THROUGH SPACE, TIME AND OTHERNESS: A SPATIAL ANALYSIS OF FIFTEENTH TO TWENTIETH CENTURY LABRADOR INUIT SETTLEMENT PATTERNS

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by

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Abstract

This thesis is an examination of the long-term spatial organization of Labrador Inuit coastal settlements. Existing descriptive accounts of the Labrador coast suggest important differences in the internal spatial arrangement of Inuit archaeological sites. Focusing on winter sites containing sod houses temporally ranging from precontact Inuit to modern times, this research examines the variability in the spatial patterning of Labrador Inuit sod houses, and addresses the particular issue of structures that can be characterized as "outlier houses". This thesis takes a multidisciplinary and geographically broad approach. Its goals, methods and conclusions were informed by several methodologies and theories of more general interests to archaeology, namely materiality, phenomenology, landscape archaeology, spatial analyses, as well as ethnolinguistics. This thesis integrates the nearest neighbour (NN) analysis, a distance method stemming from point pattern analyses. Exploratory tools favoured for the present research were the Stienen diagram, and the Empty space distance diagram.

The present thesis demonstrated that general trends could be deciphered from the spatial patterning of houses within Labrador Inuit costal settlements. First, it is suggested that ranges of specific distances may indicate sociospatial relations between houses, while some may indicate the contrary. Second, NN distances tend to increase and become more disparate from southern to northern locations. Third, this distribution indicates that the wider time-span a site covers, the greater variability in spatial arrangements it displays. The ethnographical data collected in the present work has allowed the following assertions. For the Inuit, social distance and spatial distance are directly proportional.

Abandoned houses or house ruins may in fact have been considered inhabited by the Inuit, just in a less tangible manner than in the case of simultaneous occupations. Inuit house, just like Inuit bodies, can be used to communicate, and feel, social closeness or distance. The concepts of *silaqqatigiit* and *nunaqqatigiit* lie at the core of the understanding of Inuit spatial patterning of houses.

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Table of Contents

List of Tables

List of Figures

Chapter 1 Introduction

This thesis is an examination of long-term spatial organization of Labrador Inuit coastal settlements. Existing descriptive accounts of the Labrador coast suggest important differences in the internal spatial arrangement of Inuit archaeological sites. While some thought has punctually been given to this phenomenon in some site reports and scholarly papers, it has not yet been properly addressed. Early in the course of reading published work and learning the basic elements of Labrador's archaeology and ethnohistory, it became apparent that Inuit perception of otherness, space, and time, were key elements to the understanding of this problematic. In this thesis, the term precontact Labrador Inuit is being used over the term "Thule". Designating the Inuit who lived prior to contacts with Europeans, the word Thule was arbitrarily chosen by members of the Fifth Thule Expedition (1921-1924) because it reflected the name of the area, in northwest Greeland, where this culture was first identified. While it is widely accepted by archaeologists, this word does not correspond to Inuit understanding of Inuit history[1], and was therefore voluntarily changed for precontact Labrador Inuit. While it still refers to an arbitrary (and euro-centric) division of Inuit history, it is felt that it better reflects the cultural continuum existing between modern Inuit and the so-called "Thule" people. Likewise, the name Palaeoeskimo, designating people occupying the area before the Inuit (ex. Dorset and Groswater), is here replaced by "pre-Inuit". I gathered from personal and colleague's experience, as well as written sources (Dorais 1974; Kaplan, University of Alaska

[1] This is a personal observation resulting from the exhaustive review of litterature necessitated by this MA degree. There haven't been publications on the subject yet,

Website), that the word "Eskimo" (from the Innu "eater of raw meat" or Ojibwa "to net snowshoes") is considered pejorative by most Inuit communities of the Arctic. Pre-Inuit, therefore, seems a more respectful term to use in a thesis discussing the ancestry of these particular people. Words are powerful, and even if used innocently or scientifically, they can have powerful ramifications into the way a given people is politically or socially considered by others (Silliman 2010a, 2010b).

Previous research in archaeology has demonstrated that the spatial distribution of dwellings in a site reflects the social decisions that were made by past people to regulate interactions between members of the group (see Grier & Savelle 1994). They also may reflect how, chronologically, houses in a settlement were built and occupied. Existing accounts of the Labrador coast suggest important differences in the internal spatial arrangement of Inuit coastal settlements, which may reflect fundamental elements of the Inuit social structure. This research focuses on winter sites containing sod houses temporally ranging from precontact Inuit to modern times. I argue that Inuit dwellings are like extensions of their inhabitant's body, and thus become important means of communication when a person or group settles in a given location. Dialogues inevitably occur between them and surrounding people, inhabited and uninhabited dwellings, or natural and human made structures, in order to establish a viable, if not harmonious sharing of space (Hodder 2004). This project sheds some light on the possible meaning of house location within a site.

This research is a multidisciplinary examination of the variability in the spatial patterning of Labrador Inuit sod houses, as previously recorded by Kaplan (1983), Schledermann (1971), Bird (1945), and Whitridge (unpublished research material 2007, 2008). It integrates formal quantification methods stemming from point pattern analyses, and qualitative analyses based on Inuit perception of otherness, space and time.

This study also raises questions, and proposes answers, on particular structures that can be characterized as "outlier houses". These dwellings are spatially removed from the core of the community and are archaeologically visible in numerous Inuit settlements along the Labrador coast. Although the distinctive aspect of these houses relates to the segregated space they occupy in villages, they can also differ morphologically in size, shape, or architectural components (Kaplan 1983). Regarded as anomalous structures, they are mentioned in, but rarely formally considered in Inuit archaeological research, typically because outliers skew the results of statistical analyses (Grier and Savelle 1994). Although archaeologically dismissed, outlier houses do exist, and probably constitute a significant statement on social marginalization created by group cohesion, expressed social differences, gender and power relations, and/or economic structures.

This research project seeks to fulfill a set of multiple interconnected objectives.

- *Conduct a comparative analysis of Labrador Inuit intrasite spatial arrangement of houses based on the study of quantifiable trends observed within Labrador Inuit coastal settlements featuring structures that have been dated to at least two of the following period: protohistoric Inuit (15th to 16th century), early-contact/protohistoric (16th to 17th century), historic (late 17th to mid-19th century), late historic (mid-19th to early 20th century) and modern (20th century to today);*

- *Investigate the relationships existing between these spatial patterns and Inuit social phenomena as defined in ethnohistorical records and linguistic studies of Inuktitut;*

- *Investigate the possible cultural explanations for the segregation of certain dwellings (i.e. outlier houses).*

The data generated in this study were applied to the three specific questions listed below. These acted as guidelines which helped keep this research's objectives in mind, while investigating further the socio-spatial meaning of the intra-site distribution of sod houses within Inuit long-term settlements, through the study of Inuit perception of otherness, time and space.

- *Can point pattern analysis methods be used to highlight possible trends and patterns in the intrasite spatial arrangement of houses within Labrador Inuit coastal sites?*

- *Is there evidence for a correlation between the spatial positioning of houses and the social relationships, or lack thereof, that existed between dwellings' inhabitants?*

- *Can the evidence of Inuit cultural conception of otherness, time and space in the ethnohistorical record, be tied to the spatial positioning of houses within settlements?*

1.1 Of Space, Time and Words : Situating this Research in Archaeology

This thesis takes a multidisciplinary and geographically broad approach to the study of Labrador Inuit spatial organization. It builds upon the existing corpus of archaeological and ethnohistorical research concerning Labrador and the Eastern Arctic. Because spatial analysis of Labrador Inuit settlements is just beginning, it was here necessary to consider records from Nunavik (northern Québec) and Nunavut (Central Arctic and High Arctic). The goals, methods and conclusions of this research are informed by several methodologies and theories of more general interest to archaeology, namely materiality, landscape archaeology, spatial analysis, and ethnolinguistics.

1.1.1 The Study of Materiality

The study of material objects as powerful organizers of social life goes back to the early days of the social sciences. Mauss (1950:365; 1968:162) was one of the first to explore bodily engagement in the world, and stress the importance of objects in social life as well as the dual nature of matter, which can be considered both animate and inanimate at the same time. Within the last decade, materiality has become a topic of increasing interest in the disciplines of anthropology, sociology, architecture, and archaeology (Attfield 2000; Buchli 2002; Hodder 1986; Latour 1993; Meskell 2004; Miller 1998; 2005; Renfrew, et al. 2005; Thomas 1996). Within archaeology, studies of material culture are traditionally understood as the contextual study of objects and assemblages as a passive domain, accessible to human knowledge through their measurable properties. Firmly devoted to object analyses (form, materials, and manufacture) empirical studies do not automatically engage with social relations. However, a single object relates to both spheres, a concept which is strongly advocated for within symmetrical archaeology (Shanks 2007; Webmoor 2007). In fact, Symmetrical archaeology builds upon the idea that there is no dichotomy between things and human beings, that they are mutually constituted. The theoretical perspective advocated here focuses on the interrelationships between sociality, temporality, spatiality, and materiality (Meskell 2004; Renfrew, et al. 2005).

Particularly important for this research is the notion of *material habitus (*Meskell 2004, 2005), defined as "the idea of a material lifeworld that is conceived and constructed by us, yet equally shaping of human experience in daily praxis" (Meskell 2005: 15). As

opposed to ideas or concepts, physical things often have different and longer individual histories. Their presence or "force of matter" (Meskell 2005:15) has the power to shape and influence the living. It is from this perspective that this research engages with the study of materiality, seen as a dialectic between people and things. It will be demonstrated that Inuit houses, as objects situated in space and having an extended existence in time, are important means of communication and have a serious impact on Inuit spatial behavior.

1.1.2 Landscape Theory

The study of archaeological landscapes as intangible components of human culture emerged in this decade (Kantner 2005; Seibert 2006), and was strongly influenced by cultural geography (Anschuetz *et al* 2001; e.g. Doubleday 1992; Knapp and Ashmore 1999), and sociocultural anthropology (Hirsch and O'Hanlon 1995; Stewart 2003; e.g. Basso 1996).

Archaeology usually combines two ingredients in their view of landscape: first, the land itself and second, the perception of the "land". The former, very simple and objective, includes both the human made features and natural context that constitute the site and its surroundings. The latter attempts to address the way past people and present observers came to understand, interact with and navigate within this landscape, both conceptually and through lived experiences (Ingold 1993: 153-154; Johnson 2007: 3-4). Landscape archaeology recognizes a dialectical relationship between society and culture on the one hand, and the natural environment, on the other. It is thus recognized that

people's perceptions and actions shape the environment, and the environment, in turn, shapes the dominant cultural perceptions of a landscape within a given society (Knapp and Ashmore 1999: 6; Thomas 1996; Ingold 1993). Notions of space (the structural or geometrical quality of an environment) and place (a notion which includes the dimension of lived experience and praxis) will thus be different and culturally variable from one society to another (*Ibid*).

This Master's project emphasizes three different ways of conceiving the landscape. First, landscape can be seen as nature, as something natural and detached from human beings. Second, landscape can be treated as horizon, which consists in the limited extent of a land that one can look upon from a given position or situation. Finally, landscape can be experienced as "home", which means as something you are part of, and that is also a part of you (Doubleday 1992).

Landscape as a cultural concept can also reflect human social identities through environmental symbols, which "are one of the most likely means whereby social identity and claims to space and time are defined and validated" (Lester and Conkey 1980:474). Because they can store, classify and convey cultural information, symbols have a traditionalizing effect that tends to define a norm or an accepted way of being. Some of the characteristics that contribute to traditionalization are rigidities of styles, identifiable order or patterns, repetitions, imitation of or conformance to physical features, and the "actual permanence, visibility and formal aspects of architecture, raw materials, and the use of space" (Rowntree and Conkey 1980: 264). As is the case with artifacts, gestures,

items of clothing, or architecture, symbolic elements of the landscape have the potential to establish or reinforce the boundaries of human life, particularly those delineating social units. As such, features in this symbolic landscape can reflect an individual's or a group's opportunities to delimit territory, control space or display personal differences (Rowntree and Conkey, 1980). Symbols in the landscape also convey information about position in time, and may destroy or signify social continuity by evoking not just specific memories of what has gone before, but also that there "was existence and life before" (Rowntree and Conkey 1980: 462). The challenge for archaeology lies in identifying which elements within a landscape had symbolic importance in a given society.

The Inuit landscape is suffused with symbols, and houses, as part of the built environment, are particularly rich in this sense. Using site records of the past 30 years, this thesis analyzes protohistoric Inuit settlement patterns through the ideological and symbolic meaning of Inuit dwellings. Archaeologists, ethnologists and anthropologists have demonstrated that for the Inuit, people, houses and the landscape are mutually constituted, an idea that is imbedded in the Inuktitut language (Dorais 1996; Saladin d'Anglure 2001, 2006; Therrien 1982, 1990; Whitridge 2004).

1.1.3 Spatial Analyses and Settlement Patterns in Archaeology

The main aspect of this research relates to spatial analyses, and especially to the study of spatial patterning of archaeological settlements. Distribution maps have been research tools for archaeologists since the early years of the discipline, especially in prehistoric studies (Clark 1957: 153; Seibert 2006). However, systematic approaches to

the examination of archaeological map have only been common since the 1970's. At first, most studies of spatial patterning adopted a strict empirical, and deterministic approach, strongly focused on cultural evolution and ecology (Hodder and Orton 1976; Kantner 2005; Seibert 2006). Gradually, with the development of post-processual archaeology (or archaeologies, as is argued by many), spatial studies became embedded in a wider referential framework and theoretical scope (Kantner 2005; Bevan and Connolly 2006; Seibert 2006), and began to examine aspects of human culture such as ideology, power relations and social structures (e.g. Dawson 1997; Hodder 1984; Leone 1986; Miller and Tilley 1984; Shanks and Tilley 1987a, 1987b; Whitridge 1999).

From functionalist perspectives, to processual and post-processual interests, settlement studies thus became part of many archaeological projects (Kantner 2005; Robertson 2006; Rossignol and Wandsnider 1992; Willey and Sabloff 1993: 216 219). According to Bevan and Connolly (2006: 218)), "settlement analysis in archaeology seeks to build up from static distribution of material culture and anthropogenic modifications visible in the contemporary landscape to an understanding of the dynamic cultural and environmental processes of human settlement systems". The main tools used in such studies are based on standard quantitative methods, and basically explore correlations between settlement and social or environmental variables, as well as the nature of the physical relationship between settlements or households (from different cultures, eras, etc.), which may be called "neighbourhood dependence" (Bevan and Connolly 2006; e.g. Hodder 1976, 1984; Robertson 2006; Rossignol and Wandsnider 1992). The quantitative

tools most often used by archaeologists include linear or logistic regression and nearest neighbour or quadrat analysis (Kintigh 1990; Bevan and Connolly 2006). First used for ecological purposes (Clark and Evans 1954), the latter was soon adopted by archaeologists, and plays a particularly important role in this research. It appears to have become a favored technique of the discipline because it is straightforward to calculate and provides a coefficient that can be easily interpreted (Kintigh 1990: 111; Bevan and Connolly 2006: 218-219). However, nearest neighbour analysis also comes with its share of methodological problems, which will be discussed in the methodology section of this thesis.

This thesis contributes to spatial studies and settlement analysis in archaeology in two ways. First, it will test whether nearest neighbour analyses can provide insights into the archaeological record of Labrador Inuit settlement, something that has never been done before. Second, it combines this traditional and simple quantitative method with wider theoretical considerations derived from landscape theory, phenomenological approaches, and ethnolinguistics.

1.1.4 Ethnolinguistics

The use of linguistics to study the human past (historical linguistics) was developed in Europe during the late seventeenth and eighteenth century, when scholars began to compare written languages, especially the classical languages of Europe, to determine the antiquity of connections among languages (Blench 2006: 33-34). However, it was soon recognized that languages could be used to reconstruct human prehistory based on word

transformations through space and time. Following this tradition, historical linguistics applied to archaeology has become a powerful tool for establishing large and small-scale chronologies (glottochronology). Coupled with molecular biology they are often used, not without controversy (see Renfrew's 1987 hypothesis on the origins of Indo-European languages), to address human population movements through the ages (e.g. Blench and Spriggs 1997; Cavalli-Sforza *et al* 1988; McMahon and McMahon 2008; Southworth 2007). In fact, historical linguistics studies demonstrated how modern Inuit populations throughout the Arctic share a common Siberian origin, and are often used as exploratory tools to investigate Inuit migrations throughout the Arctic (Dorais 1996; Fortescue 1981).

Less explored are the applications of ethnolinguistics, a field of linguistic anthropology that developed in the United-States, and has been predominantly practiced by North American academics (Salzmann 2007:14-15). Through the study of human languages, ethnolinguists systematically address issues of identity, socialization, ideology, and social space (Salzmann 2007). The basis of the discipline is the notion that a culture's language transcends the instantaneity of human experience and, through polysemy and metaphors, reveals underlying concepts reflecting complex cultural logics (Therrien 1987: 2). Although not all languages readily lend themselves to such analyses, the approach works with Inuktitut. First, it is a polysynthetic, or more appropriately agglutinative, language by definition (Therrien 1987:11). This means that it can combine an almost infinite number of words (or parts of words with meaning), in order to express a single idea or concept. For example, a "tooth" is called *kiguti*, literally "what is used to bite", or

the verb *ijiiqpuq* "he hides it" (literally "he conceals it from the eye") (*Therrien 1987:11*). Second, although there are issues regarding the survival of Inuktitut as a first language (Allen 2007), Inuktitut's structure and vocabulary have not been severely altered by contacts with Europeans and other ethnic groups. Furthermore, this language is remarkably homogenous from Siberia to Greenland (Dorais 1996; Therrien 1987). Finally, the Inuktitut spoken in Quebec and in Labrador form a single group, and share a common traditional lexicon, syntax and morphology, differing mostly phonologically (Therrien 1987: 17). This makes Therrien's work on Inuktitut usage in Northern Quebec communities relevant to this thesis.

According to the Inuit, language cannot be separated from identity (Dorais 1996: 95). In Inuktitut, "identity" is translated *Inuit inuunirarnirijangat*, which literally means "what Inuit (themselves) say about the meaning of being Inuit" (Therrien 1999:32). Inuit identity is "based on the knowledge one has of his or her social and natural surroundings, and the relations one entertains (whether collectively or individually) with these surroundings" (*Ibid*). In other words, the Inuit vocabulary tends to be built in relation to visual perceptions, the speaker's position, and awareness of the spatial dimensions of things. It is thus fundamentally subjective, and the Inuit strongly recognise this (Therrien 1987:3, 167-168).

Although ethnolinguistic studies in Inuktitut have not yet been systematically applied to archaeological research, its relevance as an interpretative tool is increasingly recognised. For example, in his research on central Arctic and Labrador Inuit cultures,

Whitridge repeatedly calls upon the Inuktitut meaning of words to reflect on the complexity of certain social behaviors, such as whale bone transport and selective meat and blubber distribution (2002), or the intricacy of connections existing between Inuit houses, bodies and "things" (1999, 2004).

This thesis proposes to explore the use of Inuktitut terms given to different elements of Inuit houses, bodies and landscapes, to help interpret the archaeological record at hand. The idea is to go farther then just examining the meaning of words. In their research, Therrien and Dorais continually urge us to study the Inuit language as a reflection of the state of thinking and of being Inuit. The Inuktitut language helps us understand the extent to which the Inuit body, because it is so *physical*, so visible (and shared by all human beings), can teach us about Inuit technology, social organisation, symbolic and religious thought, and perceptions of the natural world (Dorais 1996; Therrien 1987, 1999).

1.2 Previous Research

As Kaplan points out in her 1983 thesis, the native inhabitants of Labrador were the first people to have, through oral tradition and myths, chronicled the local succession of cultures (Kaplan 1985: 48-53). Furthermore, the archaeological record reflects how Inuit people viewed ancient pre-Inuit settlements as important landmarks, since they often set up camps right on top of old Dorset sod houses and middens.

The primary goals of early research in Labrador were to document the evolution of settlement patterns in pre-Inuit and Inuit cultures (Jordan 1978: 175), focusing on

architectural trends as well as group cultural ecology (McGhee 1969, 1970; Schledermann 1971, 1976). Labrador Inuit archaeological research began in the 1920s-30s with Strong (Nain, Hopedale areas) and Leechman (*Nunaingoak*, Mclelan Strait and *Killinek* area), followed in the period 1934-1945 by Bird's excavations of sod houses in the Hopedale area (Jordan 1978:175; Kaplan 1983). Approximately thirty years later, Nain and *Okak* became the subject of field surveys by Taylor (1966). The 1970s saw archaeological projects extend further north, with the surveys and excavations of Schledermann (1970) in *Saglek* Fiord, of Plumet at *Killinek* and in Eclipse Channel in 1967, and Fitzhugh's and Kaplan's surveys and excavations from *Killinek* to Mugford (*Torngat Archaeological Project*, 1977-78) (Jordan 1978:175; Fitzhugh, 1980:586). Many researchers have since then based their archaeological projects on the results of Fitzhugh's and Kaplan's surveys (Cox 1977; Kaplan 1983; Woollett 1999, 2003; Whitridge 2004, 2007).

In her 1983 PhD thesis, Kaplan presents the results of three seasons of archaeological fieldwork (conducted partly under *TAP)*, and archival research. She explores Inuit cultural changes that occurred during the last 500 years in central and northern Labrador, while integrating new ideas concerning choices and contacts, as potential causes of these changes (Kaplan 1983). Furthermore, her thesis provides an extensive record of Inuit settlements along the coast, including maps and house plans, from Hamilton Inlet in southern Labrador to the *Killinek* area in northern Labrador (*Ibid*). As such, her work provides a foundation for the current project.

More recent archaeological research in Labrador includes various projects concentrating on particular topics. Whitridge's excavations at the sites of Nachvak Village (Northern Labrador) and Iglosiatik 1 (Nain region, central Labrador) investigate long-term changes in Inuit social structures through settlement patterns and architecture. He carefully integrates ethnographic data on Inuit ideological notions of the world, such as embodiment, and offers a new and better understanding of the archaeological material at hand. Woollett's work on the *Uivak* Point 1 site (*Okak* region, northern Labrador) as well as in the Nain area, addresses the notion of agency, culture change and cultural history in Labrador Inuit society (Woollett 1999; Woollett: pers. comm. 2007).

As mentioned above, thorough studies of pre-contact settlements in Labrador are not yet mature. To gain a better view of the theory and methods available to the study of Inuit cultural systems, it is necessary to consider not only the Labrador coast record but also those of Northern Québec, the Central Arctic and the Central High Arctic.

Archaeological studies of spatial patterning in pre-Inuit settlements are numerous. Various quantitative methods have been considered by researchers, such as McCartney (1977), who worked along the northwestern coast of Hudson Bay (N.W.T.). Recent research includes McGhee's work at the site of Brooman Point (Bathurst Island, High Arctic) (1984), and Park's work at Porden Point (Devon Island, NWT) (1997). Among other topics, both were interested in assessing interhousehold contemporaneity. The work of Grier and Savelle (1994) also addresses intrasite spatial patterning. Using the nearest-neighbour method, they studied protohistoric Inuit social organization of 18 settlements

situated in the High and Central Arctic (Bathurst Island, Cornwallis Island, Prince of Wales Island, Somerset Island and Devon Island) (Grier and Savelle 1994).

Dawson (1997) and Whitridge (1999) also employ spatial analyses, though using statistical methods (respectively space syntax and a combination of principal components and k-means analyses) to understand the archaeological data. However, they explore other aspects of interpretative potential. Whitridge's research objectives mainly involved synchronic differentiations among house assemblages. Using ethnographic models, his work on prehistoric Inuit social differences at the site of Qariaraqyuk (Somerset Island, Central Arctic) demonstrated the substantial variability of power relations between Thule men and women (Whitridge, 1999:116). Dawson's (1999) research provides a framework for the study of "spatial behaviour", in which interpretations of space use are based on the theoretical approaches of ergonomics, proxemics, structuralism, grammatical and dramaturgical approaches, as well as "space and power". This theory provides practical, social, and ideological meaning for the different areas delimited inside a house and inside a village. In more recent work involving GIS technologies, Dawson (2007: 19) demonstrates the usefulness of informal measures such as the line of sight. This analytical method allows archaeologists to interweave dwellings with the landscape, which may provide a better reflection of Thule sensorial environments (*Ibid*).

Many other researchers could be cited here as well; however, the work of those that were just mentioned comprises the main theoretical background of this M.A. thesis. Some of them will serve as references on methodological issues, for example, the use of

nearest-neighbour analysis by Grier and Savelle in spatial patterning studies, while others will provide either guidelines to the use of ethnographic analogies (Whitridge 1999, 2004) or ways of considering the archaeological record more thoroughly, and especially - differently (Dawson 2007; Whitridge 2007; Woollett 2003). As I have already mentioned, Kaplan's exhaustive survey of the Labrador coast provides the necessary settlement data needed to expand my research context.

1.3 Thesis Plan

This master's thesis is presented in seven chapters. In the present chapter, I outlined the objectives and research questions of this thesis, and reviewed its significance within the anthropology and archaeology of Labrador and of settlement patterns in general, as well as the studies of materiality, and landscape theory. The importance of ethnolinguistics for the present study was demonstrated, and a summary of previous research related to the present subject was also provided.

Chapter 2 first provides a brief overview of the Labrador environment and ecosystems. It explores the aspects of its physical geography, seasonal climate, ecological zones, and sea ice climatology, which are necessary to understand Inuit movements in space, architectural needs, and the general environmental setting. This chapter then summarizes the elements of Labrador Inuit culture history, which are relevant to this research. The movement of populations through the Labrador territory, which are portrayed as the "Inuit Colonization of Labrador" are detailed, and the currently accepted chronology of Inuit architecture is described.

In Chapter 3, the Inuit perception of otherness, time and space are discussed. Throughout this section, it is noted how these perceptions are imbedded within one another, within the Inuit world, and are constantly referred to in order to describe people's lived experiences.

Chapter 4 presents a description of the data (which sites were selected, types of houses, etc.), and details the methodology that was used to analyze the spatial arrangement of houses within the studied sites. Here, I describe how distance methods, namely the nearest neighbour distance and empty space distance, can help us better identify areas of high and low degree of kinship within sites.

In Chapter 5, I describe the results of the spatial analyses conducted on each site selected for this research. In Chapter 6, repeated patterns and peculiar spatial phenomenon observed on the regional scale (at selected sites on the Labrador coast) are exposed, and preliminary interpretations are discussed. Each site is further analyzed individually.

Chapter 7 is the concluding chapter, and recapitulates the project's objectives and research methods. The results obtained and described in Chapters 5 and 6 are reviewed and new questions arising from the present Master's thesis are discussed.

Chapter 2 The Labrador Inuit

The Inuit culture, and its association with sophisticated whaling technologies, is considered to have developed around the 10th century AD from two northern Alaskan ancestors: Birnik and Punuk. This tradition is generally thought to have been carried

eastward through the Central and High Arctic in the 11th century, possibly following bowhead whale migrations, which were increasing at the time due to a general climatic warming (Figure 1) (Dyke and Savelle 2001; Le Mouël and Le Mouël 2002; Marchani *et al* 2007; Mc Cullough 1989; McGhee 1984b, 1984c, 2000; Morrison 2000). However, according to recently obtained radiocarbon dates, some researchers advocate for a thirteenth century migration (Friesen & Arnold, 2008), which strengthens the case for a rapid and widespread type of migration. The nature of Inuit populations movements, i.e. whether they consisted in a single massive migration event or waves of smaller groups, is still under debate. However, radiocarbon dates from Canadian prehistoric Inuit sites, supported by new mtDNA analyses, strongly suggest that around AD 1000, the initial migration was already in motion, and that a second wave from Alaska into the High Arctic occurred around AD 1200 (Helgason *et al* 2006; Marchani *et al* 2007; Morrison 1989). Inuit groups seem to have reached Labrador and Greenland between the 14th and the 15th century AD. While radiocarbon dates from the Staffe Island 1 site, northern Labrador, suggest it may have been inhabited between the 12th and 13th century AD (Fitzhugh 1994; Gullov 1997; McGhee 1984b, 1984c, 1996, 2000; Morrison 2000), such an early colonization is not consistent with much other evidence. Indeed, no other archaeological site in Labrador has produced as early a set of dates. Therefore, the colonization *per se* of Labrador is currently estimated to have started during the 15th century.

