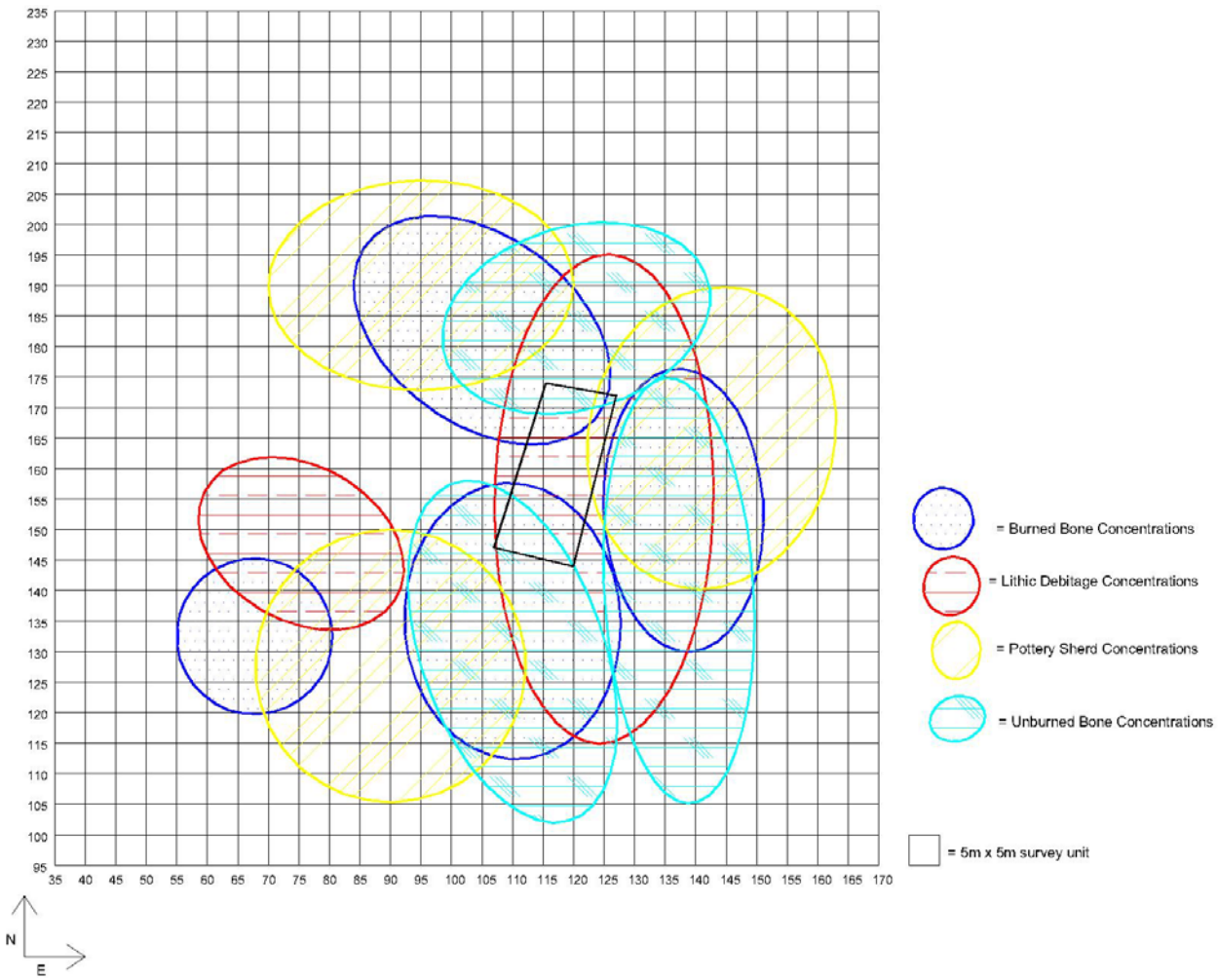

Figure 18: Carman Spatial Distribution

At Parker Farm (**Figure 19**), most of the activities seem to occur in the northern and western regions, suggestive of overlapping economic areas, although from the lithic and faunal assemblages it appears as though there are differences in site usage between Parker Farm and Carman. From the greater proportion of recovered lithics (**Table 1**) to the higher percentage of unburned bone remains (**Table 3**), it would seem as though Parker Farm is not only a more dispersed settlement, but is also a seasonal base camp or a village occupied for a shorter length of time than the average 15-20 years of a typical Iroquois settlement. The amount and type of material remains recovered also suggest that the site was utilized for tool production and animal butchering and processing, suggesting it could also be a hunting camp or more intensively

occupied during periods of the year when hunting activities play more of a dominant role and purpose within the village complex.

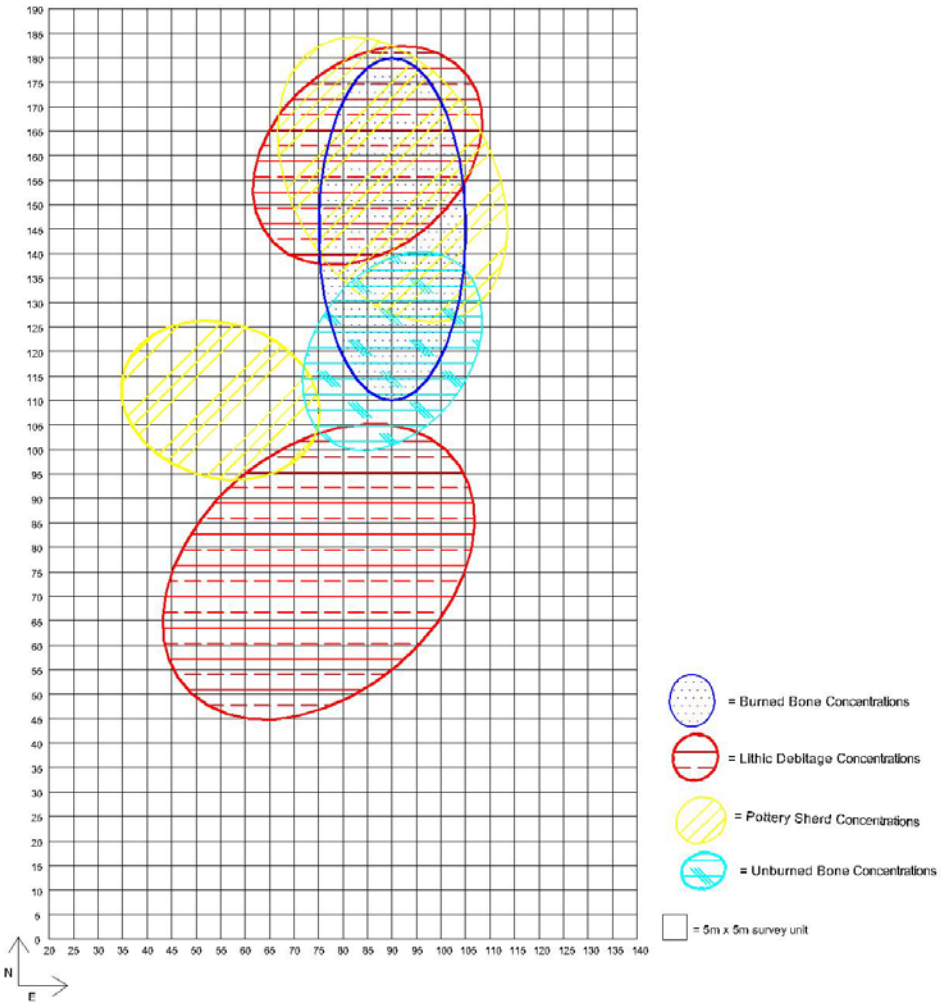

Figure 19: Parker Farm Spatial Patterning

Overall, this analysis suggests that there were overlapping gendered economic activity areas at Parker Farm and Carman. At both sites, areas that demonstrated the greatest density of material remains also exhibited signs of overlapping gendered economic activity areas. Despite these overlapping areas, there were a variety of localized economic activity spaces per artifact and ecofact category. This fits into the concept of the gendered landscape and Iroquois worldview of gendered balance and harmony in that while there may have been some distinct spheres of gendered activity, each gender could work with the other and participate in activities