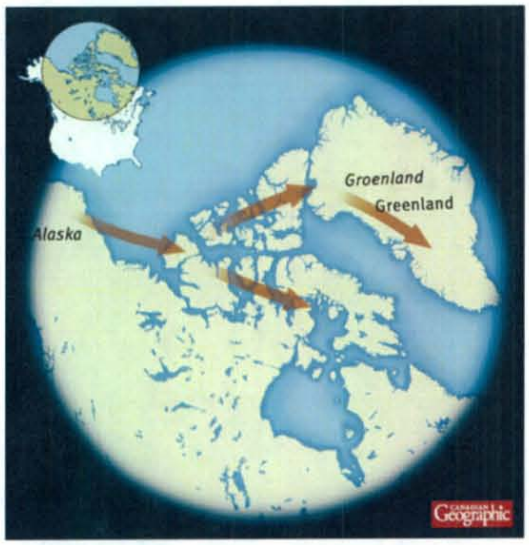

Figure 1. Thule migration Through the Arctic.
(Canadian Museum of Civilization. http://www.civilization.ca/aborig/)

2.1 An Overview of the Labrador Environment

Labrador is a transitional zone linking arctic, subarctic, and temperate environments. Its far stretching coast is an assemblage of mountain chains, headlands, bays and island clusters that altogether form a series of different sheltered "environment pockets" (Woollett 2003:144). In the Arctic in general, and Labrador is no different, latitude, elevation and relative proximity to sea ice and/or large bodies of water are all factors that influence seasonal temperature (Woollett 2003: 81-144). Annual precipitation levels in Labrador are higher than in High Arctic regions. Most parts of Labrador are relatively cold and have annual mean daily temperatures near or below freezing, for more than half the year (Table 1).

Since Labrador's climate is tributary to hemispherical and global scale circulation processes (NAO and ENSO), many aspects of the environment, temperature, precipitation, sea ice formation and extent, and polynya development, tend to vary between years. These, having a major influence on the distribution of natural resources, also directly affect human inhabitants of Labrador in terms of their subsistence strategies, settlement patterns and many other cultural aspects of their lives (Woollett, 2003:145).

Plant communities occurring in Labrador consist of either cryptogamic plants, vascular plants or some combination of the two (Dawson, 1997:61). Although archaeology has often focused on zooarchaeological data to address the question of Inuit subsistence, archaeobotany has recently demonstrated the importance of plant resources in subsistence strategies throughout Inuit history (Cynthia Zutter, personal communications 2006).

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The distribution of fauna in the Arctic is greatly influenced by the nature of the particular ecological "subsystem" they inhabit: the marine subsystem, the fresh water subsystem, and the terrestrial subsystem (Freeman, 1984). Of those three, the marine subsystem contains the largest biomass of animal species: fish, sea birds, seals, walrus, whales, and polar bears (Freeman, 1984:36). The most productive areas are associated with polynyas (ice-free zones), ice edges, water mass boundaries, local turbulence and upwelling currents (Freeman, 1984:37).

The Labrador environment and climate systems provide very specific and clustered contexts, by which archaeologists can try to pinpoint specific external

Table 1. Nain (Labrador) Average Monthly Temperature, from 1975 to 2009 (climate.weatheroffice.gc.ca)

Temperature (°C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily average	-18.5	-18.3	-12.3	-12.3	1	6.2	10.1	10.7	7	1.1	-5.1	-12.8	-3
Standard deviation	3.2	3.7	2.8	2.8	1.7	1.5	1.3	1.1	1.1	1.9	2.6	3.2	1.4
Daily maximum	-14	-13.6	-7.3	-7.3	5.1	11	15.1	15.6	10.9	4.2	-1.8	-8.8	1.3
Daily minimum	-23.1	-22.9	-17.3	-17.3	-3	1.4	5.2	5.7	3	-2.1	-8.3	-16.8	-7.3
Extreme maximum	15.7	7.6	12.1	12.1	25.6	33.3	33.3	32.7	26.1	19.4	11.7	6.7	
Extreme minimum	-42.5	-38.3	-37	-31.7	17.5	-6.7	-2.8	-2.8	-6.7	-19	-24.4	-41.5	

influences on cultural changes. However, the appealingly quantifiable nature of this variability may have created a tendency, in Labrador archaeology, to emphasize external sources of change more than internal ones (Kaplan & Woollett 2000).

2.2 Eastern Arctic precontact Inuit (AD 1000 to 1500)

The precontact Inuit culture was first described by Therkel Mathiassen (Fifth Thule Expedition, 1927), based on the excavation of the famous whale bone sod house prehistoric village of Naujan, situated in Repulse Bay on the northwest margin of Hudson Bay (Gullason 1999:18; Mathiassen 1927; Whitridge 1999; Woollett 2003). Mathiassen's description and categorization of precontact Inuit (Thule) material culture proved to be so thorough that it is still almost integrally used to this day. Among their distinctive traits was the use of semi-subterranean sod houses during the winter (Maxwell 1985: 249; Whitridge 2008). Household tools included robust soapstone oil lamps and cooking pots, lunar shaped women's slate knives (ulus), and bow drills. Slate was used extensively. Their diversified and specialized hunting toolkit included various forms of harpoon heads, lance heads, seal scratchers, darts and floats (specifically designed for hunting on fast-ice, at the ice edge (*sina*) or on open water), as well as bird darts, bolas, bows and arrows, and barbed fish spears. The *umiak* (pl. *umiat*), a large seal skin boat used for whaling and transport, and kayak (pl. kayat) also figure amongst Inuit technological innovations. This toolkit is considered to be the broadest of all prehistoric Arctic cultures, and reflects the unique traveling capacity of Inuit people, as well as their ability to utilize all of the subsistence resources Arctic seasons have to offer (Maxwell 1985: 249). The formidable

extent of ecological knowledge developed by Inuit cultures certainly has allowed their culture to flourish in a challenging environment that combines harsh climatic conditions and unpredictable natural resources scattered spatially and seasonally (Freeman 1984: 43),

Central to the definition of precontact Inuit people is their association with the hunting of large sea mammals, including various seals, walrus, and whales. However, between the 1930's and 1970's, archaeological studies tended to overemphasize their reliance on bowhead whale hunting (Mathiassen 1927: 2, 182, 184; McCartney 1977; McGhee 1960/70). Although this reliance is not to be denied, other studies currently lean towards more nuanced assessments. They suggest that whale products, ubiquitous on most precontact Inuit sites, may result from opportunistic acquisitions, such as the scavenging of beached carcasses (Freeman 1979, Savelle 1997; Savelle and Friesen 1995), as well as from the pursuit of both large and small live whales (Savelle and McCartney 1994; Whitridge 1999, 2002), all of which was subject to cultural, regional and temporal variations (Dawson 1997; Gullason 1999; Stanford 1976; Whitridge 1999; Woollett 2003). Nonetheless, whale hunting constitutes a radical difference from the economies of pre-Inuit peoples, especially in its capacity to generate subsistence surplus.

Precontact Inuit groups are perceived as complex maritime-oriented broad-based foragers, an assumption that is so far supported by Zooarchaeology, bone collagen stable isotope and radiocarbon studies (Arnold 1996; Balikci 1989; Coltrain 2009; Dawson 1997; Whitridge 1999; Woollett 2003). All over the Eastern Arctic, the ringed seal was an

important source of meat, blubber (for lamp fuel and food), and hide (used for clothing and kayak covering) that could be consistently harvested, although not as fruitfully during the open water season. Bearded seals were also hunted for their durable hide used to cover *umiat* and to manufacture thongs and boot soles (Kaplan 1983, Dawson 1997; Whitridge 1999). Various marine and freshwater species of fish, such as cod, salmon and arctic char also seem to have been important resources (Balikci 1989; Kaplan 1983; Woollett 2003), although perhaps not only as direct food supplies (Whitridge 2001). As for terrestrial species, caribou were of primary importance (especially for inland communities in Low Arctic regions) and could be acquired in large numbers during their spring and fall migrations (Oakes 1991; Rasmussen 1930; Whitridge 1999). Caribou meat and marrow were considered to be of very high food value, and their sinew, antler, bone and hide (prized for winter clothing in all of the circumpolar North) were important raw materials (Oakes 1991; Rasmussen 1930; Stenton 1991). Arctic foxes, hares, and polar bears complete the list of potentially acquired terrestrial species, as well as muskoxen depending on the locality (Kaplan 1983; McGhee 1996; Whitridge 1999). Finally, waterfowl, sea birds, waterfowl, ptarmigan, and other avian species were consistently harvested, though in lesser amounts (Balikci 1989; Kaplan 1983; Whitridge 1999). Plant foods were probably of dietary importance, especially during the summer months (Cynthia Zutter, personal communications 2006).

Prehistoric Inuit groups also relied on various gathered resources, such as wood, driftwood (valuable for boats), and soapstone, which was used to make cooking pots and

lamps. Lamp wicks and bedding were made out of numerous plant materials, like cottongrass (*Eriophorium* sp.) and crowberry bushes (*Empetrum nigrum*) (Cynthia Zutter, personal communications 2006; Whitridge 1999; Woollett 2007). Native copper, and sometimes Norse metal (from the late 13th century) were both widely traded all around the Canadian Arctic, and used for manufacturing harpoon head and blades, knife blades, etc. (McGhee 1984b; Whitridge 1999:83). Judging from regular discoveries of exotic products on protohistoric Inuit sites and the ethnographic importance of trade, extensive exchange networks of locally scarce material probably were active at the time (Gullv 1997; McGhee 1996; Whitridge 1999, 2002).

Precontact Inuit economies thus relied on large-scale cooperative procurement strategies that focused on one or a few focal species, mainly during the late summer and fall. Such practices resulted in large semi-permanent gatherings of a number of *ilagiit* (extended family-based groups) that resulted in the agglomeration of many single-family dwellings (Whitridge 1999, 2008). At other times of the year, resources consisting of either smaller or scattered species were acquired through more individualistic or family-based harvesting activities (McGhee 1996; Rasmussen 1989; Whitridge 1999). According to the typical Inuit division of labour, most hunting activities were assigned to men and most processing to women. This implies that women and men would have known the land in quite different ways (Mancini Billson and Mancini 2007; Oakes 1991; Shannon 2006; Whitridge 1999; Woollett 2003). This cultural gender division of labor seems quite homogenous across Inuit societies. Although situations appear to gradually be changing in

modern times (Williamson 2006), close resemblance between protohistoric Inuit and ethnographic material culture, as well as osteological evidence demonstrate a strong continuity in women's and men's habitual activities over the past millenium (Maggo 1999; Rankin and Labrèche 1991; Saladin d'Anglure 1978; Whitridge, 1999: 281-282). The Inuit gender division of labour not only acted on many categories of daily activities, but also on the various tools that were used to perform those activities (Gullason 1999; Whitridge 1999). Inuit gender systems are extremely complex, and consist in a mixture of rigid laws expressed by cultural taboos, which can still be arbitrarily rearranged under exceptional circumstances to ensure group safety or survival (Saladin d'Anglure 2001, 2006a, 2006b). In Alaska, for example, it has been documented that although it was considered bad luck and thus proscribed, women did participate in whale hunts when the number of men available was insufficient. However, to make such a thing socially acceptable, they were given temporary male identities (Saladin d'Anglure 2006b).

Around AD.1400-1500 and coinciding with the onset of great climatic instability associated with the NeoBoreal Cooling Phase (or "Little Ice Age") a major shift occurred in the subsistence and settlement systems among Inuit groups. In many regions of the Eastern Arctic whaling was abandoned in favor of an increasing economic focus on ringed seals (Dawson 1997:78; Maxwell 1985:288; Whitridge 1999: 68: Woollett 2003). Populations throughout the Eastern Arctic began to show more and more specialized and distinctive adaptations to their respective regional territories (McGhee 1994: 588). Depending on local histories and preferences, different house types were adopted. While

some Inuit groups retained single-family dwellings, others adopted multiple-family structures. Some favored snow houses for short, mobile winter occupations based on the sea ice, while others maintained land-based sod construction styles (Dawson 1997; Gullov 1997; Whitridge 2008). As a result of replacing whaling with breathing hole sealing in some areas, socio-economic relations were substantially changed (Dawson 1997; Maxwell 1985; Whitridge 1999:68). What were once flexible community-based social relations became stricter, kinship-structured, sharing-partner interactions. Hence, from the community, the household grew to be the primary unit of economic production (Dawson 1997). Some researchers consider these widespread and rapid changes to be adaptive responses to climatic instability (Dawson 1997; Maxwell 1985; McCartney 1977; Schledermann 1976), but it has also been suggested that they were encouraged by contacts with the Europeans and exposure to foreign diseases (McGhee 1994).

2.3 The Labrador Inuit

The present chapter summarises the history of the Labrador Inuit, as it is presently known, and focuses on house form and settlement patterns, which are both central to this thesis. Establishing a strict chronology for Inuit houses is, however, difficult. Indeed, while general trends can be established, house forms seem to have constantly been in flux, and experimentation was ongoing. For example, multilobed structures occurred from the early colonisation of the Eastern Arctic, through at least the late 17th century, when communal houses became briefly popular, and were even perhaps used again during the 18th and 19th century (Peter Whitridge, personal communications 2010). The house form

chronology suggested in this chapter reflects the current understanding of long-term change in Inuit winter house design (Figure 2). Figure 3 provides a visual representation of a Classic Thule (precontact Inuit) winter house, understood as consisting in a semisubterranean lobed structure walled with sod and stone, covered with a roof of turf and animal skin mounted over a framework of whale bones or timbers (Figure 4, Figure 5). Subsistence and economic activities are also brushed upon, as well as how they changed through time.

2.3.1 Precontact Labrador Inuit

Archaeological sites recollecting late 15th to 16th century precontact Inuit settlements in northern Labrador are scarce and scattered between Killinek and Nain, northern Labrador (Figure 6). These sites, which are few in number, consist of sod house settlements, or temporary camps composed of single-tiered and multi-tiered boulder structures or tent rings (Kaplan 1983). Sod houses, which are the focus of this project, are considered to have richer contexts and data, and have been the subject of most studies (Kaplan 1983; Stopp 2002). They occur on sites conventionally interpreted as winter settlements, which usually comprise a dozen or more structures (Kaplan, 1983:220-224). However, the current state of research in Labrador Inuit archaeology does not allow us to assess whether many of these structures were inhabited at the same time. Sites like Iglosiatik Island (Kaplan 1983:462) and Staffe Island 1 (Fitzhugh 1994: 258) tend to indicate that only a limited number of structures (3 to 5) were used simultaneously.

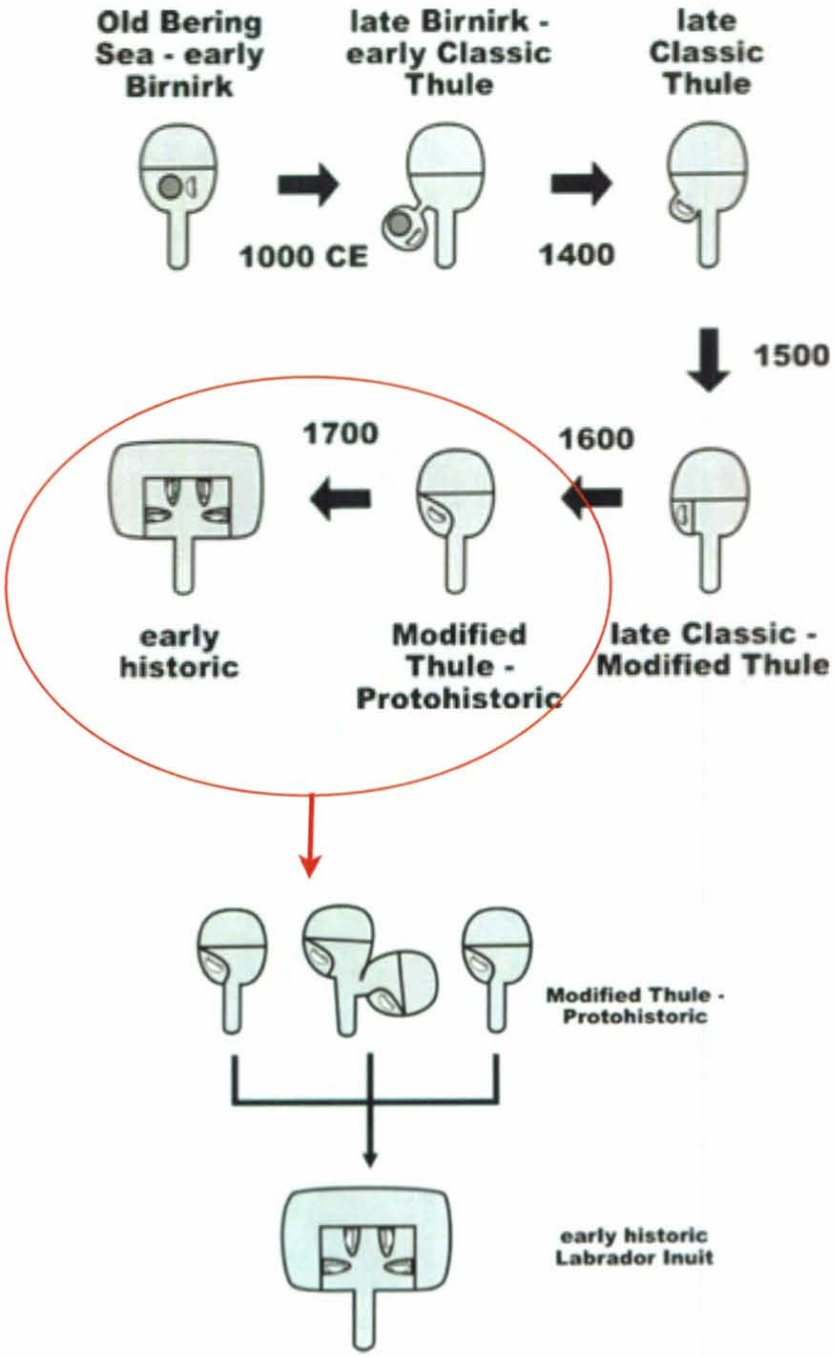

Figure 2. Long Term change in Inuit House Design
(Whitridge 2008: 300)

Figure 3. Computer reconstruction of the Thule (Protohistoric) whale bone and sod house (Dawson 2006: 81)

Figure 4. 19th century Sod house, Hebron, Labrador. (Library and Archives Canada)

Figure 5. Stratigraphy showing how sod was stacked together to build the walls at house 4, Green Island 6 (HkCk-01)
(Picture courtesy of Maryse Cloutier-Gélinas, 2008)

As such, Labrador precontact Inuit populations seem to have been small in comparison with contemporary winter settlements elsewhere in the Canadian Arctic (McGhee 1984; Whitridge 1999), which is why archaeologists tend to associate early Labrador Inuit settlements with groups of explorers investigating "the various merits of Labrador's fiord and island region" (Kaplan 1985:49).

Most precontact Inuit winter settlements seem to have been located on outer islands, in the shelter of bays, or near polynyas (Kaplan 1980; 1983), while some temporary camps were also situated on interior islands and bays (Kaplan 1985:49). This settlement pattern, combined with zooarchaeological studies, strongly suggests a maritime oriented economy that focused on sea mammals (Fitzhugh 1994: 246; Kaplan 1983:218; Woollett 2003: 47-48). During the open water season, seasonal migrations of various marine animals were of great importance. Interior resources (like caribou) were also harvested (*Ibid*). Due to the apparent emphasis on whaling and walrus hunting, subsistence behaviors of the 15th to 16th centuries seem to have been based on cooperative community endeavors, where the skills and man/womanpower of a number of settlements were likely shared during the whaling season (spring, summer or fall) Woollett 2003: 42-46, 202-210). Fall caribou hunting through driving techniques, and spring fishing

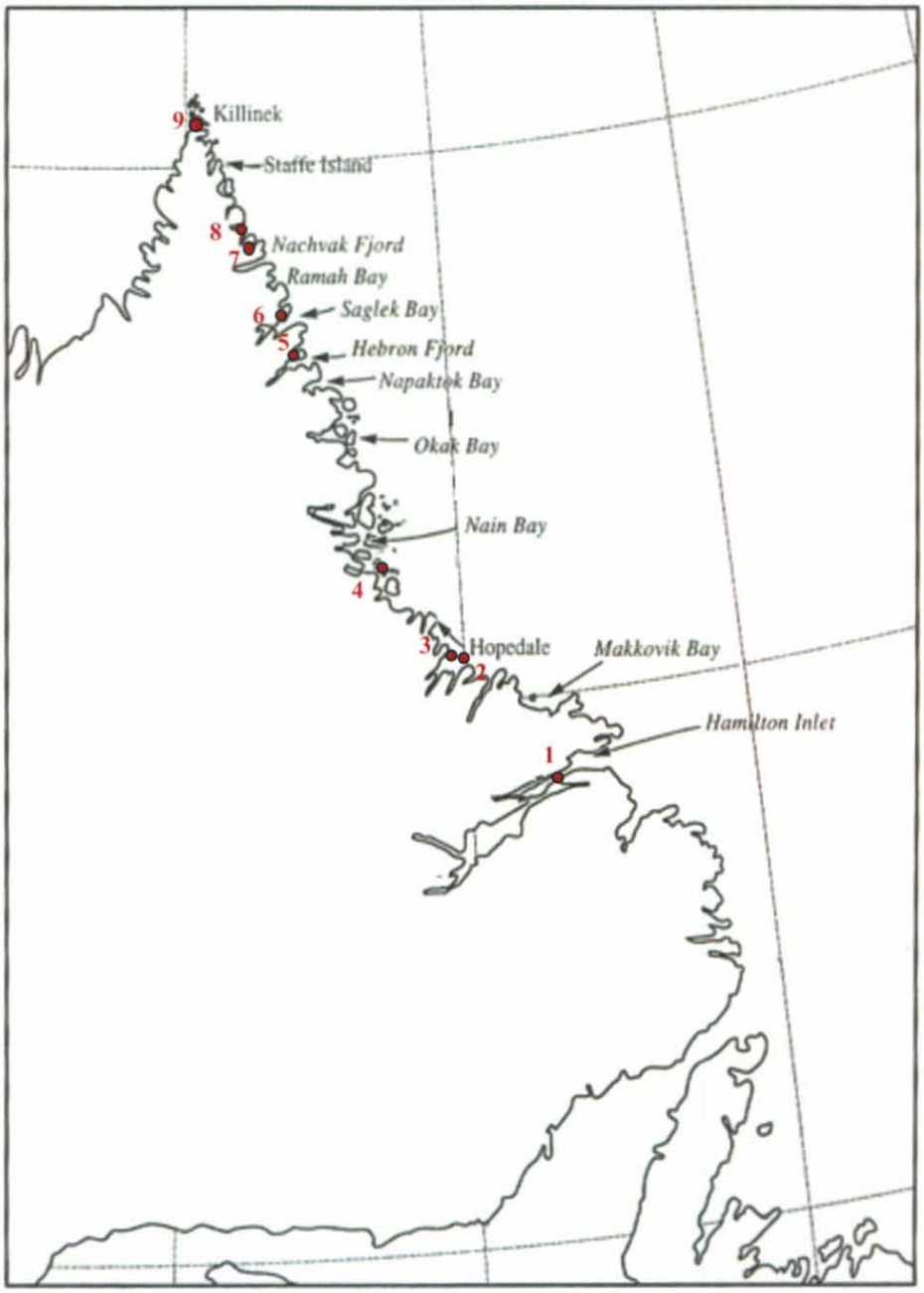

Figure 6. Map of Labrador places recurrently mentioned in this thesis
(Modified from Woollett 2003: 84)

1. Eskimo Is. (GaBp-1,2,3)	2. Avertok (GiCb-1)	3. Karmakulluk (GjCb-6)	4. Iglosiatik (HbCh-1)	5. Johaness Point 1 (IbCq-1)
6. Ikkusik (IdCr-2)	7. Nachvak Village (IgCx-3)	8. Komaktorvik 1 (IhCw-1)	9. Nunaingok 1 (JcDe-1)	

using weirs also may have involved the gathering of multiple families (Kaplan 1983: 218, 1985:49; Woollett 2003: 207-210).

Fall-winter houses usually consisted of semisubterranean lobed structures with long entrance passages, either straight or curved, which functioned as a cold-trap designed to insulate the living chamber (Kaplan 1983, 1985:49). Usually paved with flagstones, these passages sometimes included an alcove or a cache built into one of the side walls. The opening, leading to the interior of the house, was framed by two stone columns supporting a lintel (*katak*, in Inuktitut). Early Labrador sod structures were small in comparison with later periods, and rarely exceeded 5 m in length and 20 m^2 of floor area. General shapes were variable, ranging from round, ovoid and trapezoidal, to subrectangular (Kaplan 1983). Multicompartment houses were also quite common. Floors were usually paved with flagstones. House interiors comprised a single raised sleeping platform at the back, and a lamp stand, for light and cooking, next to the entrance (*Ibid*). Alcoves, caches, cooking areas and processing areas have been identified.

Sod houses probably housed small family units of about 5-6 individuals (Maxwell 1985:288; McGhee 1976; Taylor 1974:68-69), while multi-lobed structures housed two or more families with distinct platforms and sometimes lampstands, as well as either common or distinct floor areas (Kaplan 1983).

2.3.2 Sixteenth to Eighteen Century Labrador Inuit

During the 16th century, changes in regional subsistence economies occurred throughout the Canadian Arctic, including the decline of whale hunting (Schledermann

1976). In Labrador, southern locations such as the Narrows of Hamilton Inlet, Groswater Bay and Hopedale, provided productive sea mammal hunting settings and milder climatic environments than along the northern coast (Kaplan 1985: 50; Woollett 2003: 50-56). Settlements established in Hopedale, Nain, Hebron, Okak and Killinek (see Figure 2 for settlements location) demonstrate that much as in other regions of the Arctic, Labrador Inuit culture was gradually becoming more differentiated and specialized (Kaplan 1983; Woollett 1999; 2003:50). However, few Inuit sites from this period have been recorded. While this may be due to archaeological survey biases (Woollett 2003: 51), it has also been proposed that Labrador Inuit populations dwindled during the 16th and 17th century. According to McCartney (1977), and Schledermann (1976), these demographic changes may have been due partly to a general climatic cooling, or to contacts with Europeans (and perhaps ensuing epidemic diseases) (McGhee 1994).

Surveys and excavations conducted at Eskimo Island 3, in Hamilton Inlet, and Iglosiatik, revealed the earliest sod house settlements in southern Labrador Nain, and dated to the 16th century (Fitzhugh 1972; Jordan 1977; Peter Whitridge, personal communication 2010). Although the pace of this movement remains unclear, the Inuit southern expansion continued throughout the 17th century (Kaplan 1983; Stopp 2002).

First contacts with Europeans, or European material, thus seem to date to the mid 16th century (Kaplan 1985). Frobisher (1576-78) figures among the early European visitors to the Arctic, where he encountered Baffin Islanders. Goods acquired from these initial exchanges probably made their way to northern Labrador through local trade

networks (Kaplan 1985:53). Basque whalers (mid to late 16th century) and Dutch traders (early 17th century) had more durable and direct contact with Labrador groups, since they seasonally visited the southern coast (Kaplan 1983; Stopp 2002; Whitridge 2008). Throughout the 17th century, an increasing number of people in the Eastern Arctic gained access to European-made goods. Excavated sites in the Hopedale, Nain, Hebron, Okak and Killinek regions have yielded traditional precontact Inuit material, as well as a certain quantity of European goods (Kaplan 1983, 1985:52). While face to face contacts between Europeans and Inuit from the northernmost areas are unlikely to have occurred, Inuit in the south adopted the role of middlemen, thus intensifying exchange networks that already existed (Jordan and Kaplan 1980; Kaplan 1980: 650, 1983).

Most 16th to 17th century houses reflect continuities with those from the precontact era. Labrador Inuit appear to have experimented with winter house forms during this period, and many architectural styles are documented (Kaplan 1983). It has been noted that some houses show larger floor plans, like at Iglosiatik 1 (Kaplan 1983). Archeological excavations also reveal that many dwellings now contain artifacts of both Inuit and European manufacture, mostly nails or spikes, fragments of metal and beads (Jordan 1978; Kaplan 1983).

Inuit settlements dating to the 18th century have been reported from northernmost to southernmost Labrador. Their number and size indicate that different groups were uniting in communal winter settlements, and probably that the Inuit population was growing again (Kaplan 1983; Taylor and Taylor 1977; Woollet 2003:51).

Winter settlements containing communal sod houses were built in inner bays and along the coasts. This would not only provide the occupants with shelter, but also give Inuit groups access to both marine and terrestrial environments (Woollett 2003:52). Thus, like their ancestors, contact era Inuit maintained a subsistence economy based on logistical mobility mainly oriented towards marine resources. According to archaeological data, seal hunting was of prime importance, whereas baleen whales were only occasionally intercepted during their fall migrations. Beluga whales were occasionally hunted during spring and summer (Woollett 2003). Fall caribou migrations retained their importance, however, and various berry species, fish and furbearers were still collected (Woollett 2003).

During the 18th century, contacts between Europeans and Inuit took on a more regular, if not permanent form, for example the establishment of the Moravian mission station at Nain in 1771 (Kaplan 1985; Stopp 2002; Woollett 2003). The gradual introduction of new technologies such as firearms, wooden boats, seal nets and fish nets, increased the productivity of many forms of hunting, and instigated changes in seasonal rounds (Taylor and Taylor 1977; Woollett 2003: 55). Inuit started to settle in semi-sedentary camps around missions, where they could trade their surpluses for European goods. Furthermore, as they gathered more and more Inuit converts, Moravian Missionaries attempted encouraged summer cod fishing in order to build surpluses for the winter (Taylor 1974:30).

The typical house associated with 18th century Inuit culture, and the one that has been most studied, is that of the communal or corporate dwelling (see Figure 2). It consisted of a large subrectangular to rectangular sod and stone walled structures, ranging in dimensions from 7m x 6m to about 16m x 8m (Kaplan 1983: 238; Woollett 2003). These structures also retained some of the internal features of their antecedents such as long entrance passages, cold traps, and paved floors, as well as sod and animal skin roofs laid over frames of wood or animal bones (*Ibid*). Many sod houses had increased interior space through added alcoves situated in their entrance passages or main chambers, which probably were used as storage or cooking areas (Kaplan 1983:550). Extensive sleeping platforms stretched along the entire rear of the house. The presence of several lampstands along these platforms suggests that they were divided into smaller units, each inhabited by a nuclear family (Kaplan 1983; Schledermann 1971). Each house appears to have been occupied by 14 to 36 individuals, and according to Moravian missionaries censes, some settlements seem to have been inhabited by up to 100 people (Taylor 1974; 1977).

2.3.3 Nineteenth Century Labrador Inuit

Near the end of the 18th century, Moravian missionaries used economic strategies to challenge the activities of powerful Inuit men. Because of this, and since whale and walrus populations were decreasing, large sea mammal hunting was almost entirely abandoned, which destabilized the organization based on cooperative hunting techniques. Settlement patterns were also further altered (Kaplan 1983, 1985: 64; Woollett 2003: 55-56).

Faunal assemblages from 19th century sites demonstrate major changes in subsistence strategies and resource structures, such as an increased emphasis on fox trapping, seal hunting and fishing (Kaplan 1980:652-53). Artifact collections from this period, for example those of Big Head 1 (IiCw-3) and Komaktorvik 1 (IhCw-1), also reveal the presence of cartridges and rifle parts. These weapons were common equipment at that point, which allowed hunters to acquire caribou without the aid of others; it was thus no longer critical to establish camps where caribou drives could be conducted.

According to recent archaeological evidence, Inuit settlements of the 19th century can be divided into two types. First, some settlements formed more or less temporary clusters around Moravian missions, Hudson's Bay Company trading posts, or other European settlements (Kaplan 1980:653, 1983). Second, Labrador Inuit populations also scattered into small groups, consisting of one or two family-size houses, and settled in areas of Labrador never inhabited before (Kaplan 1983). Still, the reported 19th century Inuit population seems to have been denser in southern regions of northern Labrador such as the Hebron, Okak, and Nain areas (Kaplan 1983:653).

Due to competition between Moravian missions and trading companies, schisms appeared among already dispersed Inuit groups. According to Kaplan (1980: 653), three categories of individuals started to emerge: "those loyal to the mission, those trading with the Company, and those not affiliated with either organization". Archaeological surveys have revealed settlements that may mirror these categories (*Ibid*).

In her research, Kaplan (1983:244) mentions four different categories of sod houses for the 19th century. These include large communal houses similar in form to those of the 18th century, with multiple rear living areas, long entrance passages, and cold-traps, and smaller semisubterranean sod houses, ranging from 4 m x 4 m to 6 m x 5 m, with single or multiple sleeping platforms, and either entrance passages or simple entryways. The latter are considered more typical of this period, and may indicate a return to smaller family/production units. There are also small single-family dwellings, similar to those just mentioned, but with side walls longer than rear and front walls. The fourth documented type consists of small rectangular sod houses constructed on the ground surface, with stone foundations, wood and turf structures, and simple entryways (Kaplan 1983; Whitridge 2008).

Groups of dwellings often share single entrances that face the same direction, and incorporate European types of construction material and elements, such as nails, wood, and cast iron stoves (*Ibid*). Nineteenth century Labrador Inuit architecture thus shows greater variability then previous periods (Kaplan 1983; Taylor 1974; Woollett 2003).

Chapter 3 Inuit Perception of Otherness, Time and Space

No research has been solely and directly devoted to the Inuit conception of otherness, space or time. Authors like Balikci, Rasmussen, Briggs, Laugrant, Saladin d'Anglure and Dorais have allocated space within some of their writings to the subject. Inuit stories and myths also hold some information, but are difficult to interpret. They will nonetheless, but carefully, be used as reference material for the following discussion. This

is especially true with regards to the Labrador Inuit, for whom specific anthropological and ethnological literature cruelly lack. While anthropological and ethnographic literature concerning Alaskan, High Arctic and northern Quebec Inuit communities is abundant, it is almost inexistent as far as the Labrador Inuit are concerned. This work recognizes that assuming that observations from one part of the Arctic apply to all Inuit would be inaccurate. However, in the absence of such information on the Labrador Inuit per se, this project intends to use the analogical process through a conscious awareness of the degree of similarity between variables in the Inuit ethnographic record and the archaeological material at hand (Friesan 2002: 339).

It is important to note that the conceptions discussed below have changed in recent years. Most young Inuit are educated in Euro-Canadian schools, and the way they experience the world certainly differs from that of the time period covered by this research (15th to 19th century). The previous generation of high school graduates was largely educated in mission schools, which profoundly rejected Inuit traditional knowledge. Thus we are two generations removed from those Inuit who may have possessed more "traditional"[2] conceptions of time and the past (Bielawski 1994; Laugrand 2002; Nagy 2002).

3.1 Otherness

Because social cohesion is such a crucial and seemingly obvious element of Inuit culture, studies of Inuit social organisation usually are centred on the kinship system

[2] It is here understood that tradition is not fixed in space or time. However, Inuit populations are today mostly sedentary, a difference which probably impacts strongly on the way people perceive space and time.

uniting living people. To try and delineate Inuit perceptions and interactions with unfamiliar elements of the landscape (whether they be people, animals or objects), we have to interrogate what, within this social system, may help us understand the physical and ideological frame that would have shaped past Inuit interactions with their surrounding world. Traditionally in anthropology, the Inuit kinship system is thought of as construed by genealogical or locality ties, with "extra-kinship" phenomena used to create alliances between spatially discrete social groups, such as naming, adoption, activity partnerships or spouse-exchange (Trott 2005: 4). The basic elements of this system are, of course, individuals, followed by the *ilagiit* (Balikci 1989: 11-125). The Inuit word *ilagiit* first appeared in the works of Damas on the Iglulingmiut (1963, 1964), but was further developed in Balikci's (1989) ethnographic research on the Netsilingmiut. He characterized it as having two different "levels". First, the restricted *ilagiit* (*ilagiit nangminariit*) – defined by the narrow circle of kin constituting the nuclear family -, and second, the extended *ilagiit* a preferably patrilocal extended joint family, residing under the same roof, and comprising both consanguineal and affinal kin. According to Balikci, the extended *ilagiit* not only provides a framework for subsistence cooperation, but is the social unit within which one can find marriage partners, as well as personal security in the context of widespread inter-group hostility (Balikci 1989: 111-125; Trott 2005:6).

The word *ilagiit* is based on the root *ila-*, translated either as "kin, relatives", "activity companion" or "a part (of something)", and the post-base *-giit*, "those who share". In this sense, one can ask *ilauniaqpunga?* "may I join with you [on your outing]?

(Therrien 1986:105; Trott 2005: 5). This linguistic observation hints towards a complex definition of the term *ilagiit*, and of Inuit kinship and social organization. Inuit kinship comprises notions of genealogy (representing the biological links between individuals) (Damas 1964) and territoriality (representing a locality-based logic amongst those who lived, camped and worked together over time) (Graburn 1964; Guemple 1972; Trott 2005:19). However, recent research demonstrates that it is not restricted to these notions, and points towards other generative structural forms.

Ann Fienup-Riordan's work (1983) on ritual/symbolic activity and social relations within Yup'ik society demonstrates that a person's relationship to another, and whether they are considered as relatives or not, can be season-specific, and change over the course of such a season, or a longer period of time. In her study of Inupiat culture in Northern Alaska, Barbara Bodenhorn (2000) argues that Inupiat social relations were structured by the formation of whaling crews and the distribution of the products of the hunt. She demonstrates that kinship relations provide an open field of potential relations, which gradually become insignificant if not activated by co-production and commensality, while those people with whom one has active co-production relations actually become included as kin. While still documenting the importance of activities (especially sharing) in the Inuit construction of social relations, Mark Nuttall (1992) proposes the concept of "memoryscape", which places social relations within the relations between people and the landscape. Thus, the sharing of common memories of a piece of land and its history, from place names to people who lived and died over certain spaces, creates a bond between

individuals who thus may be considered as kin. Finally, Christopher J. Trott's research in Arctic Bay, Nunavut, showed that the Inuit more often spoke of *tuqturaqtuq* (Northern Baffin form of the word) than of *ilagiit*, to define the ways in which they relate to one another (Trott 2005). The word *tuqturaqtuq* has many meanings, which range from "nickname" to "the term by which one calls another person" (Trott 2005:2). His research demonstrates that naming processes within Inuit society are crucial to establish relationships between members of a family unit or a community, and between members of different communities. Indeed, by receiving the name (*atiq*, name/name-soul) of a live or deceased individual, a child partly becomes that person. He/she will thus inherit his/her namesake's gender (at least until puberty) and web of personal relations. Thus, people will refer to the child by the kinship term that they used for the previous holder of the name (Saladin d'Anglure 2006b). Significantly, a child may inherit more than one *atiq*, and be known under different names in different communities, the name used being aligned with the social relations of the particular community (Trott 2005).

Name giving also played an important role in land appropriation. For example, the entire district of Arctic Bay (inhabited by the Tununirrusimiut) had been depopulated in 1893, and reoccupied by a new group in 1908. These new arrivals had the same names as those who had disappeared (Trott 2005:15). Interestingly, the accounts of the whalers of that time reveal that the people within this same group, who traveled from Pond Inlet to Arctic Bay throughout the year, used different names depending on the locations in which they resided. Such a naming process creates the appearance of continuity and

permanence, as the same names are always present, while actual bodies move through the names, space and time.

Where no kinship can be identified, feelings towards others can take many forms, but overall, much importance seems to be given to inter-group differentiation (Laugrand 2002). Rasmussen (1930) relates how, as he was trying to identify a homogeneous Inuit identity, he encountered "resistance" from his participants, who refused to talk on behalf of their neighbours:

> " You [...] must know that human beings differ. The Harvaqtormiut know many things we do not know, and we know many things they do not. Therefore you must not compare the Harvaqtormiut with us, for their knowledge is not our knowledge, as our knowledge is not theirs. Therefore we tell you only what we know from our village. " (Rasmussen 1930 : 111)

This is further demonstrated by the fact that although the Inuit mythology assigns a common origin to the *Ijjirait* (Caribou Spirit), the *Iqqilit* (First Nations), and the *Tuniit* (Inuit ancestors), they are still considered as strangers to the Inuit, as related by Qakurtigniq (Rasmussen 1931:121): "We counted *Tuniit* a foreign people, yet they spoke our language, lived with us and had the same habits and customs as we had".

There is a marked contrast between the closeness expressed by groups sharing kinship bonds and the distance expressed by groups with no kinship[3] (Briggs 1970; Therrien 1987: 104-105). Interestingly, Briggs notes that closeness, separateness and

[3] Briggs definition of Utku kinship is mostly genealogical; that is, kin groups consist in genealogical or adoptive siblings and the children of those siblings.

hostility are expressed socially, in the act of sharing or not sharing activities, food, clothing, and so on, as well as spatially, by the distance between camps and the spacing of tents and *illu*s within camps. (Briggs 1970:177-223; Therrien 1987:104-105). During her stay amongst the Utkuhikhalingmiut (Utku), Briggs observed that continually, the least recognized family's tent would always be set up "so far apart from other clustered tents" (Briggs 1970:184). It is perhaps in the act of visiting that social closeness and separateness are the most easily expressed. Whereas insiders (kin) would invite themselves in, settle on the *iqliq* (platform), help themselves to food or participate in various household chores, an outsider would usually stand just inside the door, and only enter and partake of ongoing activities when invited to (Briggs 1970:178). Briggs also recognizes that social displays differed depending on the seasons. Indeed, socializing would be more difficult during the winter, and although more people would inhabit a single camp, "each *illu* constituted a snow monad" (1970:179) and life would thus be more private than during the summer. Interestingly, Briggs notes that depending on how deep the *illu* was buried, all footsteps that passed nearby or overhead would be recognized, and would reveal certain details of the activities of one's neighbours (*Ibid*).

As can be seen, the Inuit system of kinship is a complex network of different social components. A person's relationship to another may be shaped by partaking in common activities and sharing goods, genealogical or territorial ties, seasons, and more ideological or symbolic elements, such as the sharing of an *atiq*, and memories. It is expressed in social behaviors, and according to Briggs, is reflected in the use of space. By

understanding the basis of the Inuit system of kinship, we can sketch a better portrait of Inuit interactions with external elements, and how it can be tied to intra-site spatial organization.

The Inuktitut language also reveals much about how the Inuit experience otherness. The concept of *Inuk* "human being[4]" stands in opposition to everything that is not identical to one's self, that is, on the one hand, to animals and supernatural beings, and on the other hand, to *allaq* "stranger" (Therrien 1987:148). More precisely, a stranger is a person/thing that has no affiliation: *ilaunngituq* "who has no kin" (where *ila* designates a kindred individual, a part of, a piece). When groups or individuals traveling in unknown territory encounter other people, they will try and connect to the local social network and see if they share any *ila*. Sharing social relations, even distant ones, can prevent hostile reactions and conflicts (Therrien 1987: 105). Inuit residing in the same place were classified into two categories: *nunaqqatigiit* "those who share the same territory (*nuna*) in a discontinuous way", and the *silaqqatigiit* "those who share the same territory, camp, *sila* (literally "air", "environment", "universe"), in a continuous way". A person with whom no bond of kinship can be found will be considered as an opposite, or *akilliq* "the one that stands the most opposite to one's self" (from the root *aki*-opposite, and *–lliq* the most in one direction). In a strictly spatial sense, the word *akilliq* is used to describe the neighbour who, in the village, resides in the house opposite to yours. More categorically, the words *akiraq, akiraqtuti* refer to the enemy. In western Greenland, the

[4] *Inuk* can actually be translated in multiple ways, from "human being" to "owner", to "inhabitant" (Therrien 1987: 145-148).

Inuit from Canada are called *akilinermiut*, a term which emphasizes the spatial distance existing between the two people (Therrien 1987:148-149).

For the Inuit, being *Inuk* involves precise behaviours, amongst which the most important ones certainly are generosity and temperance (Balikci 1989; Boas 1964; Briggs 1992; Saladin d'Anglure 2006b; Therrien 1987). Similitudes and resemblance amongst individuals are strong elements of social cohesion. Difference is received with distrust, or simply rejected, a phenomenon strongly felt by many non-Inuit ethnographers during their stay amongst Inuit groups (Malaurie 1976; Nansen 1975). For example, during her stay amongst the Utku, Briggs angrily scolded white fishermen for breaking an Utku boat. This display of such a highly disregarded emotion resulted in her being estranged for several months by all members of the Utku clan she was living with (Briggs 1992). Should a foreigner, however, demonstrate similar behaviors and values, he could be integrated into the community and promoted to the rank of "Inuk". For example, in 1756, a West Greenlander wrote to Paul Egede (Nansen 1975:182), that due to his good conduct and piety, he had been recognized as a human being, as a Greenlander.

3.2 Time

In the previous section, the way otherness is perceived and enacted by different Inuit groups of the Canadian Arctic has been discussed. However, since this thesis is concerned with intra-site spatial organization, another component must be included in the discussion: time. Indeed, an important question to be resolved relates to how Inuit

experience the passing of time, and especially how they perceive(d) the past and its material manifestations.

Like action in the past, time remains invisible. It cannot be grasped; only experienced. To describe these experiences, and the rate at which time seems to happen, we use metaphors like: "time flies like an arrow", "time is cyclical" or "how time drags". The ideological conception of time is deeply imbedded in culture. It can be studied through language, but also through cultural material, past and present. Indeed, as concrete reflections of past actions, material objects are major structural elements of temporality, which can be defined as the varied activities and processes occurring within time (Ingold 1993; Thomas 1996).

The traditional Inuit way of experiencing time seems to be both linear and cyclical (Briggs 1992). According to Briggs (1992) linear time is associated with the domain of practical activities, or human interaction with nature, and cyclical time (which she also qualifies as 'transformational') is more culturally variable and belongs to the world of rituals, which are tangible manifestations of the social structure enacted in an attempt to preserve it.

For the Inuit, the notion of time is subordinated to people's activities (and not the opposite, as it seems to be for non-Inuit). There exist measures of time external to human concerns, but strictly speaking, these "units" are not moments but events that are deeply oriented towards human concerns (Briggs 1992; MacDonald 1998; Nagy 2002). There are

words in Inuktitut[5] for day (*ulluq*) and night (*unnuaq*), morning *(ullaaq*) and evening (*unnuk*), tomorrow (*qauppat*) and yesterday (*ippaksak*), as well as for the – our – four seasons (Briggs 1992: 89; Boas 1964). Appropriately translated, what they do refer to is, first, the life cycles of the animals that provide people with food, and second, the rhythms of light and darkness, which also influence human action. For example, there is "the time of the caribou calves", which corresponds to June; "the moulting time for birds that have no young", which is identified with the beginning of July; "the moulting time for birds that have had young" (the end of July); or "the time for the sun to rise again" (January–February) (Briggs 1992:89; Rasmussen 1931).

Indeed, it seems that personal memories and experiences constitute the temporal organizers and markers of lives, and not abstract notions such as age or years (Anawak 1988, Bielawski 1988; Briggs 1992; Laugrand 2002; Nagy 2002). Women tend to order (more chronologically so than men) the events in their lives with reference to their first menstruation, the births of their own children, or the periods during which specific children were nursed or carried in the *amautik* (women's parka) (Briggs 1992; Nagy 2002: 196). Men tend to "date" events with reference to the time when they began to hunt, or killed their first game animals, or established a camp in a certain place (Bielawski 1988; Briggs 1992).

Non-Inuit researchers who worked in the North often describe the Inuit as living in a timeless present (Boas 1964:229; Carpenter 1956; Laugrand 2002). However, recent

[5] As documented in Briggs' (1992) orthography of the Qipisamiut of Cumberland Sound on Baffin Island and the Utkuhikhalingmut of Chantrey Inlet in the Central Canadian Arctic.

research concerns demonstrate that this perception most likely is a product of our own idiocentric way of conceptualizing the passing of time, that is as a trichotomy constituted of a past, a present and a future. Briggs (1992: 98) notes that a good deal of Inuit action related to hunting "makes sense when looked at lineally and the balance of action tips rather heavily toward the short-term". However, she also states that when it comes to the use of "human resources" (for example child education or the choosing of a spouse), adults have conscious long-term goals. Finally, in several cases, the combination of both long-term and immediate considerations can be seen in the same act. For example, as a child is born and receives the name of a deceased individual, he or she also inherits his/her gender. As such, the choosing of one of the child's names may reflect the immediate need for more hunters or seamstresses. It calls upon the past and brings it back to life, and has future consequence for the way this individual will be educated, at least until puberty. Furthermore, this name propels him/her into the future, especially given the fact that it will be given to another being at some point (Anawak 1988: 46; Briggs 1992; Therrien 1999:36). In this light, Inuit time thus appears to be cyclical or "transformational", where "all forms, all event, all times, are immanent in the present situation" (Briggs 1992: 98). Inuit perception of events that happened, and events that may come[6], are tightly bound to the present, but are not restricted to it.

The Inuit have great reverence for the past. To this day, it is shown in the respect people have for traditional knowledge (such as survival skills, legends, hunting

[6] Uncertainty towards the future is very important. Inuit do not prophesize about a future that may never happen.

techniques and terminology, traditional food and skin-clothing preparation, production of implements and shared on-the-land living experience), and the important place it is given in educational programs (Anawak 1988: 46). "(Thus), we as Inuit are taught that all things stem from and continue to be tied to the past and that it must continue to be respected and preserved" (Anawak 1988:45). For the Aivilik Inuit (Carpenter 1956), no chronological chains seem to tie events to each other. There is no beginning, and no creation: the world is now as it has always been. The past is something immanent in all Aivilik being, and can exist within objects, stories, prayers and songs (Bielawski 1988: 229). The Aivilik Inuit perception of the past is further hinted at in their language, where events are distinguished on the basis of having occurred in a "time before known time" (which is a different kind of time, rather than an earlier time than now) (Bielawski 1988:229). Interestingly, the term *sivulliit* [7]"ancestors" refers to "those who are the most in front" (Dorais, personal communications 2008). As they die, people become "a thing of the past", but not "a forgotten thing" (*ippirainnatuq*). They only "move" to a different place, and cease to become perfectly visible (*nittagunnaituq*), just like elements of the landscape may become blurry and fade on a misty day. Deceased individuals will then try to come back to the world of the living, either as ghosts (unwelcomed and frightening), or as newborns, through their *atiq* (Therrien 1987: 159). This, however, may take a while, as people may choose to reincarnate into an animal, or many animals before they become human again (Saladin d'Anglure 2006b; Therrien 1987, 1999). For the Inuit, time does

[7] The root *sivu-* is also used in *sivuliqti* "head dog" (the one who acts in front), and becoming a substantive *sivu* refers to the upper part of the forehead.

not stop in death: another form of time emerges, that is the time it will take for the *atiq* to reincarnate into a woman's body, a new living space. Time and space are always linked. Indeed, they share the same affix "*vik*": "the time of", "the place of" (*Ibid*).

3.3 Space

The Inuit have a "plural" way of experiencing the world, and these experiences revolve around the consciousness of being Inuit: it is a subjective experience of space (and time). Linguistically, Inuit describe their experiences by visualizing the object of the discourse and linguistically describing the spatio-temporal conditions of their observations, as with the personal pronouns, I (*uvanga*) = "my here very close" and us (*uvagat*)= "our here very close" (Therrien 1987:13). The relation between the notion of being human and its linguistic expression promotes an understanding of how the Inuit perceive their place in the world (Therrien 1987).

It is important to consider "the body", through which all experiences of the world pass (Hamilakis *et al* 2002; Joyce 2005). The Inuit body seems to serve as a model for human and natural "productions". It is the foundation of the entire human experience, for it is the most immediate, visible and transposable medium of communication with the universe (Saladin d'Anglure 2006a, 2006b; Therrien 1987, 1999; Whitridge 2004). The polysemic nature of Inuktitut is an excellent guide through Inuit phenomenology, for we can easily observe how linguistic forms[8] designating parts of the body have equivalences in animal and object-related vocabulary, while they are also used to describe lived

[8] Any meaningful unit of speech: a morpheme, word, phrase, sentence, etc.

experiences, as well as refer to spatial and temporal notions (Therrien 1987) (Table 2). Here, we have to integrate the notion of an extended body, which has ramifications in the form of conceptual attributes and symbolic associations with the natural world, technology, social organization, and emotions and religious thoughts.

Affinities between the body and the natural world are not only metaphorical, but merge into a complex system of correspondences between physiological and natural processes. Intimate relationships between people and the land are well described by elders. Some remember having to move because a member of the family suffered from a fever: the abnormally warm body would communicate its condition to the earth, which would suffer from the same illness (and lead to drought) (Therrien 1999: 49-50). Another example of this relationship is reflected in the ideological association of bodily fluids, and the physical and chemical properties of water. The words *auk* "blood", *aukkaningaq* "sweat", *aukkaniq* "polynia" and *auktitiqpuq* "the melting of the snowhouse in the spring", all refer to a flowing "body" of liquid (Therrien 1982). The polysemic substantive *sina* designates both the border of the eye, the limit of the sea ice (a particularly rich part of the Arctic ecosystem), and shores (associated with either rivers or lakes). The common denominator between these elements seems to be the opposition between their "dryness" and the humidity of either the eye or unfrozen water (Therrien 1987:85). Particularly important for the Inuit is the notion of "border"or "limit". Boundaries are linked to both changes and modifications of corporeal elements, and to the

Table 2. Examples of the Extensiveness of Localizing Radicals (Therrien 1987:93)

	BODY			**LOGICAL ASSOCIATIONS**		
	Human	Animal	Object	Space	Time	Actions and Movements
Aku- between	*akuaq:* lower abdomen *akuliaq:* space between the eyes *akunaujaq :* space between fingers *akunnaaki:* adolescent (between two ages)	*akunnalik* itigajuq: a paw that has a flipper *akuarmik:* an egg that is ready to be layed *akunnatuq;* a half breed fox	*akuq:* the rear flap of a woman's parka *akuilitaq:* waterproof clothing made of bladder *akuliaqattaq:* a hill standing between two bays	*akunniq:* the space that is comprised between two things; an interval; betweex, amongst;	*akunnitujut:* they are very far apart in time (or space); long intervals; not frequent; *akulaitturnik*: frequent; *akuni:* for a long time	*akuttuasiqpuq:* divinatory games *akuttuatiqpuq:* he acts or speaks at long intervals *akunnagivaa:* he postpones it.
Sivu- direct; in front; front part	*sivuaq:* incisive *niup sivuraa:* fore-leg sivuniq: tip of the foot *sivu:* front of the head (if plural: hair at the front of the forehead)	*sivua:* incisive *sivuliqtaituq :* head dog	*sivuraguti:* skin strip attached to the boot *sivulik:* boat with a raised prow *sivuraq:* visible surface that stretches in front of an observer	*sivuraa*: in front of him (his front) *sivumut:* in the front direction sivuniq: front of (+ possessive)	*sivulliit:* the ancestros (i.e. the first in front) *sivullimik:* first *sivuniq* (+ possessive): before us, you.	*sivumittuq:* loaded at the front (kayak, sled, etc.) *sivuurajuq:* he worries, apprehends

opposition between the body and the outside world (Therrien 1987: 84-89; Saladin d'Anglure 2001, 2006a, 2006b). Whether in myths, metaphors or stories, parallels drawn between human made objects and the body are plentiful. For example, various Inuit groups share the use of the substantive *puuq* to designate "a woman who is a mother", which is also used to refer to a "bag", or a "container" (skin) (Therrien 1987:129). According to Collis (1971: 102) *puuq* is composed of the minimal forms *pu-* , which refers to any element "presenting a curve", and *–uq,* which marks the attribution. In this sense, a container would be "that which has a curve". One of Rasmussen's (1931: 222) female informants used the image of the bag to designate "that which surrounds and protects". Because they share a similar form (the curve) and function (protection, life and warmth), obvious parallels can be drawn between houses and women[9].

Houses can be considered as embodiments of the culture itself and not just vessels. Inside the dwelling, body and mind are fused into a single being. A house has a *qingaq* "nose" (through which it communicates with the universe), a *qimirluguti* "spine" and *kajjiq* "hair" (a great part of the human soul is said to reside in the hair) (Therrien 1987). Any *illu* is a metaphor for the human body, predominantly the female body (Figure 7). The *illuvigaq* or snowhouse is particularly associated with women. The root *au(k)* is used to designate the following experiences: *aunaqpuq* (the loss of blood caused by menstruation) and *auktitiqpuq* (the melting of the snowhouse in the spring) (Therrien

[9] While the illu tends to be symbolically associated with women, the kayak is a metaphor for the male body (Therrien 1987).

1982:123). The root and substantive *paa,* which designates the entrance tunnel of the snowhouse, is also used in *utsuup paanga* "of the female sexual organ the opening", while the term *anivik*, also used to designate the entrance, refers to both "the place from where one gets out", "being born", and "mother" (on a more metaphorical basis).