within the same vicinity. Both genders could be identified with lithic debitage and faunal assemblages, which highlights the wider societal trend for gender reciprocity and a societal system without strict and unbending gender roles. While I attempted to identify areas of gendered economic activity, it would appear that this is not as evident and easy to identify archaeologically as previously hoped and imagined. The patterns found, however, provide the basis for further research to discover the composition of some of these specifically defined clusters and to map these distributions in relation to other artifact groups to further discern if any gendered economic activity areas can be discovered at either site. These patterns also validate and suggest new claims about site usage at each Cayuga settlement.

The Iroquois, and specifically this group of sixteenth century Cayuga Iroquois, utilized their landscape and surrounding region to create a balanced and harmonized village setting. While the males are frequently thought of as belonging to regions outside of the village, or "the woods," and females are commonly associated with the clearings, or the village environment (Venables 2010), within the village sphere both worked together in structuring village layout and constructing areas of gendered economic tasks. Females, at least at Carman, appear from their related archaeological artifact and faunal assemblages, to participate in more activities near the village center and longhouse structure, whereas males move throughout the village space and have tool products near the peripheries, and thus closer to the woods. At Parker Farm, the tendency for a high concentration of artifact and faunal remains to be near the northern portion of the site coincides to the concentration being nearer the woods and additional known longhouse structures. This could mean it was closer to other longhouses and thus more of a village center location.

In conclusion, the surface distribution of material remains demonstrated that certain economic activity areas could be located for the two prehistoric Cayuga settlements. Although surface collection survey procedures have inherent biases, they were able to highlight some interesting trends at the two sites in question. Further research can be conducted to attempt to find more longhouse structures at both sites as they relate to these surface collection findings. Further research is also needed to examine these localized spaces of surface remains at Carman and Parker Farm to discover the artifact and ecofact composition so that a more detailed picture of the gendered economic activities can be revealed.

APPENDIX A

LITHIC CODING SYSTEM

Complete and Broken flakes were individually recorded for the following characteristics:

Categorical Variables:

Site # (642 or 643)
PN Number
Unit #
Date Recovered
Flake Type
Dorsal morphology (1 = cortex; 2 = angular, one to two flake scars; 3 = multi-faceted, two or more flake scars; 4 = indeterminate)
Cortex Amount (1 = no cortex; 2 = <50% cortex; 3 = >50% cortex)
Platform Surface (1 = platform absent or indeterminate; 2 = flat striking platform; 3 = complex striking platform)
First or Second Pass
Lithic Raw Material Type (1 = Onondaga Chert; 2 = All other types)

Measurements:

Weight (grams)
Height, width and thickness (mm, and only for complete flakes)

Presence/Absence Variables:

Evidence for Heat Fractures
Platform grinding
Trim
<1/4" or greater than

Flake Fragments, Debris, and all other lithic categories (tools, groundstone, exotic lithics, ect.) were recorded with the following categories:

Categorical Variables:

Site # (642 or 643)
PN Number
Unit #
Date Recovered
Flake Type
First or Second Pass
Lithic Raw Material Type

Measurements:

Count
Weight (grams)

Presence/Absence Variables:

Evidence for Heat Fractures
<1/4" or greater than

POTTERY CODING SYSTEM

Decorated and undecorated pottery sherds were recorded for the following variables:

Categorical Variables:

Site # (642 or 643)
PN Number
Unit #
Date Recovered
Size Category (Small, medium, large, extra-large, and extra-extra-large)
First or Second Pass

Measurements:

Weight (grams)
Thickness (mm, and only for complete sherds)

Presence/Absence Variables:

Complete or Exfoliated Sherd
Decoration Evident
Surface Treatment (Smooth or Rough)
Sherd Type (Rim, Collar, or Body sherd)
Tempter Type (Coarse or Fine)
Temper Material (Shell, Grit, Sand, or Indeterminate)
Pitting
Sooting
Noticeable Residue
<1/4" or greater than