Such metaphors had repercussions for daily activities. For example, a pregnant woman was strongly advised to crawl in and out of an *illu* with her head facing towards the outside, which would prevent the baby from being born in a breech position (Therrien 1987: 33). Many Inuit informants, recalling their intra-uterine journeys as a foetus, discuss how they lived in a little *illu*, which became smaller and smaller as they grew (Rasmussen 1930:45; Saladin d'Anglure 2001, 2006b). Contrasting with the solid/vital nature of the foetus (*ilumiu* "the one inside")[10] is the fluid/liquid nature of menstrual blood, which is one of the greatest taboos expressed in Inuit societies throughout the Arctic (Therrien 1987; Saladin d'Anglure 2006a). Although seldom referred to, there seem to have existed menstrual huts and birthing houses, where the parturient and her newborn would stay for a month or so (Therrien 1987: 129-131; Saladin d'Anglure 2006b).

[10] The word *illumiut*, designating the inhabitants of a house shares with *ilumiu* the notion of "a presence inside" (Therrien 1987:31).

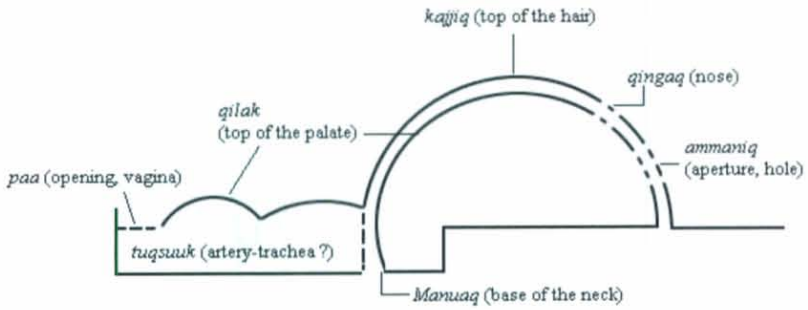

Figure 7. Longitudinal section of a snowhouse (Therrien 1987:28)

This perception of the *illuvigaq* as a metaphor for the reproduction of the human body is the first stage of its symbolic meaning. Its ceiling (*qilak* "house vault", "sky vault"), linguistically associated with the sky, is a replica of the universe. The vaulted shape is the same, only the proportions change. Not only do Inuit houses tie humans to the celestial world, but they also connect them to the marine world. Interestingly, an Inuit myth recounts the abduction of a female youth by a whale, in which that whale builds his female captive a house from his own bones at the bottom of the sea. Both this myth and the linguistic co-significance of terms tend to indicate a powerful relationship between females, whales, and winter houses (Therrien 1982; Whitridge 2004: 242). However, this myth being associated with Eastern Arctic populations, we can question whether it was of equal importance in Labrador, where the main deity/spirit was not a sea goddess, but the *Torngatsuk*, spirit of the Torngat mountains. Furthermore, the greater availability of driftwood and spruce trees in Labrador seems to have played a role in the substitution of whale bone for timbers, as roof supports for sod houses[11]. In this sense, it would be interesting to investigate whether houses retained their symbolic association with the ocean, or if there was a fluctuating shift towards the terrestrial world. Nonetheless, drawing from mythological and linguistic analogies, it becomes apparent that dwellings are intricately linked to both bodies and the landscape.

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[11] Whereas Eastern Arctic sodhouses' roofs were often supported by whale bone (Whitridge 1999), Labrador groups seem to have used wood to a greater extent(Kaplan 1983;Woollett 2001)

The Inuit body is an ensemble of disparate, yet interdependent elements (*ila*), grouped under the following categories (according to Therrien, 1987): head and neck; torso; upper and lower limbs; skeleton, organs and skin. They are further understood in terms of their horizontality (left, right) and verticality (upper, lower). While we tend to assign more importance to the head (as the controlling element), the Inuit believe that they all work in symbiosis, as a whole. As we have mentioned above, Inuit society (*ilalimaat* "the entire network of kin") is perceived as the sum of such elements (*ila*). Altering a single element influences the "whole" (*iluuna*) (Therrien 1987).

We have seen previously that nothing is more important to the Inuit than social cohesion. In western society, we tend to perceive nerves and blood vessels as much more important than articulations. However, because they create cohesion, the Inuit share a special intimacy with this body part. Articulations are also perceived as *loci* for the soul (or souls), the place where the compact/solid nature of the body attaches itself to the fluid/ liquid nature of the soul (Therrien 1987: 103-112). A person with a severed limb or organ is considered of a lesser kind than other human beings. Only an *angakkuq*, a shaman, could survive a "disarticulation". In fact, going through such an experience was part of the shamanic rite of passage. *Angakkut* stood at the articulation of the terrestrial and cosmological worlds (Saladin d'Anglure 1983, 2006a; Trott 2006).Inuit bodies and things find meaning through their relation within space, but so do feelings and behaviours. Here, again, Inuktitut underlines how it is impossible for one to understand the world if one does not possess "spatial consciousness" (Therrien 1987:95). For example, *ungaviga* "he

loves him/her and cries in his/her absence", stems from the root *ungat-* "far from"; *iqqapaa* "he remembers him", stems from the root *iqqa-* "of (something) the bottom"; *kinngupaa* "he/she misses him" stems from the root *kingu-* "behind", "of (something) the rear". Taking the notion of distance into account helps to express a plurality of human feelings.

The Inuit conception of the universe can thus be seen to revolve around bodily experiences and perceptions. The body is a vector through which one communicates with the invisible world. Matters of the body become socio-religious prescriptions (such as reinforcement of social cohesion through sharing) or prohibitions (such as the seclusion of women giving birth), which in turn, orchestrate daily and intergenerational movements and actions.

As argued by Ingold (1993), Tilley (1994), and many others, actions and movements stand at the core of the human experience of space and the definition of place. Within a village, as people travel to and from houses, and perform various activities, they create a dynamic map "dissected by paths and punctuated by regions or points of heightened significance" (Whitridge 2004 :4). In this same way, territories on a larger scale are created. Winter landscapes are especially important in this regard, since those paths become visible (as human, *komatik* or animal tracks), and charged with symbolic, social and practical significance (Aporta 2004; Therrien 1990). The Inuit of Igloolik use different terms to define tracks and trail visible on the snow. The term *igliniq* (pl. *igliniit*) refers to a communal trail made of several tracks and routinely used for travel. Usually,

such trails correspond to traditional routes (*aqqutiit*). *Iglinikuluk* is used for small trails, and *inisiaqpunga* refers to the act of following a lone track left by an occasional traveler (Aporta 2004:17). In Northern Quebec dialect, different names are given to traces according to the specific destination they indicate. For example, *ungammuaniit* is used to designate the track left by someone leaving a given point. *Angiqraliniit* refers to the tracks left by a person who's going back to his/her house, while *utirnigiit* designates a "back and forth" movement (Therrien 1990). Looking upon a winter village, one would thus immediately be able to recognize which points (houses, graves, free spaces, etc.) are considered of greater or lesser significance. Just as musical notes or writing can be read on a sheet of paper, so could a village be read on a snow canvas.

Tracks associated with footsteps, *tumiujaq* (human, animal or otherworldly creatures) are imbued with symbolic significance, and are perceived as miniaturizations of the human body (Therrien 1990:36). Indeed, like a personal signature, whether an individual is young, old, injured, or walks heavily or with long strides, can be read from his tracks. In Inuktitut something that is oval shaped is said to be *tumiujaq* "that resembles a footstep" (Therrien 1990). Myths recount stories of people whose metamorphoses into animals were witnessed through their tracks, or whose destinies were changed by having listened appropriately to the sound made by animal or human footsteps on the snow (Figure 8) (Therrien 1990; Saladin d'Anglure 2006b). In Nunavut, it was not recommended for physically or psychologically ill people to leave the space "with footsteps" *tumitaqaqtuq*, and enter the space "without footsteps" *tumitaittuq*, which

was considered to be the realm of the *inua* "spirits". *Inua* had a liking for weakened humans, for they could easily be influenced into bargaining their lives. Only shamans willingly entered the *tumitaittuq* and talk to the *inua* (Saladin d'Anglure 1988, 2001).

Not only through their visible characteristics can snow tracks create a dynamic ensemble of mental images: they also have a sonorous quality. Once again, depending on the stride or weight of an individual or object (say a *komatik*), footsteps/passage will produce a distinctive and recognizable noise. Once again, contemplating a winter village is not only a complex visual experience, but a whole sensorial experience. Because they disappear with the melting of snow in the spring, tracks (both at the scale of the village and of the landscape) are bound to become memories. As they travel within the landscape, people not only move from place to place but, rather, move along a network of lines interconnecting different points/places where both real and mythical events are known to have happened (Collignon 1996, 2002, 2004; Jones 2004; Nuttal 1992; Saladin d'Anglure 2004). Particularly important events/places are given socially meaningful names (which we refer to as toponyms). For example, they may indicate the presence of useful natural resources, like *Uviluqtuq* "where there are mussels" (near Inukjuak), or refer to events of great social significance, such as *Imittumavik* "where one eats men" (Staffe Island 1, JaDb-2, Home Island area), where it is said that during a period of famine, people resorted to cannibalism (Kaplan 1983:789). Toponyms may also indicate mythical places, such as *Tupilavvik* "the place where there are *tupilait*" (situated on a little island near Killinek), *tupilait* being spirits associated with the pollution generated by a site which has

3a

ᑕᐃᒪ ᑕᓐ ᐊᓐ ᐃᓂᐅᐃᒪᒋᑦ (ᓂᓇᐅᔪᑎᒋᑦ) ᐊᑯᓂᐅᐊᑦᒪ
ᐊᑯᓂᐊᓗ ᐅᑎᕐᓇᐃᒪ ᑭᓇᐊᓕᕆᓂᑯ ᓴᓇᐅᕈ ᐃᑲᔪᕐᓂᓂᓂ
ᑎᔨᓕᓂ ᑲᓕᑐᐃᓇᓕᔪ ᑕᐸᑲ ᓄᓇᑐᐃᓇᒧ ᐱᓕᕆᑯ
ᑕᐃᒪ ᑭᓇᐃᑎᓂᓄ ᑐᒋᒋ ᐊᑐᓕᑦ ᒪᓕᐸᐅᑐᐃᓇᓕᕆᑯ.

3b

ᑕᐃᒪ ᑐᔨᑕᐅᒪᒋᑦ ᑐᒋᓕᑦ ᑕᑯᓕᓇᐱᔪᐅᓕᕆᑯ
ᐊᓕᐅᐃᓕᓴᓕᐊᒪᓕᒃ ᑐᒋᒋᑦ ᑯᐸᓕᑦ ᐊᒪᑭᑦ ᑐᒋᒋᓕᕆᑦᑕᑦ

Figure 8. Illustrated myth written in syllabic by Paulusi Sivuaq, entitled *Arnaq Amarunngutuq* "The woman who turned into a wolf"
(Therrien 1990:44)

been populated for too long (Saladin d'Anglure 2004). The significance of other place names, such as *Komaktorvik* "where one eats lice" (Kaplan 1983) remain more obscure. As one travels, each part of the territory, acting as a trigger, unveils different memories and reactivates the emotions associated with it (*Ibid*). Place names are crucial, for they bind together spaces and time, to create humanized places in which the Inuit can evolve (Collignon 2002:55). Many studies, for example Collignon amongst the Nunavik Innuinait and Nuttall for Greenland Inuit, have demonstrated how crucial toponyms are in generating and regenerating socio-cultural identities. Unfortunately, no such study has yet been done in Labrador. The present research relies on the slim data existing on the subject

Chapter 4 Quantitative Spatial Analysis: Defining the Data and Methodology

While it examines the intra-site spatial distribution of Inuit houses, this research is primarily concerned with the instances of this distribution that, repeated on different archaeological sites, create a pattern, which can then be interpreted in terms of cultural behaviours. Archaeological sites are not here studied as distinct/hermetic entities, but as points interconnected by a complex network of lines created by people's movements through space and time. This study's scope is thus also regional, and considers Inuit archaeological sites situated along the Labrador coast.

Focus on the Labrador coast is not, however, so much the result of a selection process as it is a constraint. While inland occupations have occurred (see Taylor 1969), they have not yet been systematically recorded. Indeed, Inuit archaeological site surveys and

research in Labrador have, up to now, focused on coastal settlements. Also, as mentioned in the "Previous Research" section of this thesis, most of the present data comes from Susan Kaplan's doctoral thesis, which remains, to this day, the most extensive database of pre-Inuit, and Inuit site locations. However, it still is the result of a single research project – the *Torngat Archaeological Project* (1978-79). Because of this, we cannot assume it accounts for every Labrador Inuit coastal settlement. Still, Kaplan's list is extensive, and complete with site descriptions (of variable completeness) and site maps (as often as travel and fieldwork contingencies allowed the mapping of a site). In the present research, sites were chosen according to the following set of criteria:

- for comparative purposes, it was decided that only sod houses would be taken into consideration. This ensures that all sites were experienced under similar conditions (temperature, light, snow coverage, need for specific natural resources like closeness to the *sina*, etc.), because sod house settlements were occupied between fall and spring,
- because this research studies the intra-site spatial relationship between houses, sites featuring only one sod house were rejected. In is thus acknowledged that this constitutes a bias as far as regional settlement patterns analyses are concerned.
- at least two of the following time periods are represented by different structures: precontact Inuit (late 15th to 16th century), protohistoric/early-contact (late 16th to 17th century), historic (late 17th to mid-19th century), late historic (mid-19th to early

20th century) and modern (20th century to today)[12]. Iglosiatik 1 and Nachvak are exceptions, and the reason why they were incorporated in this research is explained in chapter 5.

- the site must have been mapped based on accurate measurements.

Unfortunately, some archaeological sites looked promising on maps, but could not be used since not enough houses had been tested or situated chronologically, for example Ivitak Cove 1 (Kaplan 1983:664-673).

Also, a boundary had to be set in regards to the "vertical" spatial arrangement of houses. Re-occupation of house structures is indeed a recurrent feature in almost all Labrador Inuit coastal settlements. Dorset material seems ubiquitous in precontact Inuit archaeological contexts and indicates the re-appropriation by the latter of loci previously occupied by Dorset. South of Nain, stratigraphy shows evidence that some historic houses were built on top of precontact structures, while this was a much more common phenomenon in more northern locations. Although the re-appropriation of space constitutes an intriguing research topic, the scope of this Master's thesis does not allow its integration in the present investigation. It was thus decided that when situated underneath a more recent structure, only houses whose own structure remained apparent would be taken into consideration (how this was done is discussed further in the next chapter). Only in one exceptional circumstance did the super-positioning of two houses not affect the

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[12] Assigning a period to a structure was in most cases, not based on absolute dates. It was decided that the substantial recovery of chronologically diagnostic material (like coins or pearlware), as well as the combination of chronologically diagnostic attributes (such as "a small oval shape for a dwelling", the presence of nephrite tools and the absence of contact-associated cultural material) was enough.

location of either one's entrance passage: houses 1a and 1b at Komaktorvik 1 (IhCw-1). Table 3 displays which sites ended up constituting the archaeological sample assembled for this research.

It is important to mention another type of variable that could not be assigned adequate attention here: landscape features. There is little doubt that streams, cliffs, hillsides, coastlines and the like had a major impact on the choice of building locations and settlements of houses in a given landscape. However, for the following two reasons, it was decided that natural features would not be counted as quantifiable data. First and foremost, most of the maps taken from Kaplan's thesis do not account for this kind of information with enough precision or consistency. To accurately compare site layouts the variables that are to be contrasted need to be the same (for example, the distance to the nearest neighbour, or the distance to the hillside). If "hillsides" are indicated on some maps and not on others, they cannot be used as quantifiable comparative material, especially not on so small an set of data as the one used in this thesis. Second, landscapes change. For example, in the 500 years or so of Inuit occupation of Labrador considered in this research, coastlines have varied, as indicated by the layering of terraces on several archaeological sites, and vegetation has been altered (naturally and by humans) (Kaplan 1983, Woollett 2007). Identifying these changes within each archaeological site, defining which natural features are significant, translating them into quantifiable variables, and incorporating them within the present research would surpass the scope of this Master's thesis. However, should better maps become available, such studies would prove

Table 3. Labrador Inuit Archaeological Sites Utilized in this Analysis

Area	Site	Source	± Age	Map	Number of sod houses
Hamilton Inlet	Eskimo Island (GaBp-3)	Kaplan 1983; Woollett 1999	Precontact Inuit (late 16th)	In Kaplan 1983	4
Hopedale	Avertok (GiCb-1)	Kaplan 1983; Bird 1933	Protohistoric (late?) Historic (17th - 18th)	In Kaplan 1983	20
	Karmakulluk (GjCb-6)	Kaplan 1983; Bird 1945	Precontact Protohistoric Historic	In Bird 1945	8
Nain	Iglosiatik 1 (HbCh-1)	Kaplan 1983, pers.communications with Dr Peter Whitridge, 2007-2010	Precontact	Unpublished, courtesy of Dr Whitridge, 2007	15
Hebron	Johannes Point 1 (IbCq-1)	Kaplan 1983	Precontact; Protohistoric Historic	In Kaplan 1983	12 + 6 less distinct
Saglek	Ikkusik (IdCr-2)	Kaplan 1983; Schledermann 1971	Precontact Historic, late Historic	In Schledermann 1971	20
Nachvak	Nachvak village (IgCx-3)	Kaplan 1983, Jurakic 2007; pers. Communications with Dr Peter Whitridge, 2008-2010	Precontact Historic	In Kaplan 1983	17
Seven Islands Bay	Komaktorvik 1 (IhCw-1)	Kaplan 1983; pers. communications with Dr Fitzhugh, 2007-2008	Precontact Protohistoric Historic		16
Killinek	Nunaingok 1 (JcDe-1)	Kaplan 1983; Stewart 1979	Prehistoric Historic	In Stewart 1978	14

extremely fruitful for Inuit archaeology, especially considering recent advances in geographical information sciences.

4.1 Defining the Selected Quantitative Method

This research is concerned with the spatial distribution of houses, and what it may tell us about a site's history and the interplay between space, houses as objects and the occupants of the sites. As such, the first step for each site was to record each residential feature's x and y coordinates, and to plot them on a two dimensional grid, the result being called a *point process*. These are displayed in Figures 12 to 25. More precisely, each point represents the *paa* (entrance) of the illu (Figure 7), and not its center, as would have been a more typical measurement point. The *paa* of *the illu* is a place of heightened significance that marks the liminal space between the exterior and the interior of the dwelling, the place from which one would either start or stop interacting with the outside world. Therefore, entrance tunnels' orientations were incorporated as relevant information, although not formally computed in the quantitative analyses.

Selecting an appropriate statistical method for the present spatial analysis presents two main difficulties. The first resides in the number of points/coordinates that compose the data assemblages. Unlike spatial analyses focusing on artifact scatters or large complex settlement systems (which can produce hundreds of coordinate data), studies concerned with the intra-site spatial distribution of *illuit* have to deal with a limited number of such data. Furthermore, while Eastern Arctic settlements previously examined in spatial analyses sometimes produced assemblages of 20 to 30 houses (Dawson 2001;

Grier and Savelle 1994; Park 1997; McGhee 1984), and 57 in the extreme case of Qariaraqyuk (Whitridge 1999), Labrador Inuit villages tend to be smaller in comparison, and consist of agglomerations of 8 to 22 houses (as far as the sites chosen in this research are concerned). Fewer data means that distributional patterns and trends are less apparent, and may be represented by a single point (dwelling). This is why it was crucial within the context of this research to find other means, such as ethnoarchaeology and linguistic analogies, to make the most of Labrador Inuit coastal settlement analysis.

Some of the more challenging issues included how to bound regions appropriately, given the vagaries of archaeological data and no a priori knowledge of the spatial scale of the original sociocultural landscape (Kantner 2005). This proved especially challenging for the present study, since it had to deal with already existing maps drawn at different scales, and presenting variable amounts of landscape detail. Arbitrarily modifying the already subjective boundary of mapped sites, or deciding upon a fixed boundary for all archaeological sites, would only have accentuated the subjective nature of the data. It was thus decided that each site's entire mapped area would be considered as the calculation window. In this sense, each window represents the area within which points were observed. In some cases, not all houses were represented or accurately positioned on a map, for example at Johaness Point 1. It was decided that for the sake of approximate visual observations, the window would be arbitrarily adjusted. However, since the added coordinates are by no means accurate, spatial analyses were performed on both windows, and all results are considered in this thesis.

The classical techniques for investigating interpoint interaction are distance methods, which are based on measuring distances between points (Bevan and Connolly 2006; Blankholm 1990; Grier and Savelle 1994). For this thesis, it was necessary to choose one that could deal with both of the difficulties described above: a limited number of data, as well as inconsistent boundary definitions. It was thus decided that the best method to use here would be derived from nearest neighbour analysis (henceforth NN), for it can handle point patterns of any size, and estimates spatial correlations between points. NN operates on two (or more) dimensional coordinate data (Blankholm 1990 : 110) and calculates the distance from each item/point to its nearest neighbour. While spatial relationships between houses are sometimes visually obvious, for example structures 1 and 2 at Avertok, they remain uncertain in most cases. As was demonstrated in chapter 3, distances are highly significant when considering Inuit conceptions of space, and can reveal much about the type of relationship existing between dwellings (and thus between their inhabitants).

It is important to mention, at this point, that although it is the most commonly used calculation within NN, the nearest neighbour index/statistic was not employed here (see appendix 1 for detailed formula). First, while it is very useful in the context of artifact scatters to determine whether points of a given distribution are randomly dispersed or not (Blankholm 1990), I believe it to be less so when considering the spatial patterning of Inuit sod houses. Artifacts can be randomly tossed aside, or change location through time due to natural phenomenon (etc), but as described in chapter 3 of this thesis,

ethnographic and linguistic data strongly suggest that Inuit sod houses were built according to various decisional processes. It follows that data points are here considered as dependent upon each other. This being said, the nearest neighbour statistic is also strongly influenced by the size of the studied area, which would have greatly complicated its use due to the above-mentioned reasons.

The exploratory tool favored for the present research is the Stienen diagram, which is obtained by drawing a circle around each point of a given point process, of diameter equal to its nearest neighbour distance. While it does not provide precise calculations or generate quantitative data, it is visually striking and reveals much about a given village's spatial dynamics. A Stienen diagram can be read as follows: the larger the circle, the more isolated the dwelling. One such diagram was plotted for each site. Following this, colours representing the different time periods mentioned in the previous section, were manually assigned to houses, as often as possible. The highlighted patterns thus obtained seem to reflect several interesting and new facets of the sites' histories and of the cultural significance of the spatial distribution of houses.

The second exploratory tool used in this research is based on the empty space distances, also known as the "spherical contact distribution" or the "point-to-nearest-event distribution" (Baddeley 1998, 2008; Baddeley and Gill 1994). The empty space distance method is described as boundary dependent (hampered by the edge effect). This is probably due to the fact that it is usually utilized in biological and ecological contexts featuring hundreds of points (as in Baddeley 1998, 2008; Baddeley and Gill 1994), in

which case the window upon which calculations are executed can only represent a fraction of the whole population. However, in the case of the present research, all observable points are situated within the window. The geometry of the area was thus considered of less importance. Typically used to determine what percentage of a given pattern is empty, by summarizing the sizes of gaps within a pattern (Baddeley and Gill 1994), it is here found quite useful to calculate and most importantly visually accentuate the extent to which Inuit sod houses share a spatial relationship. The empty space function calculates the distances from each location in the window to the nearest point of the data pattern (Baddeley 1998, 2008; Baddeley and Gill 1994). The resulting diagram consists in a pixel image, whose pixel values are the empty space distances to the pattern X measured from every pixel (Baddeley 2008 :102).

The aforementioned methods present another advantage within the context of this thesis. Because they do not require calculations of mean distances, and mostly constitute ways of visualizing spatial information, they allow outlier houses to be integrated into the calculations. In statistics such as stratified samples, an outlier is an observation that is numerically distant from the rest of the data. Statistics derived from data sets that include outliers will often be misleading, and outliers are often therefore eliminated from the studied samples (Moore 1999), as was the case in the work of Grier and Savelle, 1994. However, outliers may be indicative of data points that belong to a different kind of population than the rest of the sample set, and ought to be investigated (Moore 1999; Renze 2008). Observing the spatial distribution of outlier houses within Inuit villages

allows us to propose several hypotheses regarding their significance, as well as establish a sort of "scale" or progression of certain houses towards "outlierness".

Both methods described above were realized using the statistical package R, free software with an open-source licence. It is a commonly used and easy to understand statistical package, for which reference material is readily available, mostly online. R features many libraries/packages, amongst which *spatstat* was selected for this research. *Spatstat* was designed and written by Adrian Baddeley and Rolf Turner, specifically for analyzing spatial data. Current versions of *spatstat* deal mainly with spatial point patterns in two dimensions. The package supports the creation, manipulation and plotting of point patterns, exploratory data analysis, the simulation of point process models, and parametric model-fitting, as well as hypothesis tests, residual plots, and diagnostics (Baddeley 2008 : 19).

Chapter 5 Data Analysis: Observations on the Spatial Patterning of houses

The major objectives of this thesis were to first to determine if there are quantifiable trends in the different internal spatial arrangements observed on Labrador Inuit archaeological sites, which contain sod houses ranging from precontact Inuit to historic or modern Inuit. Second, it aimed at exploring possible cultural phenomena that may have influenced the processes from which the different observable spatial arrangements originate. And third, the question of outlier houses was to be addressed, and potential cultural explanations for their existence examined. The purpose of this chapter is

to present the results of observations and spatial analyses carried out on all nine archaeological sites listed in chapter 4.

The key to data analysis certainly lies in the methods employed, but also in the way such particular data is visually represented. As mentioned in chapter 4, the Stienen diagram and the Empty space distance diagram were found particularly interesting in this regard. In order to detect general patterns and trends in the spatial arrangement of Labrador Inuit coastal sites, each house's nearest neighbour (NN) distance was recorded (for a total of 142 houses). A typical "clouds of points" graphic was produced (Figure 9), and proportions were shown in a classic bar graphic (Figure 10). Several interesting phenomena can be observed. First, we can see that the most common (46 sod houses) NN distances are situated between 3.1m and 6.2m followed by 6.2m to 9.3m (34 sod houses) (Figure 10). Second, NN distances tend to increase from southern to northern locations: more precisely, while distances below 12.5m keep remain consistent throughout all sites, distances above 18m drastically increase starting at Iglosiatik (Ig). Third, it can be noticed that both graphics are bimodal: the first (Figure 9) in its latitudinal gradient (from North to South), and the second (Figure 10) in house spacing. These patterns are interesting and significant. In the case of Figure 9, the bimodal distribution observed on the graphic is created by 5 sites, for which house distribution range between 3m and 48m. Among these, 4 are situated in Northernmost Regions (Hebron, Saglek, Komaktorvik Bay and Killinek), and one in central Labrador (Nain). Furthermore, these sites comprise houses with the wider range of dates (i.e. they have been inhabited repeatedly over longer periods

of time. It appears that northernost locations have been favoured for settling from the 15th to the early 20th century. Such contingency resulted in more complex spatial distributions, and there is no doubt that cultural perceptions of space, time and otherness were highly stimulated in these areas. This will be further discussed in Chapter 6. In the case of Figure 10, the bimodal distribution reflects an emphasis on two sets of distances used in order to deal with socio-spatial relations. First, the most frequent distances are between 0 and 9m. These tend to express some degree of socio-spatial relation. The second mode represents distances which tend to express less socio-spatial acknowledgement, which range between 12m and 20m. Such gradation is discussed further in Chapter 6.

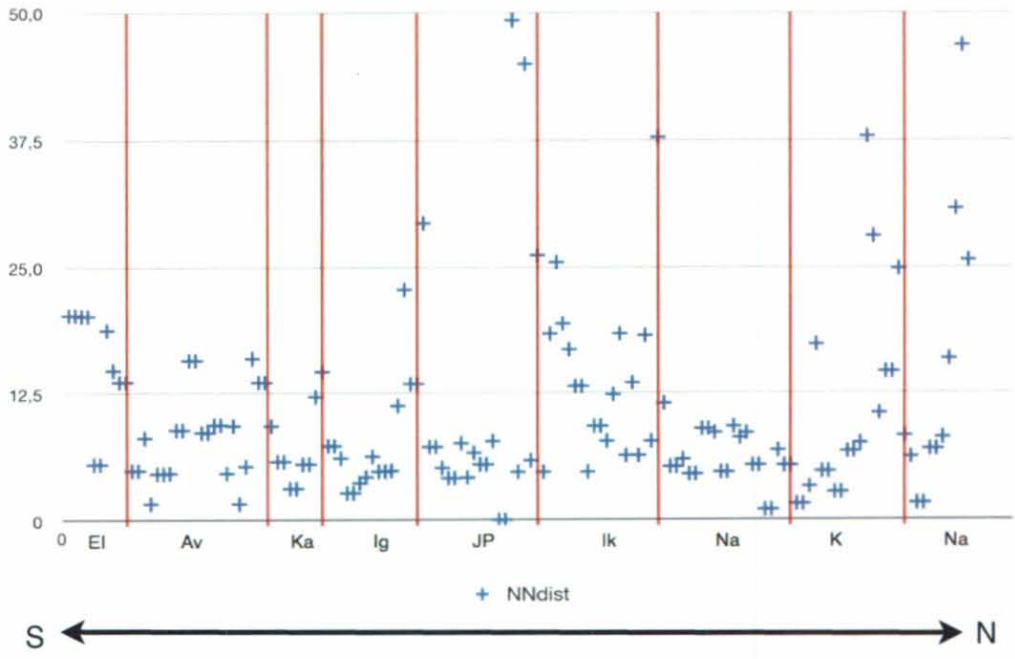
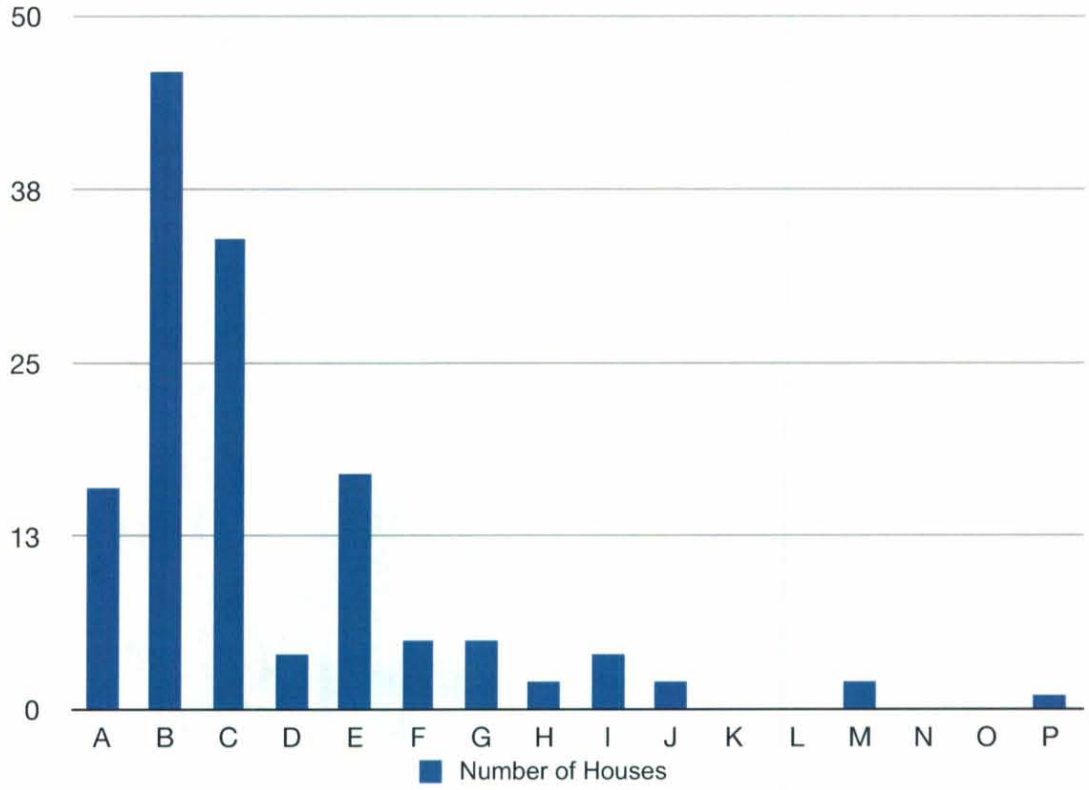


Figure 9. Distance from each house to its nearest neighbour



A	0 - 3.1m	E	12.5 - 15.6m	I	25 - 28.1m	N	37.5 - 40.6m
B	3.2 - 6.2m	F	15.8 - 18.7m	J	28.2 - 31.2m	M	40.7 - 43.7m
C	6.3 - 9.4m	G	18.8 - 21.9m	K	31.3 - 34.4m	O	43.8 - 46.9m
D	9.5 - 12.5m	H	22 - 24.9m	L	34.4 - 37.4m	P	47 - 50m

Figure 10. Number of Houses per Nearest Neighbour Distances

5.1 Eskimo Island 1, 2 and 3 (GaBp-1-2-3)

All three Eskimo Island sites are situated on a small island in Hamilton Inlet. The fact that they have been assigned distinct site names is the result of an arbitrary decision made by Fitzhugh in 1968 (Kaplan 1983:410). Eskimo Island 1, 2 and 3 are situated 50 meters apart, on the same terrace, near the same shore. Here, they were treated as a single site featuring three different house groups.

Eskimo Island 1, 2 and 3 thus feature a total of 10 sod houses, respectively (and approximately) dated to the early 18th century, late 18th to 19th century, and late 16th to early 17th century (Figure 11). All entrance tunnels face south, which is congruent with the fact that most Inuit houses all across the Canadian Arctic are oriented south or southeast due to prevailing North and Northwest winter winds. The presence of 30 documented burial structures on the island supports the assertion that the island, over time, sustained a fairly large population.

The Eskimo Island sites Stienen diagrams (Figure 12) seem to indicate a time-related preferential choice for settlement location, which may be interpreted as three different waves of occupation - 16th and 17th century, 18th century, and late 18th to early 19th century. Both Stienen diagrams and Empty space distance diagram (Figure 12*)* illustrate the various degrees of spatial relationship between houses.

5.1.1 Eskimo Island 3

The houses documented at Eskimo Island 3 (EI3) are considered to be the oldest structures on the island. The recovery of iron and Basque artefacts combined with

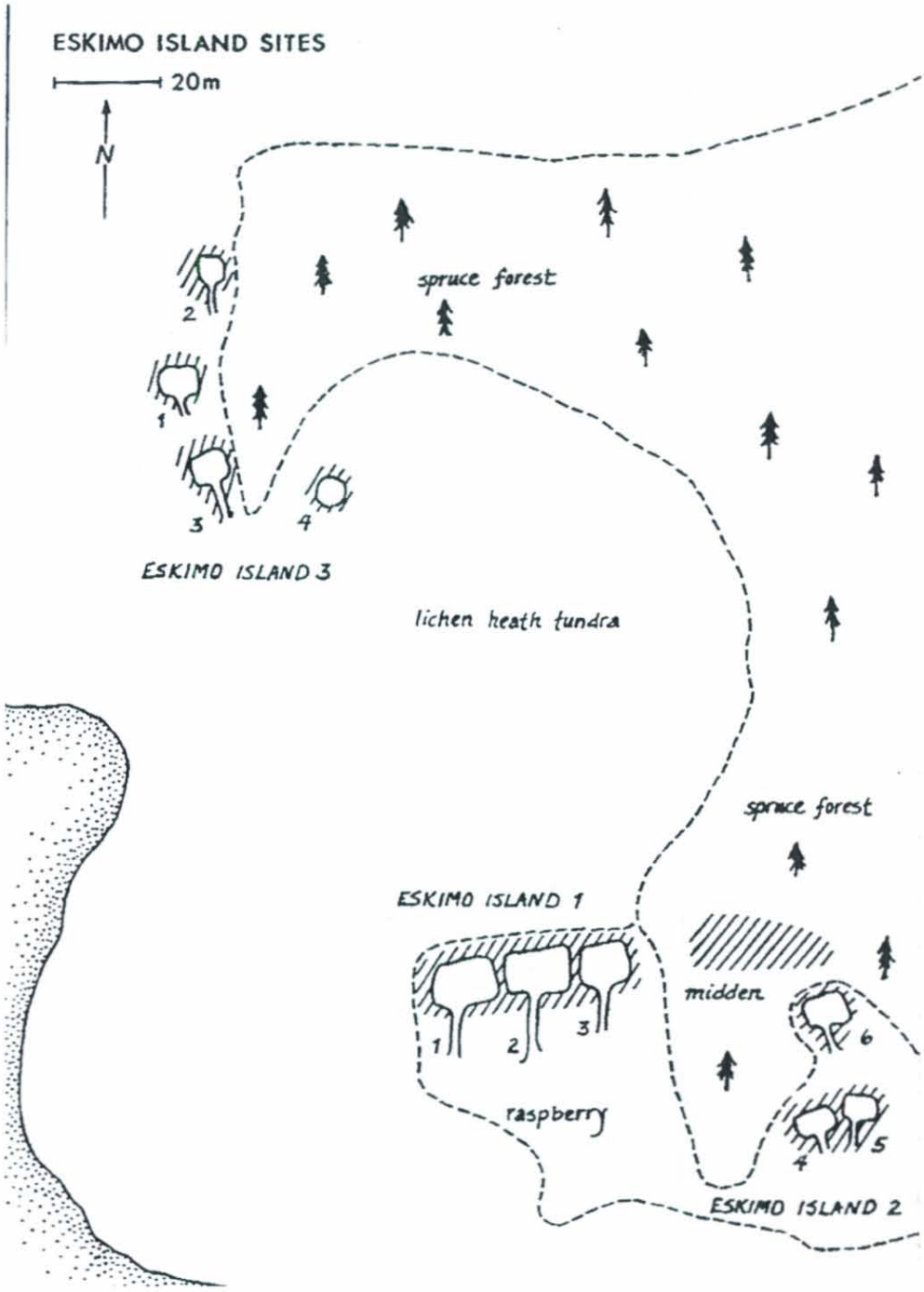


Figure 11. Map of Eskimo Island Sites
(Kaplan 1983:412)

house shape and sizes links these houses to the early contact period (late 16th to early 17th century). The chronology of Eskimo Island 3 houses is not established, but due to the fact that it is the least distinct structure, house 4 is considered to be the earliest. However, it may also have simply been the most briefly occupied. Houses 1, 2, 3 and 4 cannot be considered as spatially integrated, although they are temporally related to one another. It is only when analyzed as a component of the larger site composed of Eskimo Island 1, 2 and 3, that houses 1,2,3 and 4 of EI3 can be viewed as spatially related, and form a cluster.

From the map and both the Stienen diagram and the Empty space distance diagram produced for EI3, it can be observed that houses 1, 2 and 3 are evenly positioned in a line, one house behind the other. House 4, described as a shallow depression, is located outside of that line (20m west). Interestingly, it is also apparent that an almost systematic spacing of 20m separates the houses.

As mentioned above, and as can be seen in Figure 9, 20m NN distances are not that recurrent, and one might wonder whether they are "near neighbours" at all.

5.1.2 Eskimo Island 2

The Eskimo Island 2 site is composed of three houses that have been dated to the 18th century (Kaplan 1983: 415-419). The three structures are architecturally similar, although house 6 is smaller, and their interiors have been divided to create two distinct rooms (Kaplan 1983: 415). Houses 4 and 5 stand 5.48m apart from each other and are mutual nearest neighbours. The two houses' entrance tunnels converge. Houses 4, 5

and 6 visually constitute a cluster if all three Eskimo Island sites are considered together. Within this cluster, however, the smaller structure named house 6 can be considered a spatial outlier. As illustrated in the Stienen diagram and Empty space diagram, it lies 18.72m behind house 5 (its nearest neighbour), a position suggesting a discontinuity in the spatial relations between the three structures.

On the one hand, architectural similarities, their clustered appearance, and their approximate dating argue for a connection between houses 4, 5 and 6 of EI2. On the other hand, both houses 4 and 5 are far enough apart from house 6 not to be considered "in spatial relation".

5.1.3 Eskimo Island 1

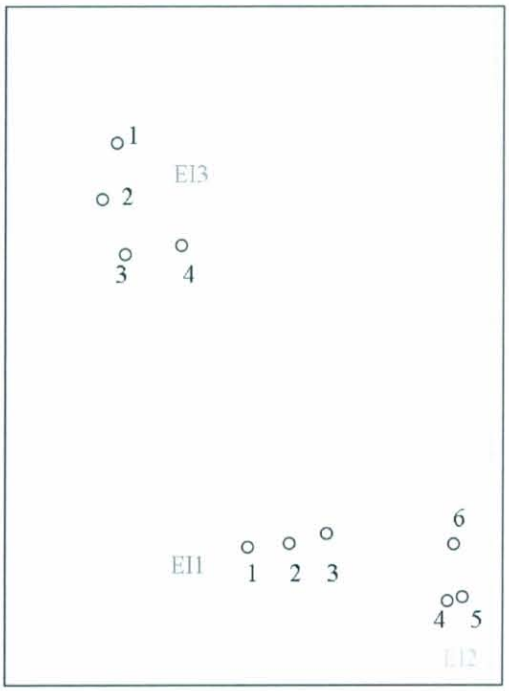
Eskimo Island 1 (EI1) is the most recent sod houses settlement on Eskimo Island, and dates to the late 18th or early 19th century. Houses 1, 2 and 3 are separated by distances of 13 to 14m, which considering that the houses are 12 m long, is about the closest they can be to each other.

5.2 Avertok 1 (GiCh-1)

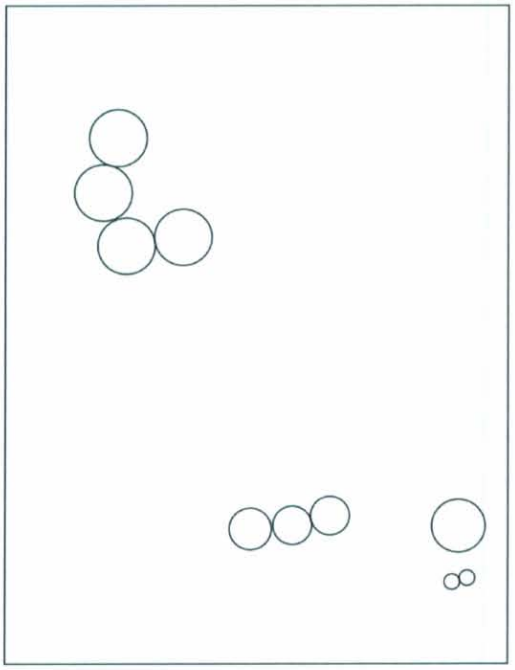
Avertok 1 or "place of the whales" in Inuktitut (Figure 13), is situated in the Hopedale area, and was extensively occupied between the early 17th century and the late 18th or early 19th century (Kaplan 1983: 445). Avertok is known as a great location for whaling, and records recount a number of whales spotted, killed or found dead between 1776 and 1781 (Taylor 1974:32). However, Jens Haven, upon visiting in 1773,

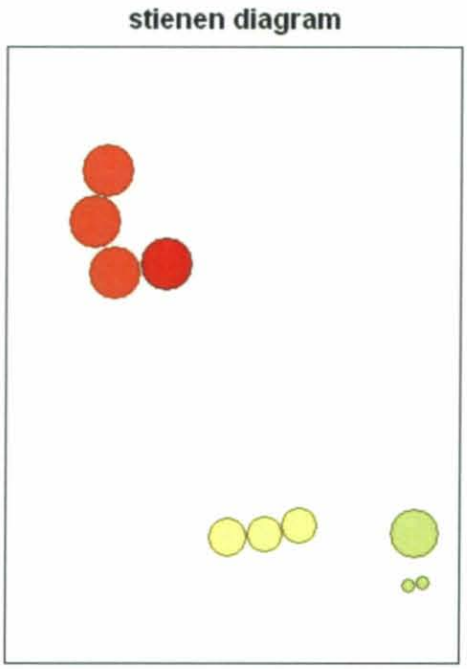
Figure 12. Eskimo Island (GaBp-1-2-3). A) Simple plot of site's residential structures B) Stienen diagram C) Stienen diagram with colours showing approximate datation of houses D) Empty space distance diagram.

A)

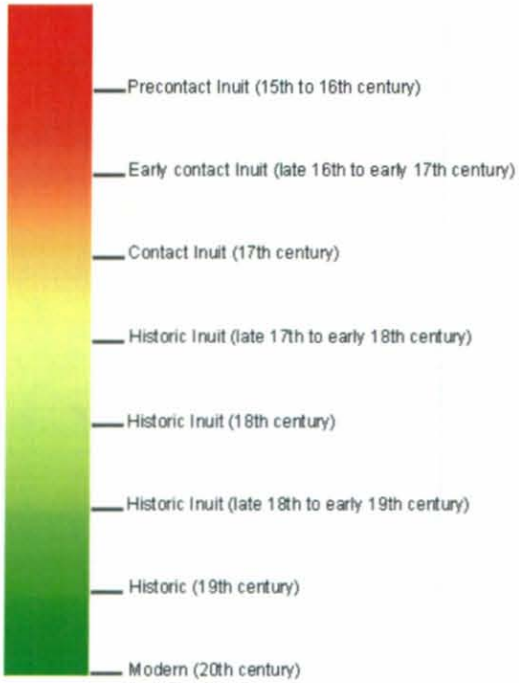


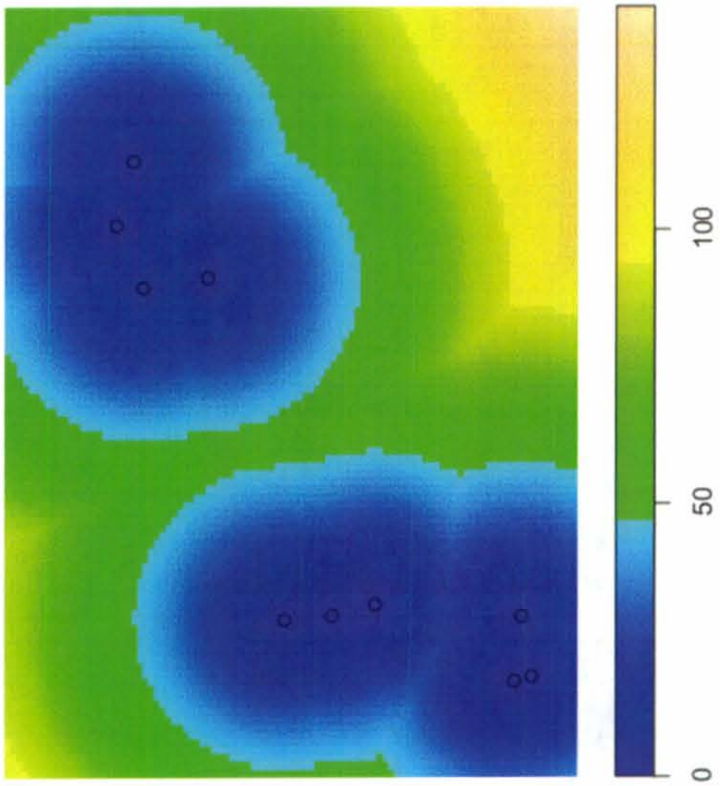
B)




stienen diagram

C)


Precontact Inuit (15th to 16th century)
Early contact Inuit (late 16th to early 17th century)
Contact Inuit (17th century)
Historic Inuit (late 17th to early 18th century)
Historic Inuit (18th century)
Historic Inuit (late 18th to early 19th century)
Historic (19th century)
Modern (20th century)



D)

recorded that the Inuit now no longer hunted for large sea mammals. Instead, they found it more profitable to act as middlemen in the exchange of goods between the European communities situated to the south and the Inuit populations living in northern locations (Kaplan 1983: 449). Perhaps this observation from Haven reflects a will to describe the Avertok area as exempt from profane traditional Inuit behaviours (such as whale hunting) as Moravians would have wished it to be. In 1782, Avertok became a Moravian settlement.

The Stienen diagram and Empty space distance diagram produced from the Avertok 1data illustrates several interesting spatial phenomena (Figure 14). First, with the exception of the southernmost cluster composed of structures 3,4, and 16 to 18, *illuit* are grouped in pairs. The later group of houses NN distances are 1.63m (house 4 to 17), 5.3m (house 18 to 4), and 9.3m (house 17 to 3). Second, the farther they are from the beach, the farther apart house are built from one another, even though they are still grouped by two. Whereas below the 3m terrace they are separated by an average of 4.7m, above this line, nearest neighbours range from 8.1m to 15.7m. It is important to note that this increasing distance surely is influenced by the fact that houses also become larger, thus their entrance tunnels stand farther from one another. Third, pairs and clusters of houses are spatially distant from each other. An average of 15.8m separates houses 5 and 6 from houses 7 and 15, 25.9m between house group 7 and 15 and houses 1 and 2, and 41.8m separates houses 5 and 6 from houses 1 and 2. Fourth, the Stienen diagram and Empty space distance diagram show that houses 9 and 10 are visual outliers. They are more

closely related to one another than to anv other structure at Avertok 1, and have been built 15.8m away from each other. Finally, the group composed of houses 19, 20 and 21, the most recent structures, were clearly built apart from other dwellings at the site.

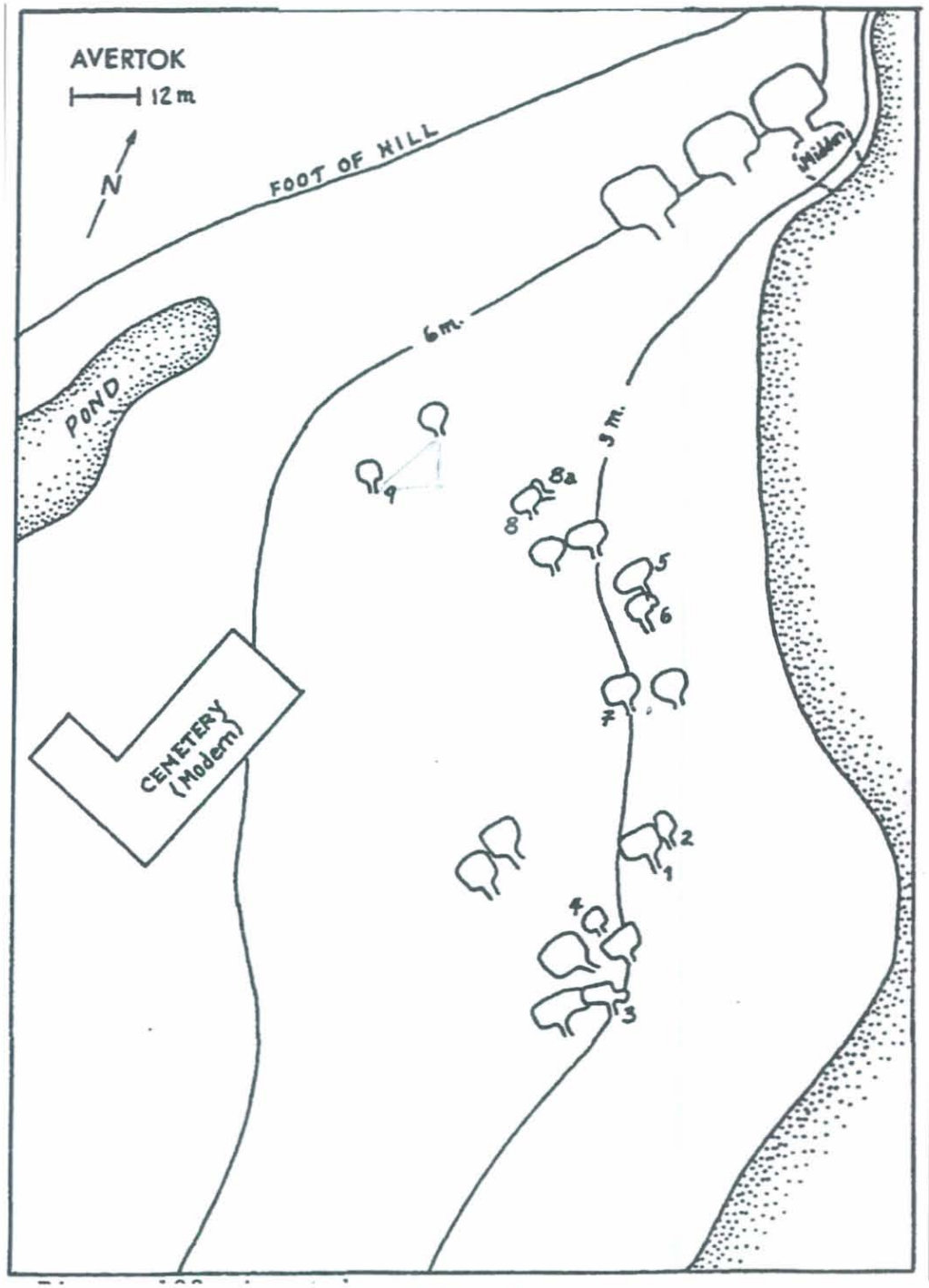
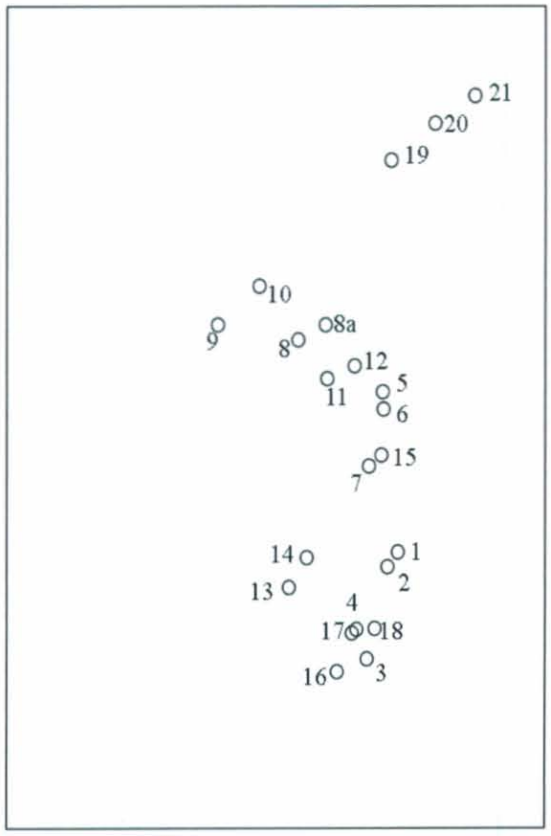
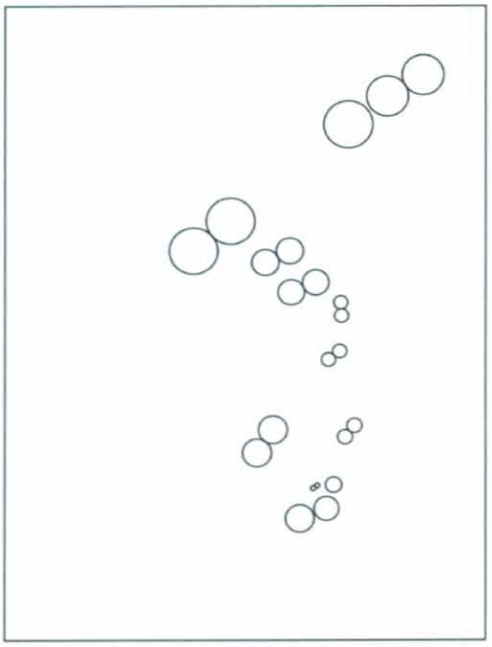


Figure 13. Map of Avertok 1
(Kaplan 1983:446)

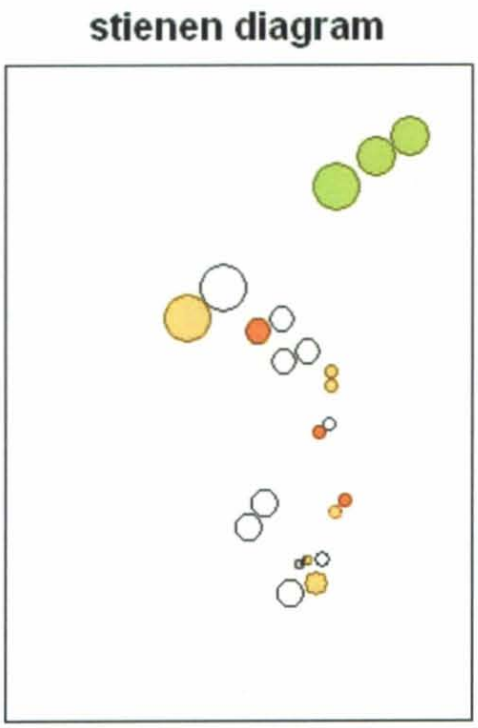
Figure 14. Avertok 1 (GiCh-1). A) Simple plot of site's residential structures B) Stienen diagram C) Stienen diagram with colours showing approximate datation of houses D) Empty space distance diagram.