FAUNAL CODING SYSTEM

Faunal remains (charred bone, calcined bone, unburned bone, and teeth) were recorded using the following variables:

Categorical Variables:

Site # (642 or 643)
PN Number
Unit #
Date Recovered
Identifiable Bones
First or Second Pass

Measurements:

Count
Weight (grams)

Presence/Absence Variables:

Evidence of Cut Marks
Modified bone

BIBLIOGRAPHY

Ahler, Stanley A. 1989 Mass Analysis of Flaking Debris: Studying the Forest Rather Than the Tree. Pp. 85-118. In *Alternative Approaches to Lithic Analysis*, eds. Donald O. Henry and George H. Odell. American Anthropological Association.

Allen, Kathleen M. Sydoriak. 2000 Considerations of Scale in Modeling Settlement Patterns Using GIS: An Iroquois Example. Pp. 101-112. In *Practical Applications of GIS for Archaeologists, A Predictive Modeling Kit*, eds. Konnie L. Wescott and R. Joe Brandon. Philadelphia: Taylor & Francis, Inc.

---. and Angela Lockard Reed. 2008 Variations in Cayuga Subsistence in the Sixteenth Century. Presented at 2008 SAA in Vancouver, British Columbia at the General Session meeting.

---, Angela Lockard Reed, and Alicia Ventresca. 2008 Surface Collections and the Spatial Distribution of Activities at the Carman Site. Presented at the 2008 New York State Archaeological Association (NYSAA) meeting in North Syracuse, New York.

---. 2010 Gender Dynamics, Routine Activities, and Place in Haudenosaunee Territory: An Archaeological Case Study from the Cayuga Region of Central New York State. Pp. 57-77. In *Archaeology and Preservation of Gendered Landscapes*, eds. S. Baugher and S. M. Spencer-Woods. New York: Springer.

---. and Sandra Katz. 2011 Iroquoian Settlements in Central New York State in the Sixteenth Century: A Case Study of Intra- and Inter-site Diversity. Presented at 2011 SAA meeting in Sacramento, CA in the symposium *Bridging the US-Canadian Border: The Anthropological Archaeology of Northern Iroquoian Peoples*, organized by Eric E. Jones.

---. and Samantha Sanft. 2012 Alternative economic activities at two sixteenth century Iroquoian sites: an analysis of lithic tools. Paper presented in the Iroquois session at the 2012 SAA meetings in Memphis, TN.

Ammerman, A.J. and M.W. Feldman. 1978 Replicated Collection of Site Surfaces. *American Antiquity*. 43(2):734-740.

Andrefsky, Jr., William. 1998 *Lithics: Macroscopic Approaches to Analysis*. Cambridge: Cambridge University Press.

Arthur, John W. 2009 Understanding Household Population Through Ceramic Assemblage Formation: Ceramic Ethnoarchaeology Among the Gamo of Southwestern Ethiopia. *American Antiquity* 74(1):31-48.

Baker, Charles M. 1978 The Size Effect: An Explanation of Variability in Surface Artifact Assemblage Content. *American Antiquity.* 43(2):288-293.

Bayman, James M. and M. Guadalupe Sanchez 1998 The Surface Archaeology of Classical Period Hohokam Community Organization. Pp. 75-88. In *Surface Archaeology*, ed. Alan P. Sullivan III. University of New Mexico Press.

Baxter, Jane. 2005 *The Archaeology of Childhood: Children, Gender, and Material Culture.* Pp. 15-56. Walnut Creek, CA: AltaMira Press.

Beauchamp, W. M. 1900 Iroquois Women. *The Journal of American Folklore*, 13(49):81-91.

Bendremer, Jeffrey and Mary Beth Williams. 1997 The Archaeology of Maize, Pots, and Seashells: Gender Dynamics in Late Woodland and Contact-Period New England. Pp. 136-149. In *Women in Prehistory: North American and Mesoamerica*, eds. Cheryl Claassen and Rosemary A. Joyce. Philadelphia: University of Pennsylvania Press.

Birch, Jennifer. 2012 Coalescent Communities: Settlement Aggregation and Social Integration in Iroquoian Ontario. *American Antiquity* 77(4):649-670.