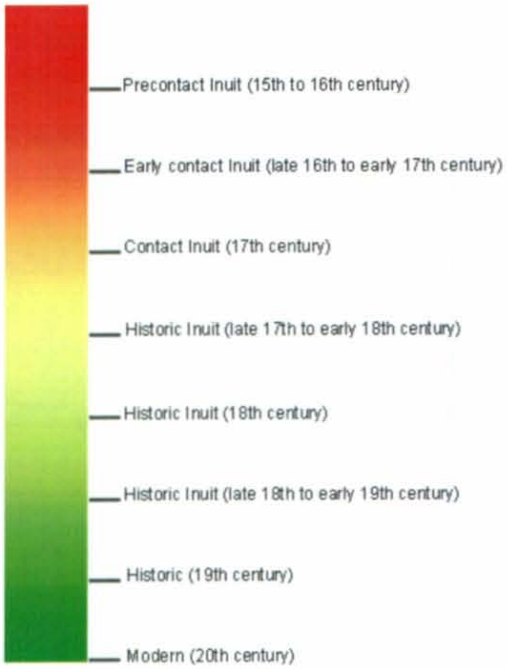
A)



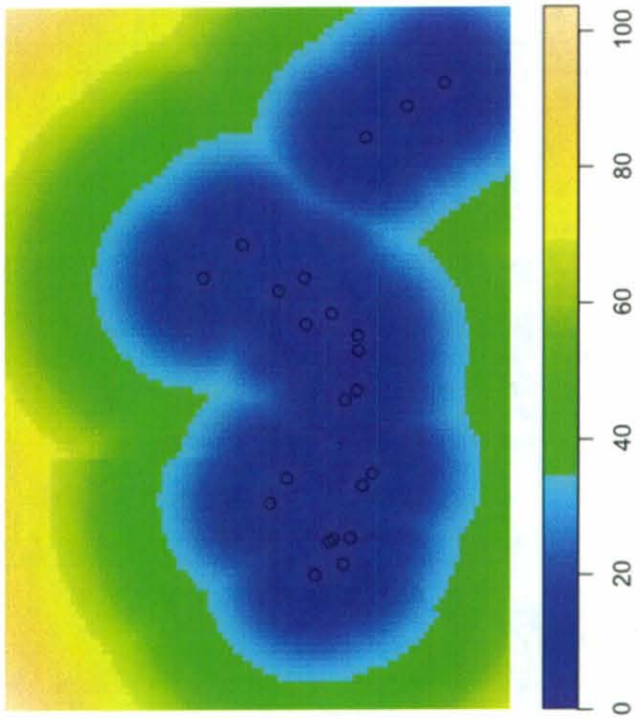
B)


stienen diagram

C)


Precontact Inuit (15th to 16th century)
Early contact Inuit (late 16th to early 17th century)
Contact Inuit (17th century)
Historic Inuit (late 17th to early 18th century)
Historic Inuit (18th century)
Historic Inuit (late 18th to early 19th century)
Historic (19th century)
Modern (20th century)

D)



5.3 Karmakulluk (GjCb-6)

Karmakulluk means "Place of low walls of old houses", a name which indicates that at some point, a newly arriving population found ruins when they settled there (Bird 1945: 163). It is possible, seeing that the name comprises the word "karmak", that these ruins were understood as past *qarmat*, a type of dwelling with sod walls and a light skin roof, usually occupied during spring or autumn. Situated in the Hopedale area, Karmakulluk site 4 is interpreted as a whaling site (Bird 1945: 163-171), and consists of 8 sod houses, dated from the early 16th century to the mid 18th century (Figure 15). These are divided in two distinct groups, of which houses 2, 5 and 8 are considered to be the oldest structures. In both groups, houses are laid out in a generally linear way, with the exception of house 8. House 8 could be qualified as an outlier. It stands at the back of other structures (14.7m behind house 7), its entrance tunnel facing an opposite way (south), and is thought to be the oldest structure and the site. Interestingly, within each group there are earlier and later components. Furthermore, both groups feature dwellings architecturally associated with the same period (*Ibid*), such as houses 1, 3, 6 and 7 (elongated rectangular structures), or houses 2 and 5 (bilobate structures).

In terms of spatial measurements (Figure 16), a distance of 38m separates the two groups of houses. Within houses 1 to 4b group, the greatest nearest neighbour distance is 9.3m (house 1 to house 4b) and the smallest is 3.1m (house 4a to house 4b). While a distance of 5.5m separates houses 5 and 6, houses 7 and 8 NN distances are respectively 12.2m and 14.7m.

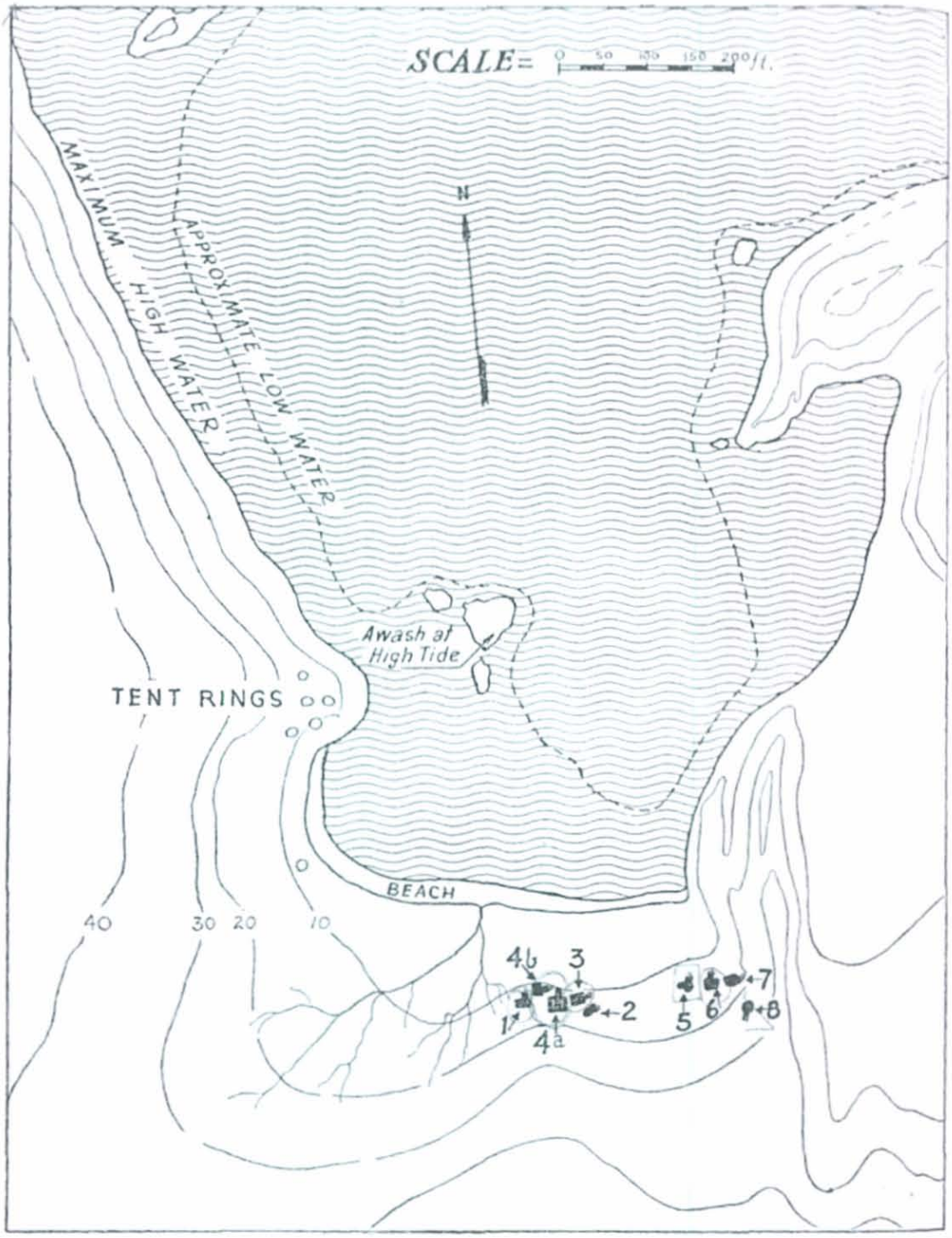
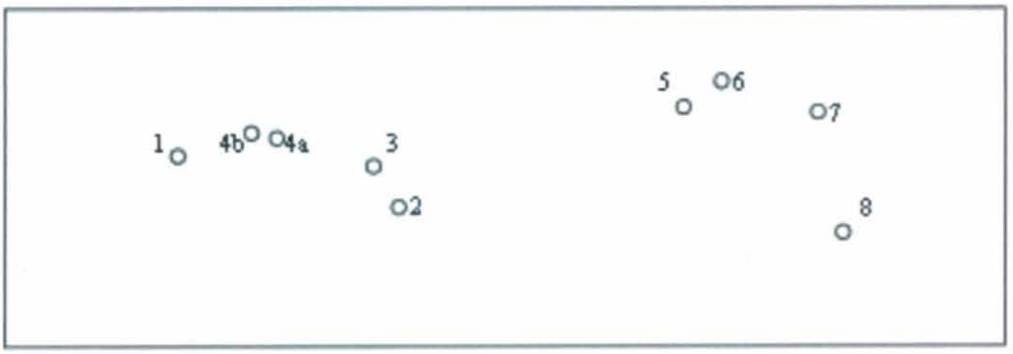


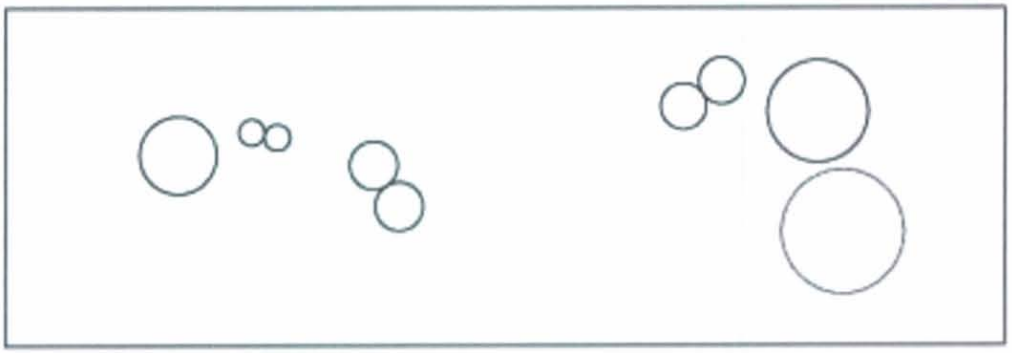
Figure 15. Map of Karmakulluk
(Kaplan 1983:446)

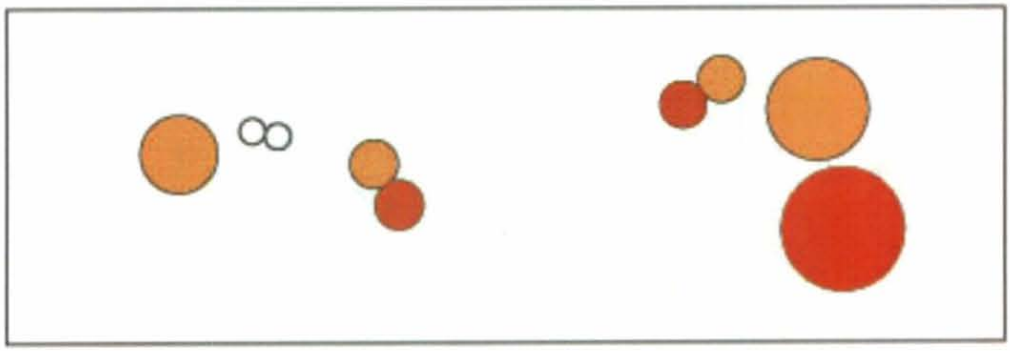
Figure 16. Karmakulluk (GjCb-06) A) Simple plot of site's residential structures B) Stienen diagram C) Stienen diagram with colours showing approximate datation of houses D) Empty space diagram.

A)

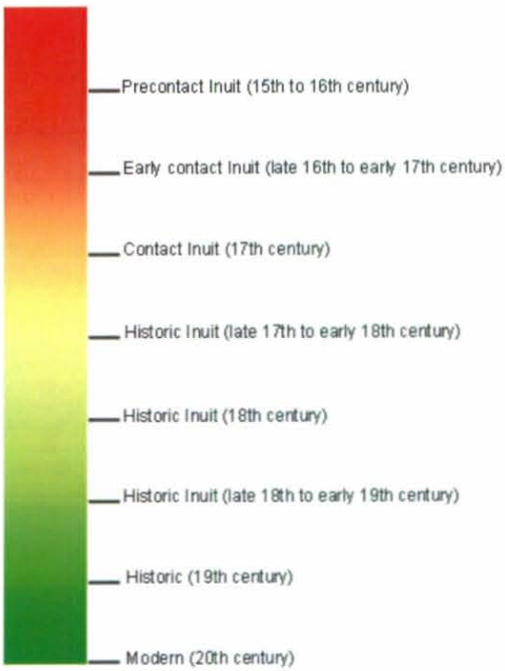


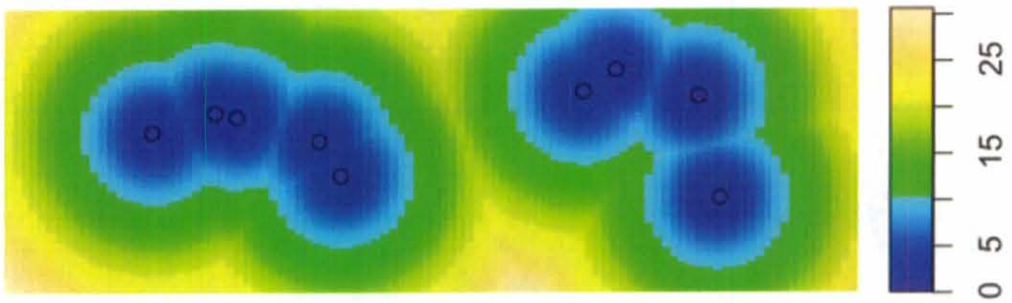
B)





C)


Precontact Inuit (15th to 16th century)
Early contact Inuit (late 16th to early 17th century)
Contact Inuit (17th century)
Historic Inuit (late 17th to early 18th century)
Historic Inuit (18th century)
Historic Inuit (late 18th to early 19th century)
Historic (19th century)
Modern (20th century)



D)

5.4 Iglosiatik 1 (HbCh-1)

Iglosiatik 1 (Figure 17) is located on Iglosiatik Island, in the Nain area, east of Voisey's Bay, and is precontact (16th century) to 19th century in age (Peter Whitridge, personal communications 2010). Judging from house shapes, sizes and the disturbance of some structures Kaplan (1983: 462) described Iglosiatik as having had many phases of occupation. In the summer of 2007, Whitridge and his crew spent a 10 day period excavating at Iglosiatik. Test pits were placed in front of houses 8, 9, and 16, as well as between houses 10 and 11.

Iglosiatik presents one of the clearest linear spatial arrangements along the coast: houses were built along a terrace, in a row oriented east-west. Both the Stienen diagram and Empty space distance diagram (Figure 18) reveal that the western portion of the site, from house 1 to 11, is spatially connected: NN distances range from 2.66m to 7.29m. House 12, while still part of the row, was built a little further apart (11.3m). House 13 stands behind the main row (22.8m from house 11) and could be considered as an outlier, as well as houses 14, 15 and 16, which are respectively separated from the rest of the settlement by 45.4m, 58.9m and 70.8m.

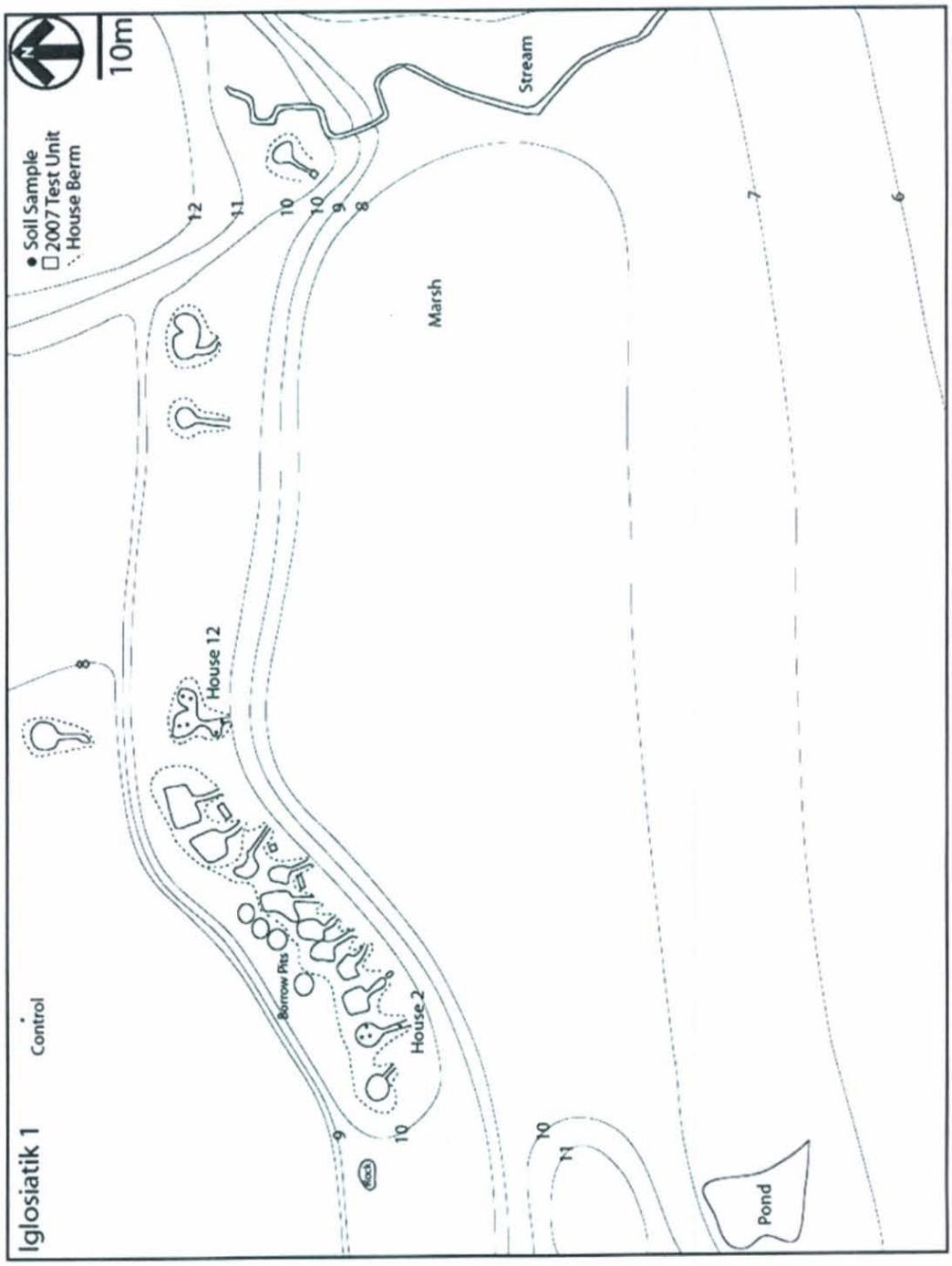
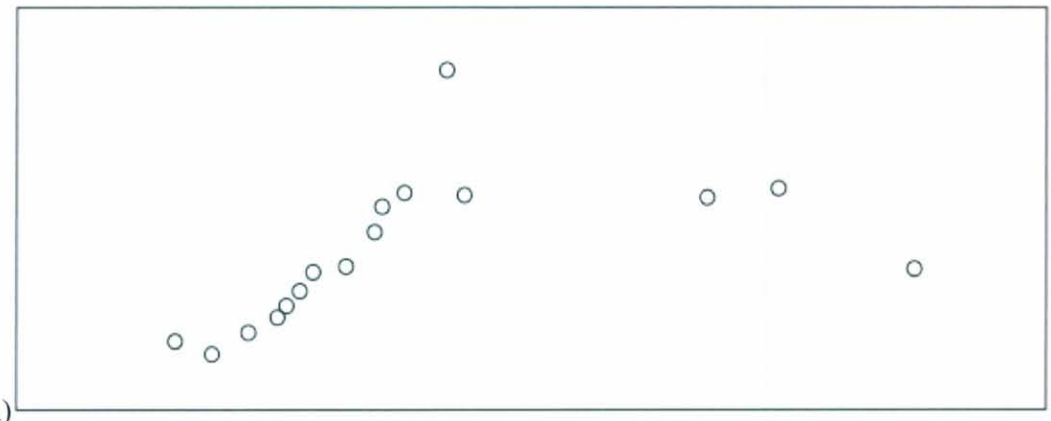


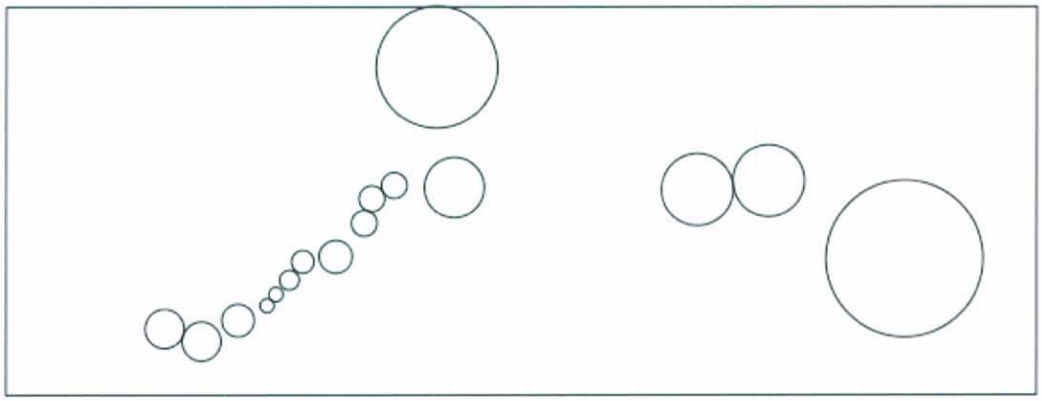
Figure 17. Map of Iglosiatik 1 (HbCh-1)
(Couresy of Dr Peter Whitridge, 2007)

Figure 18. Iglosiatik 1 (HbCh-01) A) Simple plot of site's residential structures B) Stienen diagram C) Stienen diagram with colours showing approximate datation of houses D) Empty space diagram.

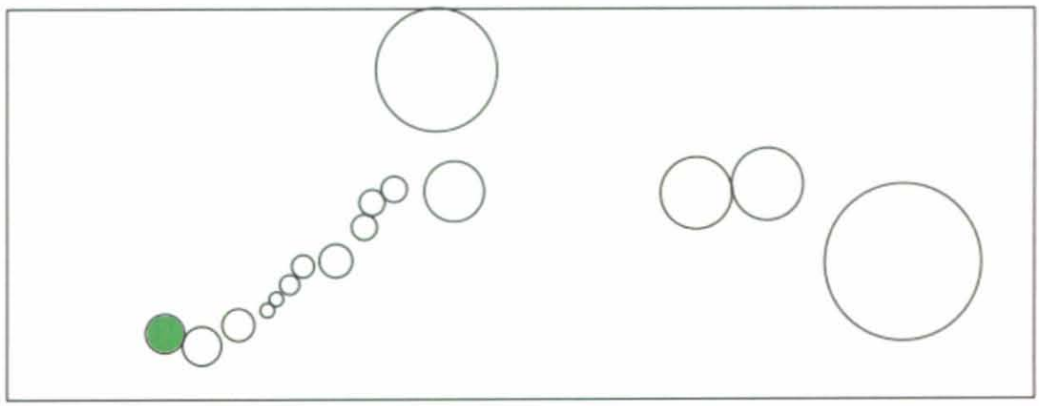
A)

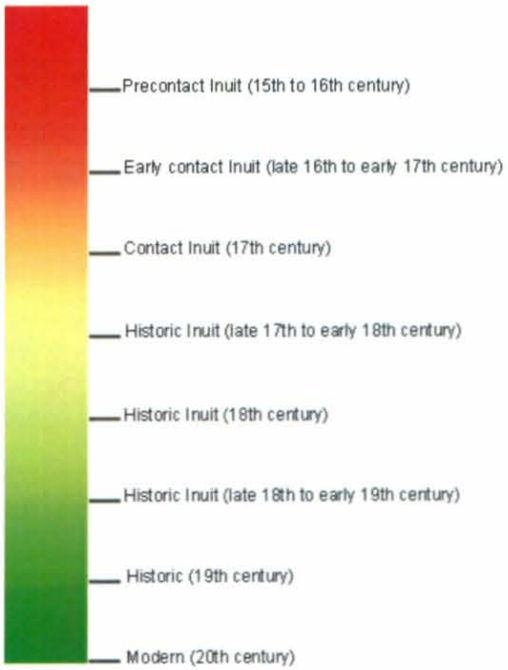


B)

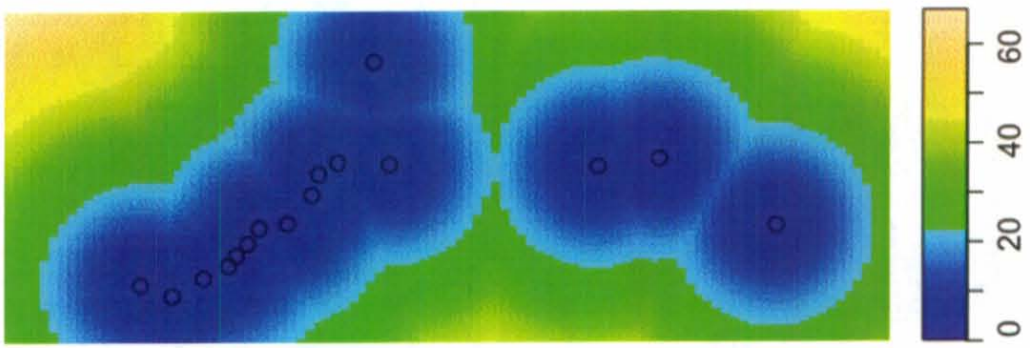


C)




Precontact Inuit (15th to 16th century)
Early contact Inuit (late 16th to early 17th century)
Contact Inuit (17th century)
Historic Inuit (late 17th to early 18th century)
Historic Inuit (18th century)
Historic Inuit (late 18th to early 19th century)
Historic (19th century)
Modern (20th century)

D)



5.5. Johaness Point 1 (IbCq-1)

Situated in the Hebron region, Johaness Point 1 features 18 sod houses (Figure 19), which have been dated to the precontact and protohistoric (15th-16th century), contact (17th century), historic (late 17th to early 19th century), and the modern (late 19th to early 20th century) periods. The site presents a very complex occupational history. Almost all houses exhibit signs of reuse, from precontact to early 20th century. Johaness Point 1 is known for its long whale hunting tradition, which is reflected in the ubiquity of whale bones in structures throughout the site.

When considering only the houses that were actually mapped by Kaplan (houses 1 to 12, and houses 16 and 18), Johaness point 1 exhibits relative homogeneity. Houses are divided into 2 groups separated by 12.5m, within which they are almost evenly dispersed in space (NN vary between 4.1m and 7.6m). The only exception is house 12, which was built directly on top of an older, yet still apparent structure, and stands 7.8m from house 11. However, if houses 13, 14, 15 and 17 are plotted on the map (approximate coordinates reported by Kaplan), the site's history becomes more complex, and outliers appear. In order to visualize this information, two different graphics were produced (Figure 20).

Houses 8 and 9 were built on top of other structures, indicating that this portion of the site was used for a long period of time (the precise length of which is hard to determine because structures were not dated, but it is reasonable to suggest the early contact period). Both structures share a wall, and because house 8 cuts into house 9, it can be assumed that it was built after the latter. House 8's entrance passage is oriented

towards the east, while all other houses at the site face south. House 18's place within this group is uncertain. Kaplan describes it as a structure, but since it is only a very shallow depression, which was not tested, it is hard to determine its exact significance.

Houses 4 and 5 have been identified by Kaplan as two houses which were at some point joined together through the destruction of the intervening wall (Kaplan 1983: 582), while retaining their distinct entrance passages. Kaplan suggests that houses 1, 12, and 13 may have been occupied at the same time, because the same type of beads was found in all three structures. These houses were built at an average of 57.7m from each other, and along different beaches (house 13 is the farthest from the shore). House 17, dated to the late 19th to early 20th century, is one of the most extreme outliers of all Labrador Inuit coastal sites studied here (Figure 10), and was built approximately 70m from house 1, its NN.

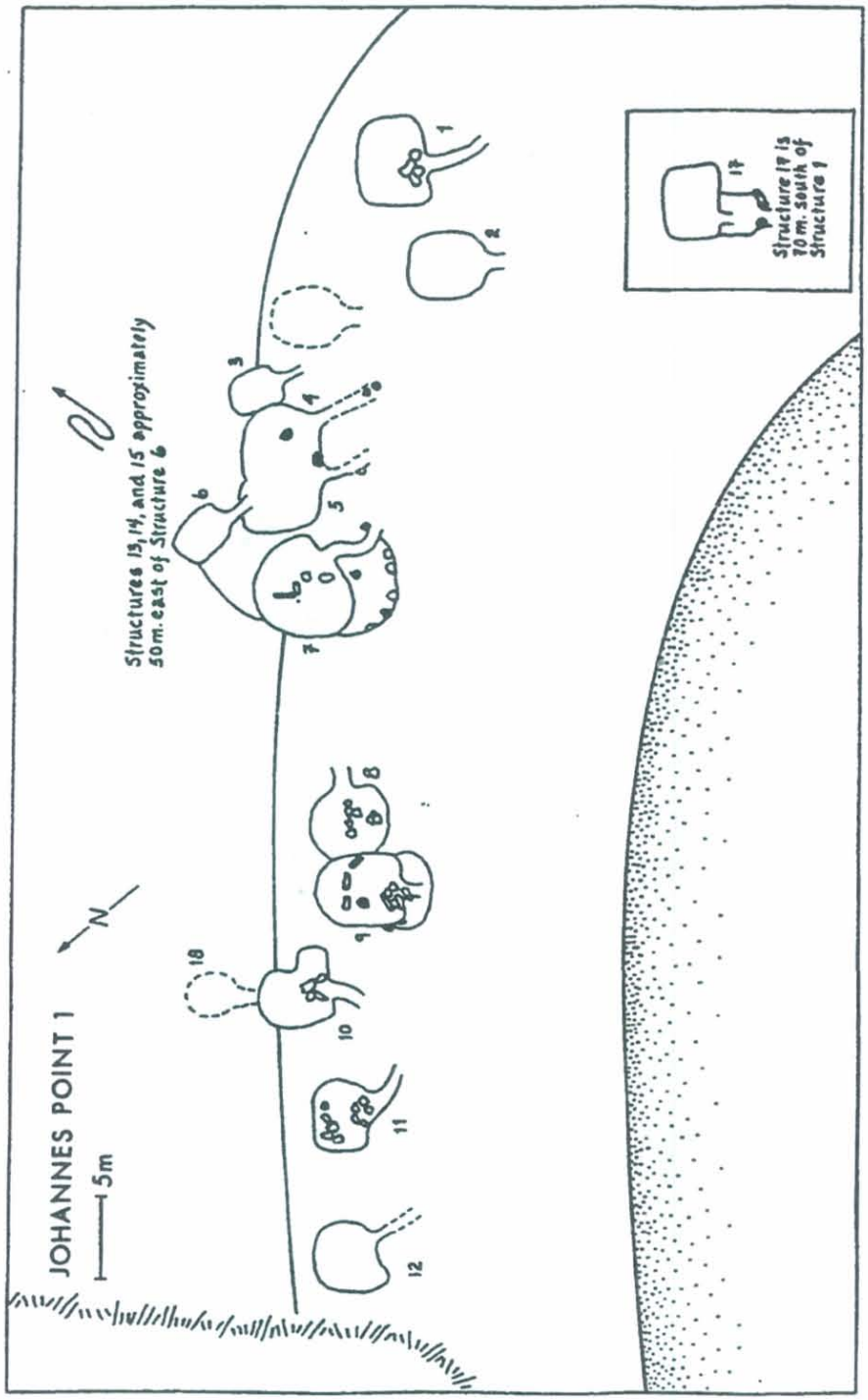
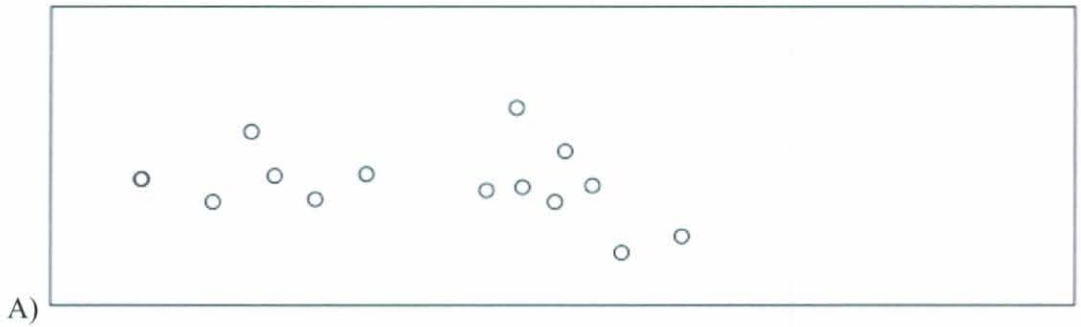
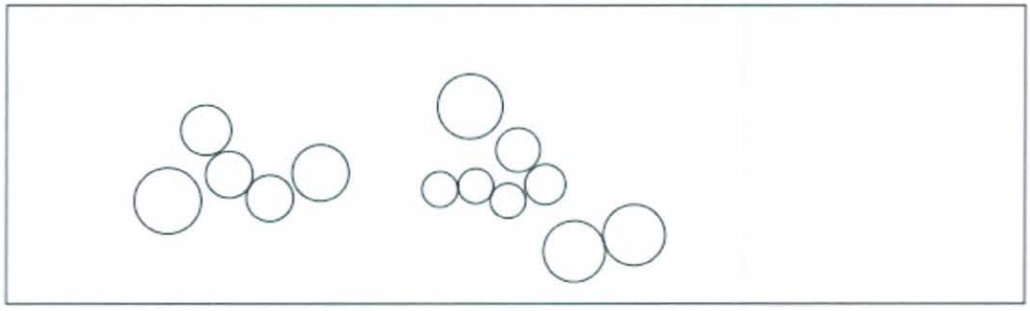


Figure 19. Map of Johaness Point 1 (IbCq-1)
(Kaplan 1983:577)

Figure 20. Johaness Point 1(IbCq-1) A) Simple plot of site's residential structures B) Stienen diagram C) Stienen diagram with colours showing approximate datation of houses D) Stienen diagram incorporating fictional coordinates for houses 13 to 17 E) Empty space distance diagram F) Empty space distance diagram incorporating fictional coordinates for houses 13 to 17

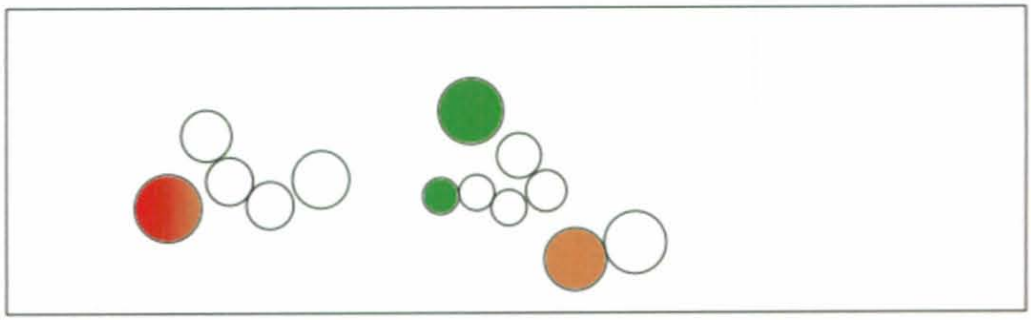


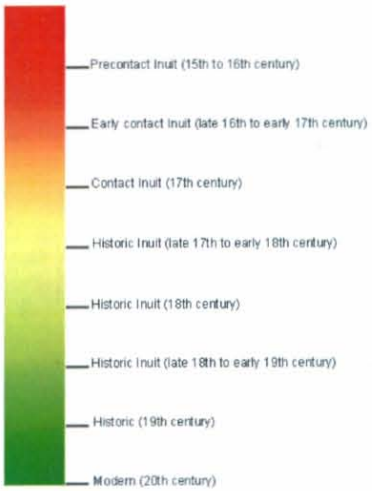
A)



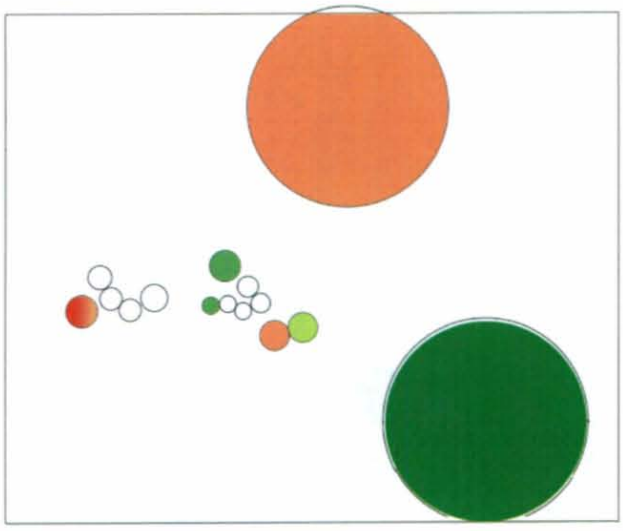
B)

C)

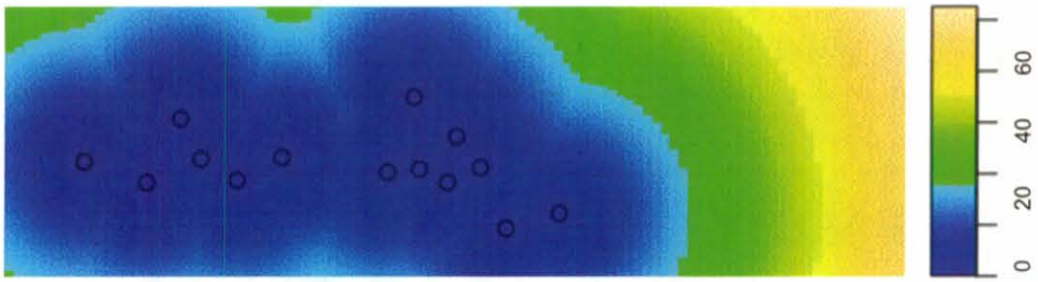



Precontact Inuit (15th to 16th century)
Early contact Inuit (late 16th to early 17th century)
Contact Inuit (17th century)
Historic Inuit (late 17th to early 18th century)
Historic Inuit (18th century)
Historic Inuit (late 18th to early 19th century)
Historic (19th century)
Modern (20th century)

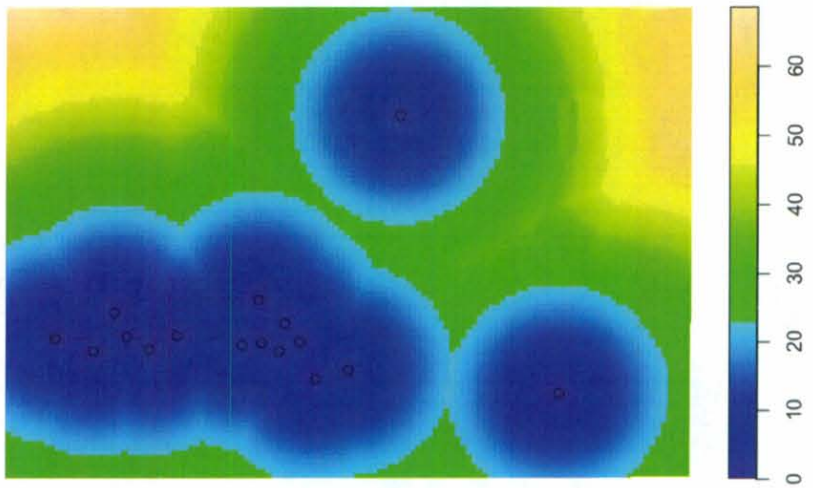
D)



E)



F)



5.6. Ikkusik (IdCr-2)

Situated on the southeast shore of Rose Island, Saglek Bay, Ikkusik (Figure 21) features twenty distinct sod houses that have been dated to the precontact, historic and late historic periods (Schlederman 1971). The quantity of whale bones and baleen recovered on site tends to indicate that the precontact population of Ikkusik was hunting bowhead whales (Schledermann 1971). The site of Tuglavina, situated on the southwest shore of Rose Island, is considered as the later settlement of the group, its population having shifted there during the late 18th and 19th century. The idea that the Ikkusik and Tuglavina sites' occupations were extensive is supported by the presence of 109 burial structures on the island (Schledermann 1971; Way 1978).

Schledermann's site map illustrates three distinct groups of houses: houses 2 and 7 to 10; houses 12, and 21 to 23; and houses 5, 6, and 17 to 19. They are spatially distinct, and further united by the sod mound they share. In addition, five isolated structures can be observed, namely houses 1, 3, 4, 15, and 16. The Stienen diagram and Empty space distance diagram produced for Ikkusik reveal different focal points within the site, some of which are different than the apparent clusters represented on the map. It appears that Ikkusik' site history is complex.

Both the Stienen diagram and the Empty space distance diagram (Figure 22) divide the site area into three sections that correspond to those illustrated on the site map. However, due to the varying range of NN distances, they cannot be called clusters. Each area features houses of the precontact and historic Inuit periods, and each area is separated from the other by at least 36.58m (from house 4 to 5). Within agglomerations,

certain dwellings are spatially closer. Houses 5 and 6 from the central area were built directly on top of houses 17 and 18. It is important to note that in the case of houses 17 and 19, their apparent spatial relation is due to the fact that, since the location of the *paa* cannot be determined, the center point of house 17 was used for calculations. Houses 17 and 19 thus seem closer on the diagrams then they are in reality.

The area situated to the right on the Stienen diagram and the Empty space distance diagram is composed of houses 2, 7 to 12, 15, and 21 to 23. Among these, houses 2 and 9 are united by a NN distance of 4.7m and based on their shapes and sizes are both associated to the early communal house period. House 10 was formally documented and associated with the late communal house period. However, it does not share the same mound as houses 2, 7 to 9, and 11, and is built slightly at the back. The Stienen diagram and Empty space distance diagram associate houses 12, 21-22 (actually a two room dwelling), and 23 with this "grouped" area at the east of the site. The site map shows them to be more like an independent cluster. House 12 is situated 21.3m from house 8. House 21-22, associated with the precontact period, was built over house 23, and house 12 was built on top of both of the other two.

The third area situated to the west (left in Figure 23 A-B-C-D), is composed of houses 1, 3, 4 and 16, for which NN distances vary between 18.4m and 26.1m. The only reason that they seem to create a spatially integrated unit is because of the Empty space distance which opposes houses 1 and 4, to both the central and right house groups. It is for this reason that house 1, 3, 4 and 16 are here considered as solitary structures. House 3

is the largest structure on site, and is associated with the communal house period. House 16, situated 26.1m from house 3, is its nearest neighbour.

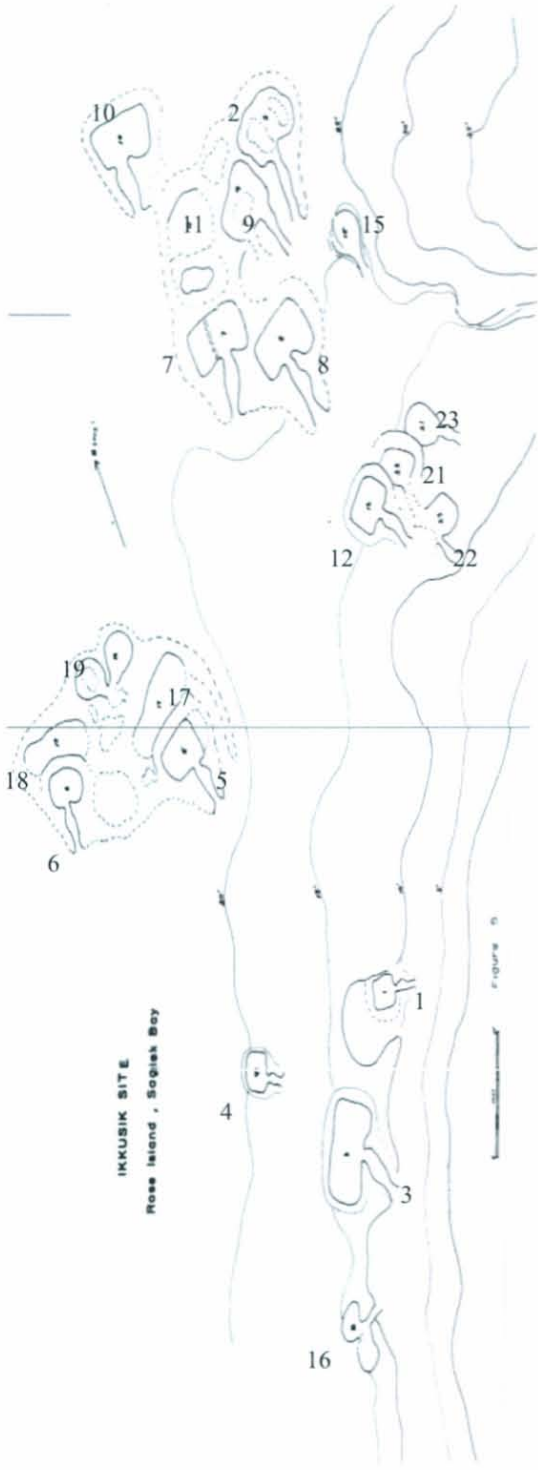
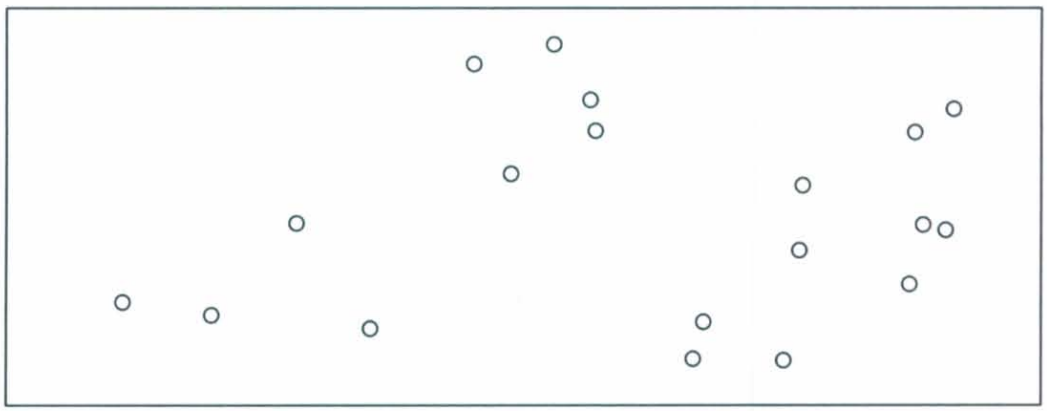
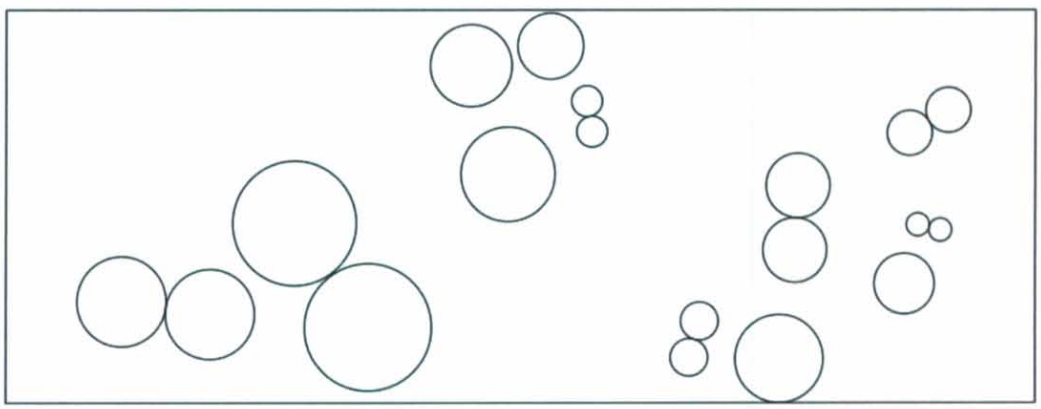


Figure 21. Map of Ikkusik
(Schledermann 1971)

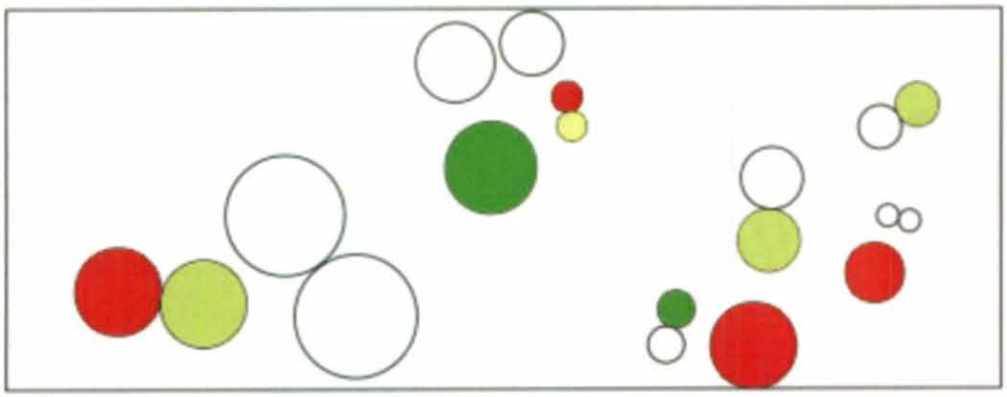
Figure 22. Ikkusik (IdCr-2) A) Simple plot of site's residential structures B) Stienen diagram C) Stienen diagram with colours showing approximate datation of houses D) Empty space distance diagram



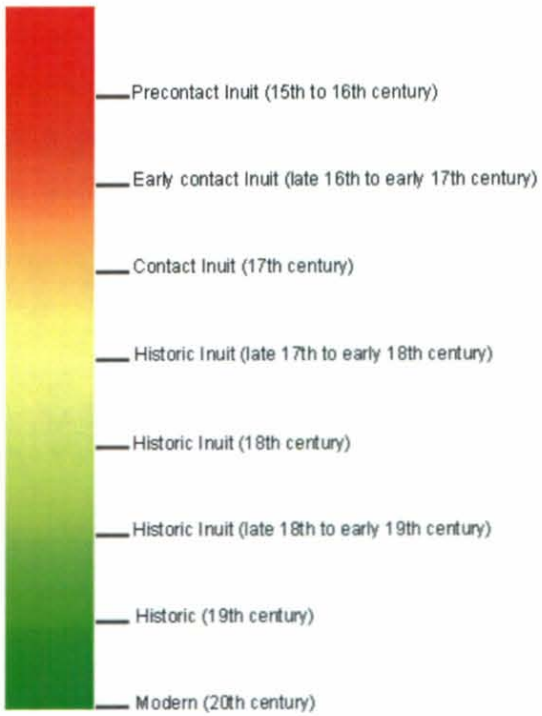
A)



B)



C)


Precontact Inuit (15th to 16th century)
Early contact Inuit (late 16th to early 17th century)
Contact Inuit (17th century)
Historic Inuit (late 17th to early 18th century)
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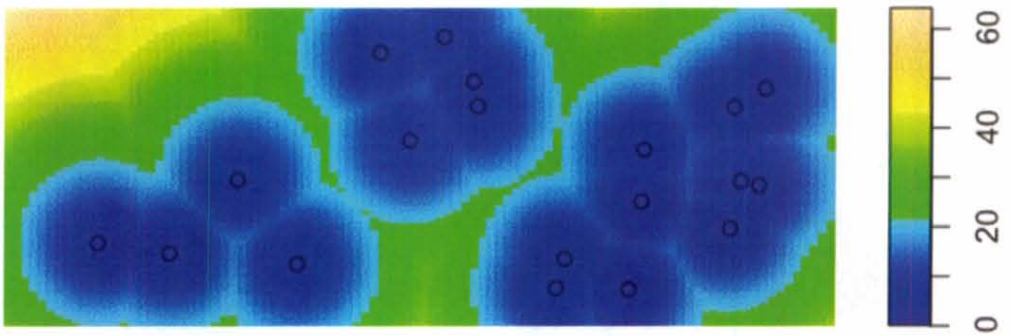


5.7 Nachvak Village (IgCx-3)

Nachvak Village is an Inuit settlement consisting of 15 sod houses and situated on the north shore of Nachvak Fiord (Figure 23). Only house 1 could be associated with the historic period *per se,* although it remains uncertain because this assessment by Kaplan (1983:678) was based on the recovery of a single fragment of metal. In fact, is is presumed that the site was abandoned by the late 18th century, when its residents likely moved to Kongu (Whitridge 2004). Although it thus is dated to the prehistoric and early historic periods, Nachvak Village was included in this research because it provides a comparative model to which later settlements' spatial arrangement of houses may be contrasted. Furthermore, incorporating these sites in the present work revealed an interesting spatial phenomenon: sites comprising houses with the wider range of dates (i.e. sites that have been inhabited repeatedly over longer periods of time) will exhibit a wider range of NN distances.

As illustrated in both the site map (Figure 23) and Stienen diagram (Figure 24), most houses at Nachvak Village were built in such a way as to form a line, within which NN distances vary from 4.7m to 9.2m. This line is, however, broken in the places where NN distances become larger. Several isolated structures can also be observed, namely houses 8 and 9 (which form a pair) and house 1 (the most striking, built 37.7m from its NN house 2). Houses are all oriented towards the beach, and 9 graves situated on a rocky knoll near the site were documented.

Material evidence recovered at Nachvak Village and the ubiquity of whale bone in house structures tend to indicate that its inhabitants successfully hunted bowhead

whales, while their diet also included smaller games, such as different species of seals, and caribou (Kaplan 1983: 678-702; Swinarton 2009). The Empty space distance diagram and Stienen diagram indicate that houses 10 to 17 form a fairly regular line. NN distances vary from 4.7m to 9.2m, which are amongst the most common NN distances within the sites studied in this research. Within this line, houses 11 and 12 are the most closely spatially related (4.7m). The line extends further north with houses 2 to 5. However, at this point, it is not as regular, and looking at the site map and the Stienen diagram, it appears to be more composed of an outlier (house 2, 11.5m from its NN house 3) and a cluster (houses 3, 4 and 5, united by NN distances of 5.3m and 6m respectively). The central point of this cluster is situated 20m from the beginning of the regular line (marked by house 17).

Houses 2, 6 and especially 7, are the largest structures on site, and are not included within the line. Their increased size perhaps marks the beginning of the contact period (for house 2) and historic period (for houses 6 and 7), after which the population of Nachvak Village likely moved to Kongu.

Houses 1, 8 and 9 are the greatest outliers at the site. House 1 is situated 37.7m from its NN. It is impossible to determine whether it represents an earlier or later feature, for the significance of the iron fragment recovered from it has not been determined. Houses 8 and 9, however, have each other as nearest neighbour.