Braun, David P. 1983 Pots as Tools. In *Archaeological Hammers and Theories*, eds. J.A. Moore and A.S. Keene, pp. 107-134. New York: Academic Press.

Bradbury, Andrew P., Kessica L. Allgood, Jason M. Anderson, Michael D. Richmond, and Deborah L. Rotman. 2008 Exploring Surface Collected Data with Spatial Analysis Methods. *North American Archaeologist,* 29(1):13-36.

Brebeuf, Jean de and Paul le Jeune 1897 [1610] *The Jesuits Relations and Allied Documents,* Vol. 8, Lower Canada, Algonkins, Huron: 1635-1636, ed. Reuben Gold Thwaites. Cleveland: Burrows Brothers Company.

Brown, Judith K. 1970 Economic Organization and the Position of Women Among the Iroquois. *Ethnohistory,* 17(3/4):151-67.

Brumbach, Hetty Jo and John P. Hart. 2009 On Pottery Change and Northern Iroquoian Origins: An Assessment from the Finger Lakes Region of Central New York. *Journal of Anthropological Archaeology*, 28(2009):367-381.

Bursey, Jeffrey A. 2004 Women and Cabin Sites: Understanding the Iroquoian Economic System. *North American Archaeology*, 25(2):161-87.

Carpenter, Roger M. 2011 Womanish Men and Manlike Women: The Native American Two-spirit as Warrior. Pp. 146-164. In *Gender and Sexuality in Indigenous North America*

1400-1850, eds. Sandra Slater and Fay A. Yarbrough. University of South Carolina Press.

Claassen, Cheryl. 1997 Changing Venue: Women's Lives in Prehistoric North America. Pp. 65-87. In *Women in Prehistory: North American and Mesoamerica*, eds. Cheryl Claassen and Rosemary A. Joyce. Philadelphia: University of Pennsylvania Press.

---. and Rosemary A. Joyce. 1997 Women in the Ancient Americas: Archaeologists, Gender, and the Making of Prehistory. Pp. 1-14. In *Women in Prehistory: North American and Mesoamerica*, eds. Cheryl Claassen and Rosemary A. Joyce. Philadelphia: University of Pennsylvania Press.

Conger, Megan and Kathleen Allen. 2012 Considering Gendered Domains: Gender, Space, and Archaeological Interpretation in Central New York State. Presented at the 2012 New York State Archaeological Association meeting in Poughkeepsie, NY.

Cowan, Frank L. 1999 Making Sense of Flake Scatters: Lithic Technological Strategies and Mobility. *American Antiquity*. 64(4):593-607.

Dancey, William S. 1998 The Value of Surface Archaeological Data in Exploring the Dynamics of Community Evolution in the Middle Ohio Valley. Pp. 3-19. In *Surface Archaeology*, ed. Alan P. Sullivan III. University of New Mexico Press.

Engelbrecht, William E. 1985 New York Iroquois Political Development. Pp. 219-33. In *Archaeology of the Iroquois: Selected Readings and Research Sources*, ed. Jordan E Kerber. 2007. Syracuse: Syracuse University Press.

---. 1987 Factors Maintaining Low Population Density Among the Prehistoric New York Iroquois. *American Antiquity*, 52(1):13-27.

---. 2003 *Iroquoia: The Development of a Native World*. Syracuse: Syracuse University Press.

George-Kanentiio, Doug. 2000 Iroquois Roots. Pp. 391-402. In *Archaeology of the Iroquois: Selected Readings and Research Sources*, ed. Jordan E Kerber. 2007. Syracuse: Syracuse University Press.

Gero, Joan M. 1991 Genderlithics: Women's Roles in Stone Tool Production. Pp. 163-193. In *Engendering Archaeology: Women and Prehistory*, eds. Joan M. Gero and Margaret W. Conkey. Oxford: Blackwell Publishers.

---. 1996 Archaeological Practice and Gendered Encounters with Field Data. Pp. 251-280. In *Gender and Archaeology*, ed. R. Wright. Philadelphia: University of Pennsylvania Press.

---. and M. Christina Scattolin. 2002 Beyond Complementarity and Hierarchy: New Definitions for Archaeological Gender Relations. Pp. 251-280. In *In Pursuit of Gender: Worldwide Archaeological Approaches*, eds. S.M. Nelson and M. Rosen-Ayalon. Walnut Creek, CA: AltaMira Press.

Gosselain, Olivier P. 1998 Social Technical Identity in a Clay Crystal Ball. pp. 78-106. In *The Archaeology of Social Boundaries*, ed. M. T. Stark. Washington, D.C.: Smithsonian Institute Press.

Hamell, George R. 1992 The Iroquois and the World's Rim: Speculations on Color, Culture, and Contact. Pp. 306-20. In *Archaeology of the Iroquois: Selected Readings and Research Sources*, ed. Jordan E Kerber. 2007. Syracuse: Syracuse University Press.

Hasenstab, Robert J. 1996 Aboriginal Settlement Patterns in Late Woodland Upper New York State. Pp. 164-73. In *Archaeology of the Iroquois: Selected Readings and Research Sources*, ed. Jordan E Kerber. 2007. Syracuse: Syracuse University Press.

Hayden, Brian 1989 From Chopper to Celt: The Evolution of Resharpening Techniques. Pp. 7-16. In *Time, Energy, and Stone Tools*, ed. Robin Torrence. Cambridge: Cambridge University Press.

Hawkins, Rebecca A. 1998 Coming Full Circle: Plowzone Assemblages and the Interpretation of Fort Ancient Settlement Structure. Pp. 91-109. In *Surface Archaeology*, ed. Alan P. Sullivan III. University of New Mexico Press.

Hendon, Julia A. 1997 Women's Work, Women's Space, and Women's Status Among the Classic-Period Maya Elite of the Copan Valley, Honduras. Pp. 33-46. In *Women in Prehistory: North American and Mesoamerica*, eds. Cheryl Claassen and Rosemary A. Joyce. Philadelphia: University of Pennsylvania Press.

Holliman, Sandra E. 2006 The Archaeology of Nonbinary Genders in Native North American Societies. Pp. 435-450. In *Handbook of Gender in Archaeology*, ed. Sarah Milledge Nelson. Lanham, MD: AltaMira Press.

Jeske, Robert 1989 Economies in Raw Material Use by Prehistoric Hunter-Gatherers. Pp. 34-45. In *Time, Energy, and Stone Tools*, ed. Robin Torrence. Cambridge: Cambridge University Press.

Jones, Eric E. 2010 An Analysis of Factors Influencing Sixteenth and Seventeenth Century Haudrenosaunee (Iroquois) Settlement Locations. *Journal of Anthropological Archaeology* 29(2010):1-14.

Jordan, Kurt. 2008 *The Seneca Restoration, 1715-1754.* Gainesville, FL.: The Society for Historical Archaeology.

Jouvency, Joseph. 1710 [1610] *The Jesuits Relations and Allied Documents*, Vol. 1, Acadia: 1610-1613, ed. Reuben Gold Thwaites. Rome.

--- and Marc LesCarbot. 1710 [1610] *The Jesuits Relations and Allied Documents*, Vol. 2, Acadia: 1612-1614, ed. Reuben Gold Thwaites. Rome.

Kapches, Mima. 1994 The Iroquoian Longhouse: Architectural and Cultural Identity. Pp. 174-88. In *Archaeology of the Iroquois: Selected Readings and Research Sources,* ed. Jordan E Kerber. 2007. Syracuse: Syracuse University Press.

Katz, Sandra. 2013 Stone Tool-Making at Two Sixteenth Century Cayuga Sites. MA thesis, University of Pittsburgh.

Knapp, A. Bernard and Wendy Ashmore. 1999 Archaeological Landscapes: Constructed, Conceptualized, Ideational. Pp. 1-30. In *Archaeologies of Landscapes*, eds. Wendy Ashmore and Bernard A. Knapp. Oxford: Blackwell Publishers Ltd.

Kuhn, Robert D. and Martha L. Sempowski. 2001 A New Approach to Dating the League of the Iroquois. *American Antiquity* 66(2):301-314.

Lafitau, Joseph François. 1977 [1724] *Customs of the American Indians Compared with the Customs of Primitive Times*, Vol. 1. Edited and translated by William N. Fenton and Elizabeth L. Moore. Toronto: Champlain Society.

---. 1977 [1724] *Customs of the American Indians Compared with the Customs of Primitive Times*, Vol. 2. Edited and translated by William N. Fenton and Elizabeth L. Moore. Toronto: Champlain Society.

Lalemant, Jerome and Paul Ragueneau. 1898 [1610] *The Jesuits Relations and Allied Documents*, Vol. 33, Lower Canada, Algonkins, Huron: 1648-1649, ed. Reuben Gold Thwaites. Cleveland: Burrows Brothers Company.

MacLean, Rachel. 1998 Gendered Technologies and Gendered Activities in the Interlacustrine Early Iron Age. Pp. 163-177. In *Gender in African Prehistory*, ed. Susan Kent. New York: AltaMira Press.

Mann, Barbara Alice. 1997 The Lynx in Time: Haudenosaunee Women's Traditions and History. *American Indian Quarterly*, 21.3 (Summer):423-49.

---. 2000 *Iroquoian Women: The Gantowisas.* New York: Peter Lang.

Matyasowszky, Frantisek Zak. 2013 Process and Realization of Archaeological Research. Pp. 201-220. In *Training and Practice for Modern Day Archaeologists*, eds. John H. Jameson and James Eogan. Springer.

Moen, Marianne. 2011 *The Gendered Landscape: A discussion on gender, status and power in the Norwegian Viking Age landscape*. Oxford: Archaeopress.

Morgan, Lewis Henry. 1995 [1851] *The League of the Ho-de-no-sau-nee or Iroquois.* Massachusetts: JG Press.

Niemczycki, MaryAnn Palmer 1984. *The Origin and Development of the Seneca and Cayuga Tribes of New York State.* Research Records No. 17, ed. Charles F. Hayes III. Rochester: Research Division.

Nicholson, Rebecca A. 1993 A Morphological Investigation of Burnt Animal Bone and an Evaluation of its Utility in Archaeology. *Journal of Archaeological Science* 20:411-428.

Noel, Jan V. 2011 Revisiting Gender in Iroquoia. Pp. 54-74. In *Gender and Sexuality in Indigenous North America 1400-1850*, eds. Sandra Slater and Fay A. Yarbrough. University of South Carolina Press.

O'Gorman, Jodie A. 2001 Life, Death, and the Longhouse: A Gendered View of Oneota Social Organization. Pp. 23-49. In *Gender and the Archaeology of Death*, eds. Bettina Arnold and Nancy L. Wicker. Walnut Creek, CA: AltaMira Press.

Outram, Alan K. 2002 Distinguishing Bone Fat from other Taphonomic Processes: What Caused the High Level of Bone Fragmentation at the Middle Neolithic Site of Ajvide, Gotland? Pp. 32-43. In *The Zooarchaeology of Milk and Fats*, eds. J. Mulville and A. Outram. 9th ICAZ Conference, Durham.

Potherie, Bacqueville de La. 1722 *Histoire de l'Amérique septentrionale*, Vol. 3. Paris.

Prezzano, Susan C. 1997 Warfare, Women, and Households: The Development of Iroquois Culture. Pp. 88-99. In *Women in Prehistory: North American and Mesoamerica*, eds. C. Claassen and R.A. Joyce. Philadelphia: University of Pennsylvania Press.

Redman, Charles L. and Patty Jo Watson. 1970 Systematic, Intensive Surface Collection. *American Antiquity* 35(3): 279-291.

Rice, Prudence M. 2005 *Pottery Analysis: A Source Book.* Chicago: The University of Chicago Press.

Rinehart, Niels R. 2008 Moving Beyond the Reduction Stage in Debitage Analysis, with a Little Help from the Pot Sherd. *North American Archaeologist.* 29(3-4): 383-390.

Roth, Barbara J. 2011 Site Visibility and the Interpretation of Mimbres Mogollon Demography in the U.S. Southwest. *Journal of Field Archaeology* 36(3):221-231.

Rotman, Deborah 2009 *Historical Archaeology of Gendered Lives*. Series ed., Charles E. Orser, Jr. New York: Springer.

Sassaman, Kenneth E. 1992 Lithic Technology and the Hunter-Gatherer Sexual Division of Labor. *North American Archaeologist*, 13:249-62.

Shott, Michael J. 1995 Reliability of Archaeological Records on Cultivated Surfaces: A Michigan Case Study. *Journal of Field Archaeology.* 22(4):475-490.

Simmons, Alan H. 1998 Exposed Fragments, Buried Hippos: Assessing Surface Archaeology. Pp. 159-167. *Surface Archaeology*, ed. Alan P. Sullivan III. University of New Mexico Press.

Sinopoli, Carla. 1991 *Approaches to Archaeological Ceramics*. Plenum Press, New York.

Slater, Sandra. 2011 'Nought but Women': Constructions of Masculinities and Modes of Emasculation in the New World. Pp. 30-53. In *Gender and Sexuality in Indigenous North America 1400-1850*, eds. Sandra Slater and Fay A. Yarbrough. University of South Carolina Press.

Smith, Donald A. 2011 The Carpenter Brooke Site, Social Setting, and Early Late Woodland Ceramic Vessel Variation in Central New York. Pp. 7-26. In *Current Research in New York Archaeology: AD 700-1300*, eds. Christina B. Rieth and John P. Hart. New York State Museum Record 2. New York State Education Department.

Snow, Dean R. 1994 *The Iroquois*. Oxford: Blackwell Publishers.

Spector, Janet D. 1983 Male/Female Task Differentiation Among the Hidatsa: Toward the Development of an Archaeological Approach to the Study of Gender. Pp. 77-99. In *Women in Prehistory: North America and Mesoamerica*, eds. P. Albers and B Medicine. Washington, D.C.: University Press of America. Reprinted in *Reader in Gender Archaeology*, eds. K. Hays-Gilpin and T. Whitley. Pp. 145-158.

Stutzman, Tracy Sue Michaud. 2002 Multi-scalar Analysis of Domestic Activities at Parker Farm: A Late Prehistoric Cayuga Iroquois Village. PhD dissertation, University of Pittsburgh.

Sullivan III, Alan P. and Kenneth C. Rozen 1985 Debitage Analysis and Archaeological Interpretation. *American Antiquity*. 50(4):755-779.

Tainter, Joseph A. 1998 Surface Archaeology: Perceptions, Values, and Potential. Pp. 169-179. In *Surface Archaeology*, ed. Alan P. Sullivan III. University of New Mexico Press.

Trigger, Bruce. 1990 Maintaining Economic Equality in Opposition to Complexity: An Iroquoian Case Study. Pp. 119-145. In *The Evolution of Political Systems: Sociopolitics in Small-Scale Sedentary Societies*, ed. S. Uphaur. Cambridge University Press, NY.

Tooker, Elisabeth. 1991 *Ethnography of the Huron Indians, 1615-1649.* Syracuse: Syracuse University Press.

Venables, Robert W. 2010 The Clearing and the Woods: The Haudenosaunee (Iroquois) Landscape—Gendered and Balanced. Pp. 21-55. In *Archaeology and Preservation of Gendered Landscapes*, eds. S. Baugher and S. M. Spencer-Woods. New York: Springer.

Wobst, Martin H. 1977 Stylistic Behavior and Information Exchange. Pp. 317-337. In "For the Director: Research Essays in Honor of James B. Griffin." *Anthropological Papers*, No. 61, ed. Charles Cleland. University of Michigan Museum of Michigan, Ann Arbor.

Wylie, Alison. 2004 What's Feminist about Gender Archaeology. Paper presentation at 2004 Chacmool conference. Calgary, Canda.

Zihlman, Adrienne. 1997 The Paleolithic Glass ceiling: Women in Human Evolution. Pp. 91-113. In *Women in Human Evolution*, ed. L. Hager. London: Routledge Press.