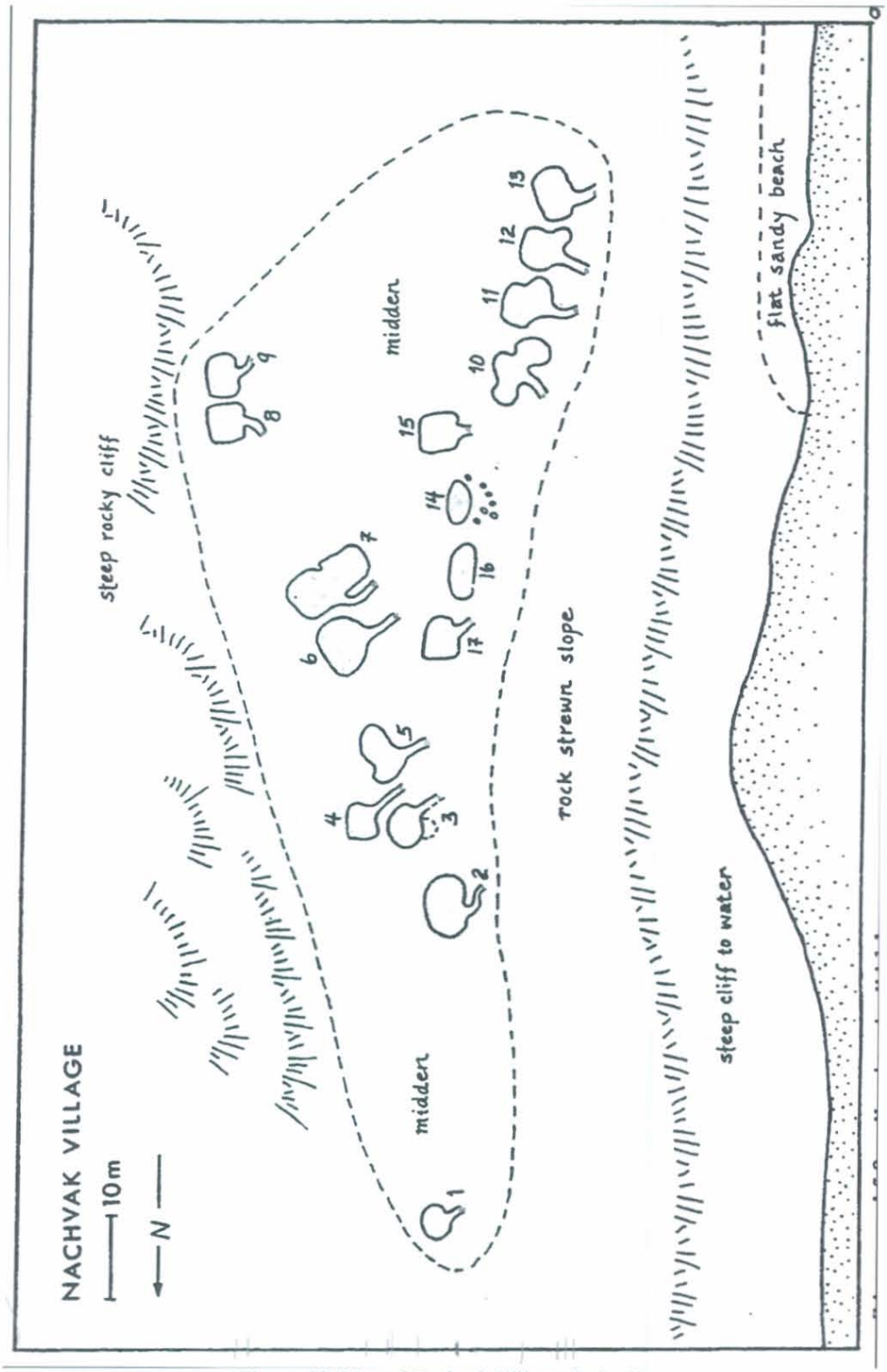
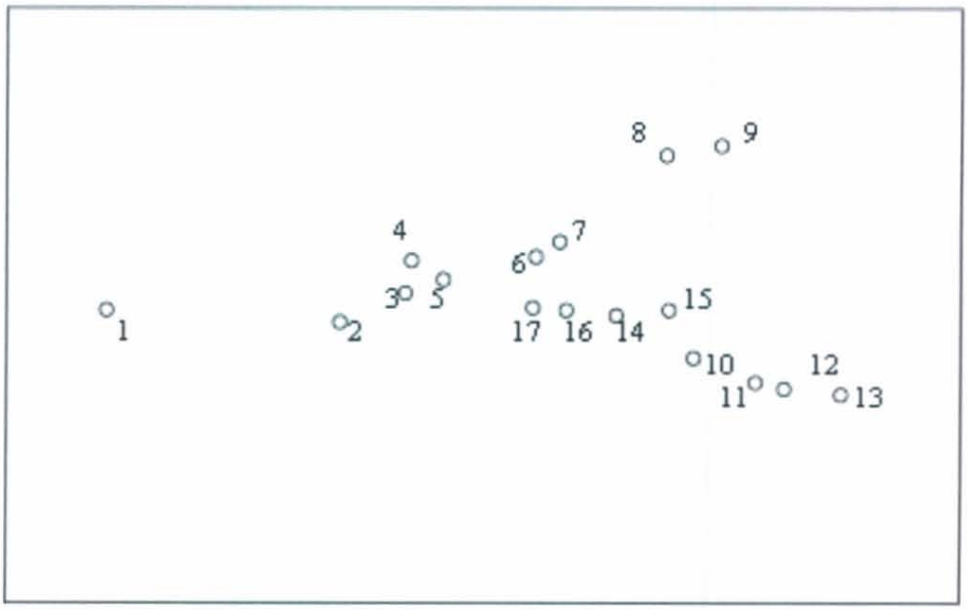
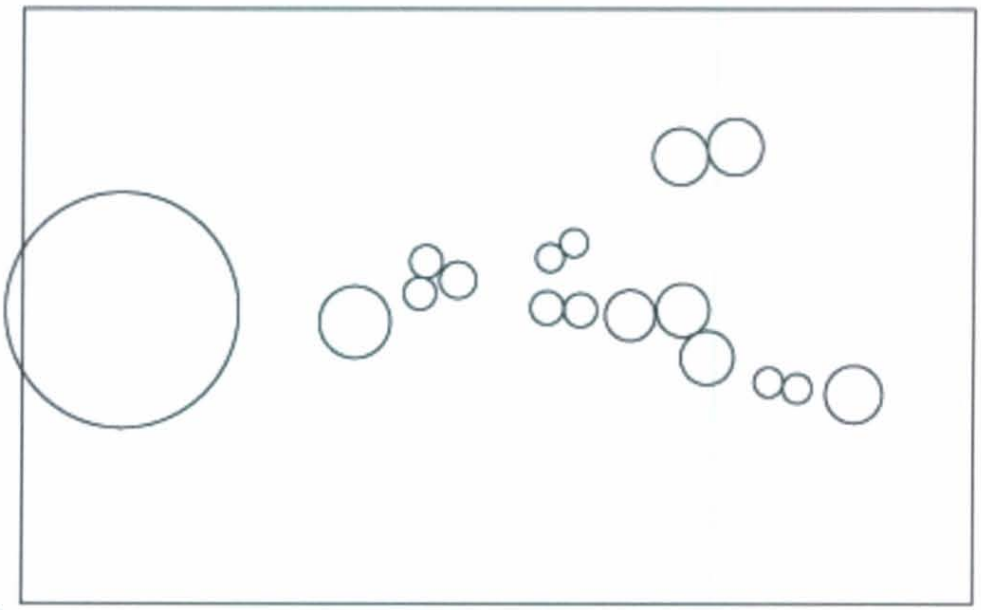


Figure 23. Map of Nachvak Village (IgCx-3)
(Kaplan 1983: 678)

Figure 24. Nachvak (IgCx-3) A) Simple plot of site's residential structures B) Stienen diagram C) Stienen diagram with colours showing approximate datation of houses D) Empty space distance diagram



A)



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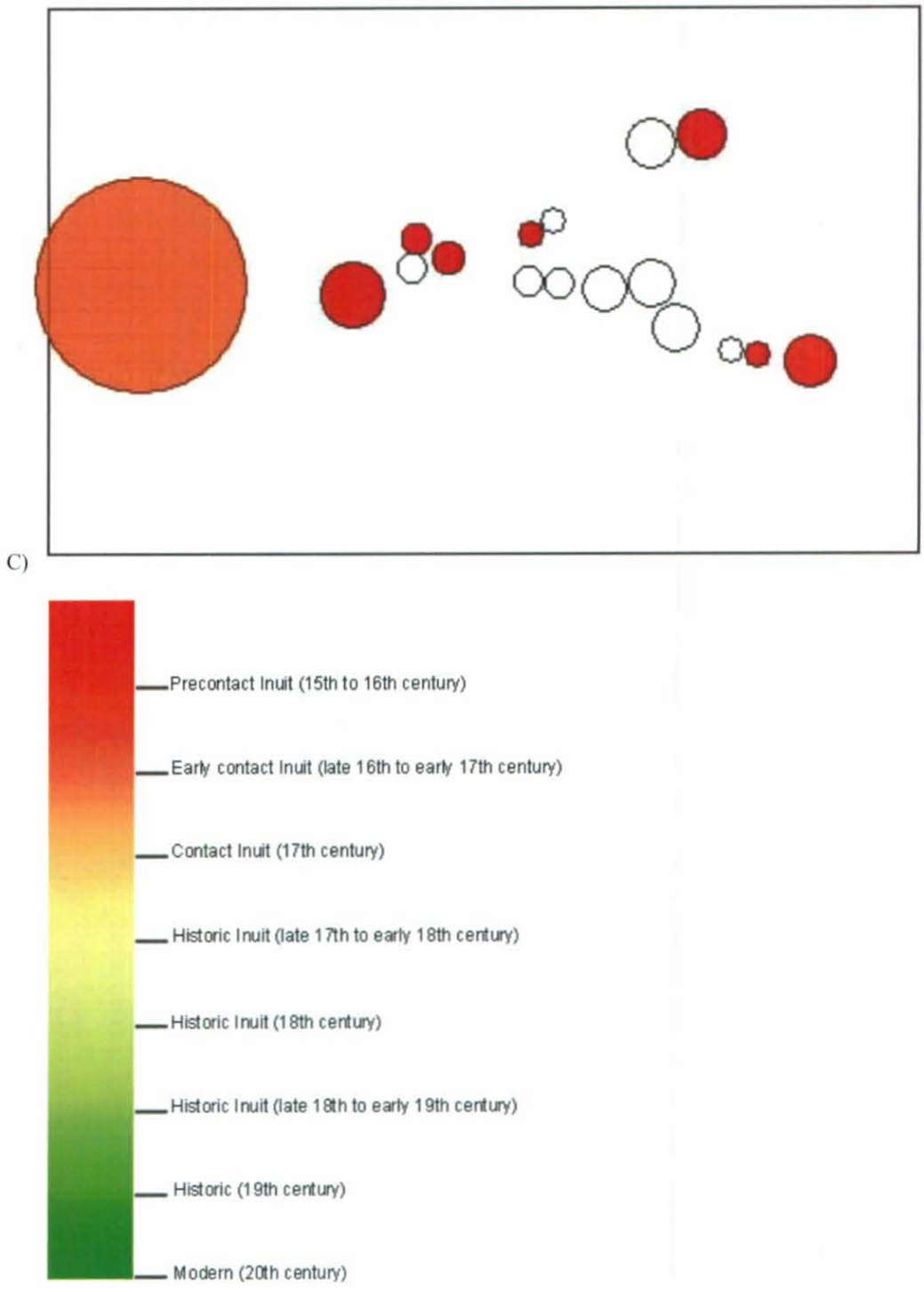
Precontact Inuit (15th to 16th century)
Early contact Inuit (late 16th to early 17th century)
Contact Inuit (17th century)
Historic Inuit (late 17th to early 18th century)
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Historic Inuit (late 18th to early 19th century)
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Modern (20th century)

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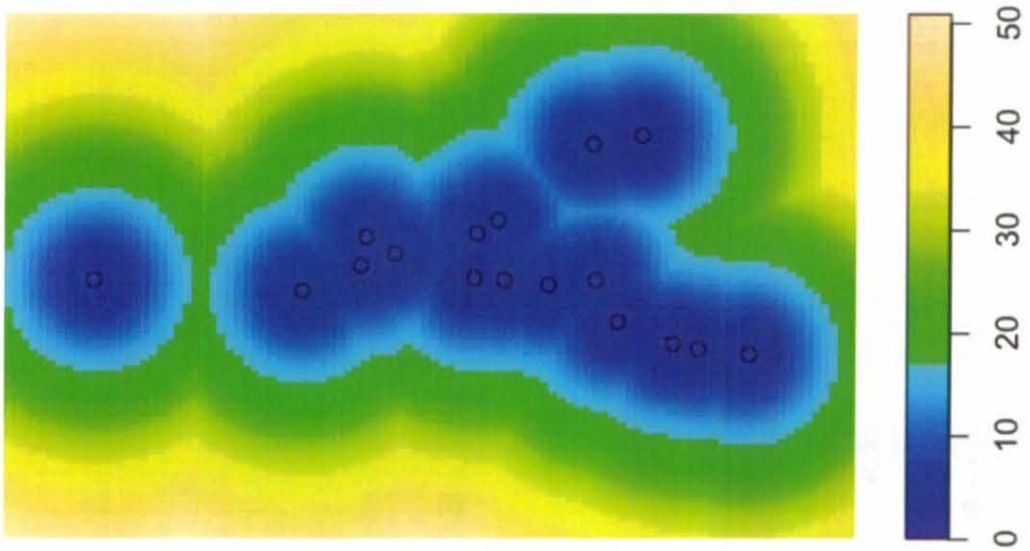


5.8. Komaktorvik 1 (IhCw-1)

The site of Komaktorvik 1, in Inuktitut "place where one eats lice", is situated on the northeast shore of Komaktorvik Fiord, in Seven Islands Bay (Figure 24). It consists of 18 sod houses ranging in age from precontact Inuit to the late historic period (as well as earlier visible pre-Inuit structures). The site was subject to extensive rebuilding activities. Strangely enough, no burial structure associated with the site has been documented. The Stienen diagram and Empty space distance diagram reveal several interesting patterns. The site seems to be divided into three clusters (houses 2a, b, c, d, e, and f; houses 4 to 7; houses 8 to 10), and punctuated by five structures of variable isolation (houses 1, 3, 11, 12, an 13) . House 12 of Komaktorvik 1 is a particularly intriguing documented outlier dwelling. Houses 1a, and 1b are the closest NN on the site.

At Komaktorvik 1, clusters and isolated structures are associated with different time periods. House 1a has been dated to the historic period, while house 1b was associated with the late historic period. House complex 2 was dated to the late historic period, houses 4 to 7, as well as houses 8 to 10 date to the precontact Inuit, and house 11 was associated with the historic period. House 1 and 11 were respectively built 85.6m and 59.1m from their NN in group 4 to 10, and 107.5m from each other.

Just like houses at Nachvak and Iglosiatik, dwellings 4, 5, 6, and 7 are positioned in a row. They are associated (Kaplan1983: 731) with the earliest precontact Inuit occupations of the site. The Stienen diagram reveals that houses 6 and 7 are particularly close, with a NN distance of 4.3m, although in terms of distances, all four structures are spatially associated (NN distances of 4.3m and 7.5m). Houses 8, 9 and 10 are situated to

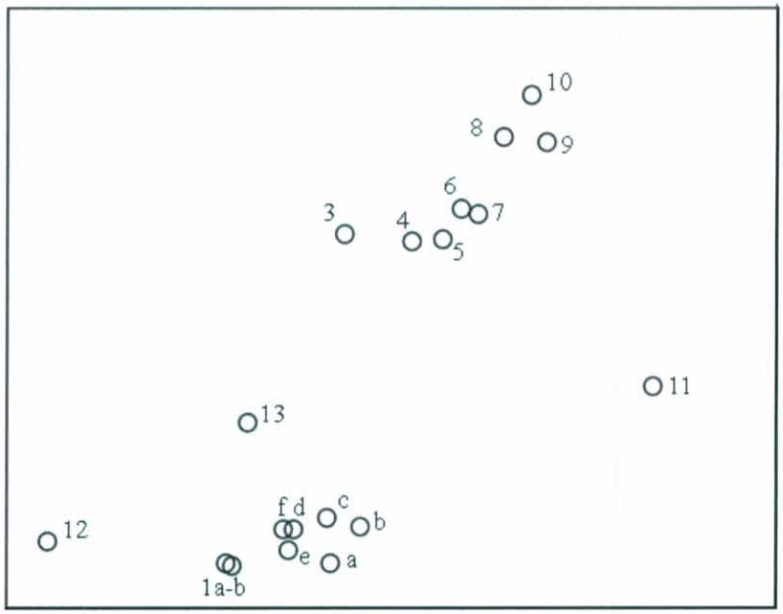
the east of dwellings 4 to 7 (21.9m separate house 7 from house 9), and were also associated with precontact Inuit (Peter Whitridge, personal communications 2008). Within the cluster composed of houses 8 to 10, nearest neighbour distances are of 10.6m (between house 8 and 9) and 11.9m (from dwelling 10 to 9). *Illuit* 8 to 10 were not built in a row, and are larger than *houses* 4 to 7.

House 1 is a little cluster of 2 houses. Probably dating from the historic period (Kaplan 1983: 710-716), it has been associated with the early communal phase (although it is not as large as other houses of the same period situated south of Nain). A smaller house was built right into it, dwelling 1b, probably associated with the late historic period (late 19th early 20th century).

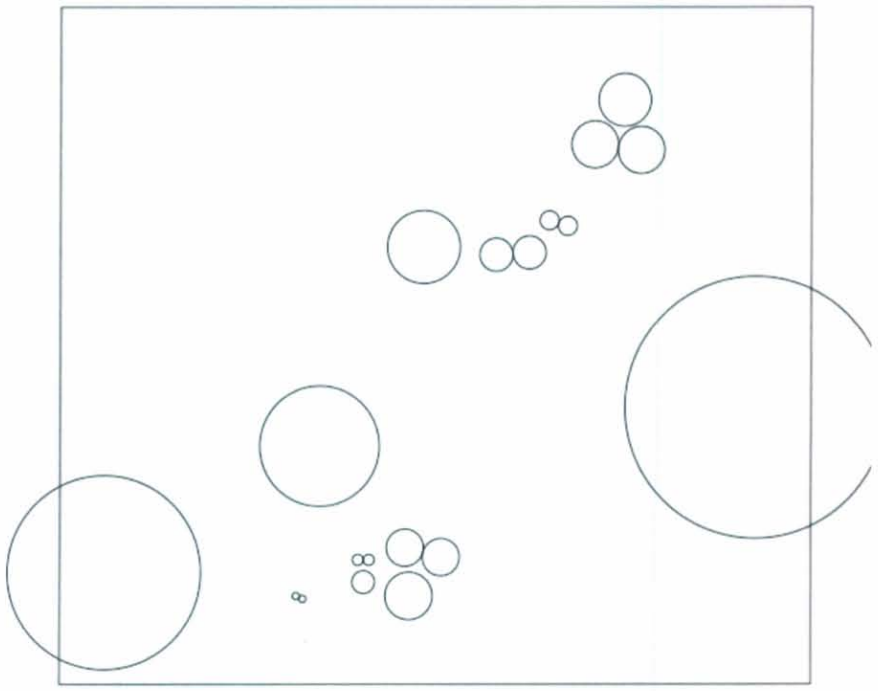
The latest occupation at Komaktorvik 1 is associated with the house 2 complex situated 8m to the northeast of houses 1a and b. All structures share the same mound, and some are even built on top of previous ones (2d, e, and f). NN distances vary greatly, and range from 2.5m (between house 2d and 2e) to 10.7m (between houses 2a and 2b). Each house is pointing in a different direction (resulting in a greater distance between each *paa*), with their backs to one another (the same phenomenon can be seen at the site of Big Head 1, Seven Islands Bay).

Figure 25. Map of Komaktorvik
(Picture courtesy of Dr Peter Whitridge and Don Butler)

Figure 26. Komaktorvik 1 (IhCw-1) A) Simple plot of site's residential structures B) Stienen diagram C) Stienen diagram with colours showing approximate datation of houses D) Empty space distance diagram



A)



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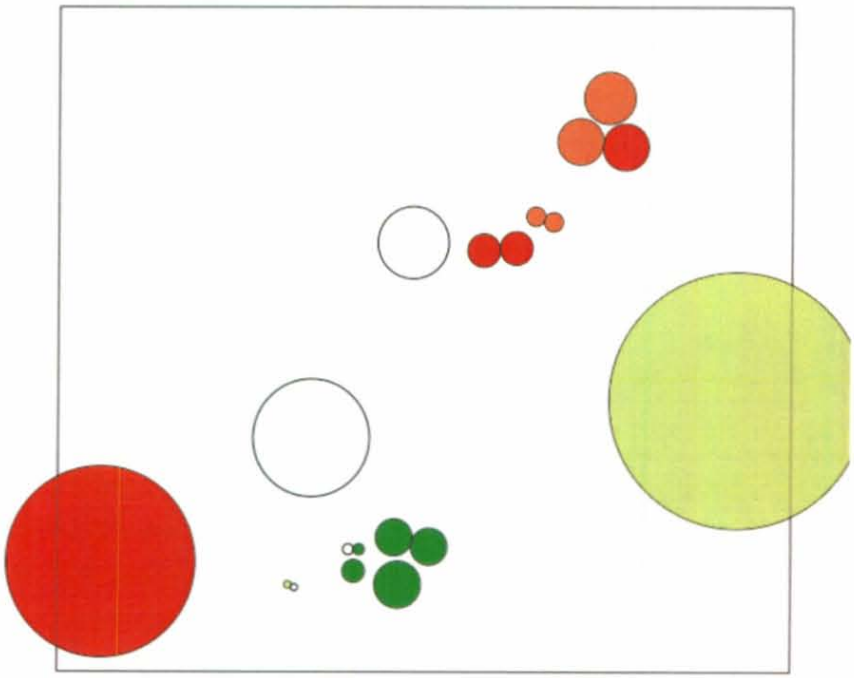

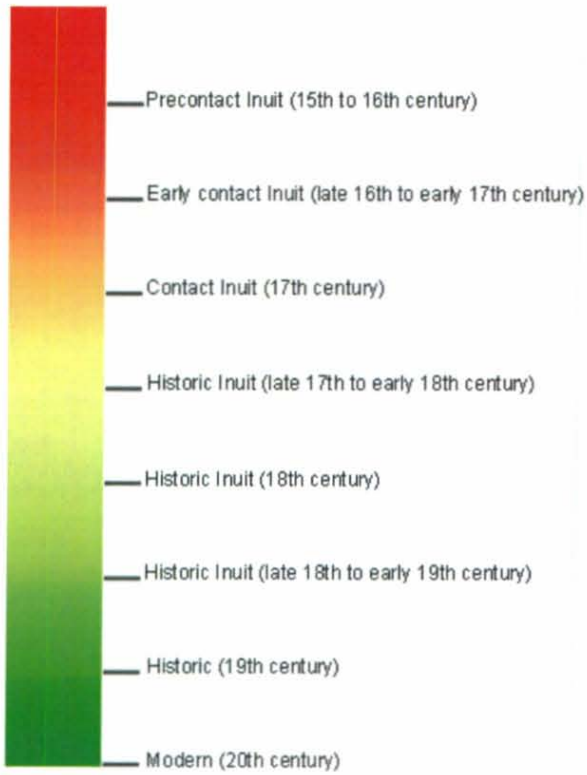
Precontact Inuit (15th to 16th century)
Early contact Inuit (late 16th to early 17th century)
Contact Inuit (17th century)
Historic Inuit (late 17th to early 18th century)
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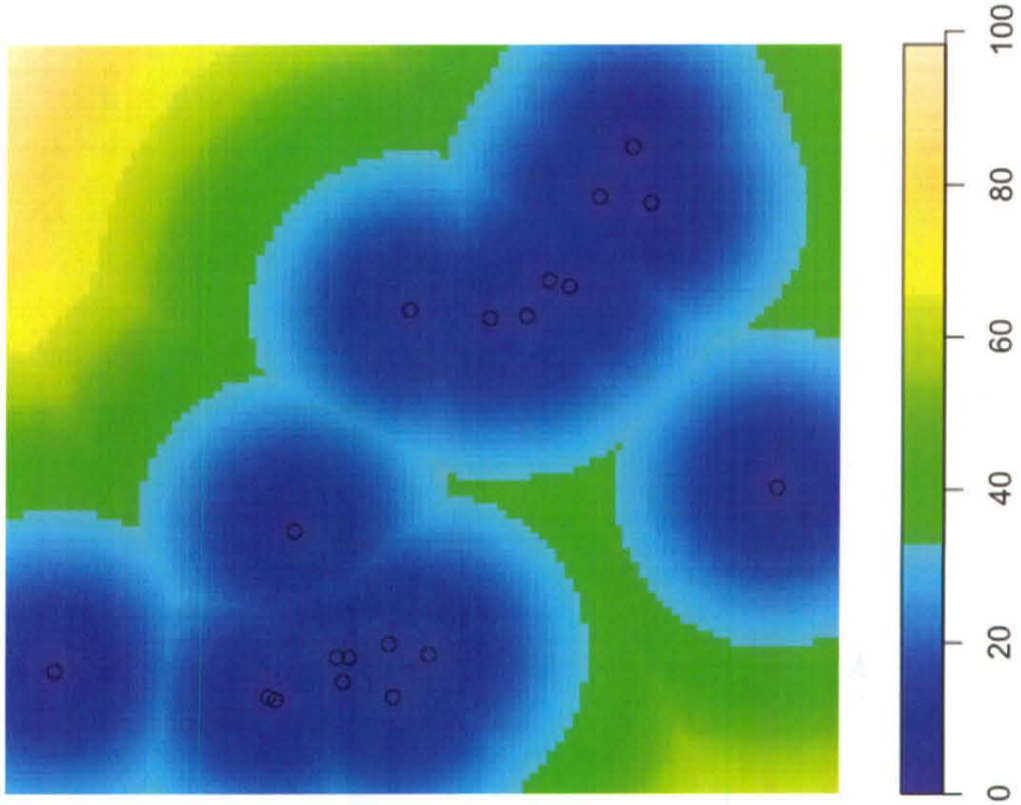
Historic Inuit (late 18th to early 19th century)
Historic (19th century)
Modern (20th century)

D)



5.8.2 House 12 at Komaktorvik 1

House 12 is situated 43.82m from its NN (house 1), and is perched in the middle of the bank leading to a 16m high terrace. Such a location for a sod house has not yet been recorded on other archaeological sites described in the reference material examined in this thesis. Although Drs William Fitzhugh, Arctic Center (Smithsonian Institute) and Lisa Rankin, Memorial University of Newfoundland, mentioned seeing houses built inside caves (personal communications, 2008).

House 12 is spatially distant from other structures and measures 2 m x 2.5m. Given its internal organization, it appears to be associated with the precontact Inuit period (Kaplan 1983: 740; Whitridge 2007; PeterWhitridge, personal communication 2008). However, as mentioned earlier, architectural styles may fluctuate through time, and current chronologies based on house forms should only be considered as general guidelines. It has a shallow midden suggesting a brief occupation.

5.9 Nunaingok (JcDe-1)

Nunaingok 1 is the northernmost site under study here. Situated in the region of Killinek, the site consists of 15 visible sod houses and a standing cabin (Figure 27). The presence of multiple tent rings, stone grave, caches, hunting blinds and 1 meter thick midden deposits (Kaplan 1983: 809) indicates that the site has been extensively occupied and represents a propitious hunting location during several seasons. Zooarchaeological data provided by Kaplan (1983:816) indicate that seals were the major food resource at

Nunaingok while walrus, polar bear, fox, bird, dog and bowhead whale bones were also recovered. Judging from the site map and Stienen diagram, houses seem to be concentrated along the bay (situated to the northeast). Apart from this, no definite cluster is observable, although certain houses seem to be spatially related.

Figure 10 shows that NN distance at Nunaingok 1 are quite disparate. The *stienen diagram* and *Empty space distance diagram* show that houses 6 and 7 are the closest related dwellings on site. Both associated with the late historic period (19th century) by Stewart (1979), house 7's mound covers house 8's, indicating it was occupied later. Their entrance passages seem to almost join. Houses 5 to 10, situated at a maximum distance of 6.2m, are oriented towards one another. While it is situated near these structures (8.3m), house 6's entrance passage does not point towards these other dwellings. Houses 9 is built on top of house 8.They both face towards the bay and are situated 11.2m from houses 6 and 7.

Houses 1 and 2 share the same mound, and have been respectively associated with the late historic and modern periods. Interestingly, Stewart (1979) mentions that these houses may have been reused later on, for he thought he could observe smaller structures within houses 1 and 2. Like the house 2 complex at Komaktorvik and houses at the site of Big Head 1, their entrance tunnels are not facing the same direction.

There are five isolated structures at Nunaingok 1. House 3 is the earliest documented structure at the site, and was associated with the precontact period (Stewart 1979). It is situated 24.8m from its NN (house 2). Houses 14 and 12, of about the same

size, are also isolated structures whose entrance tunnels face different ways than other houses at the site. House 13 was built 46.8m from its NN, house 11. While Stewart does mention its peculiarly isolated spatial position, he did not excavate it. House 11 is the largest dwelling at Nunaingok 1. Associated with the 18th century, it is situated 15.9m from its NN, house 9. While it is not the most isolated structure at the site, it still stands far enough apart from any other dwelling to be singled out.

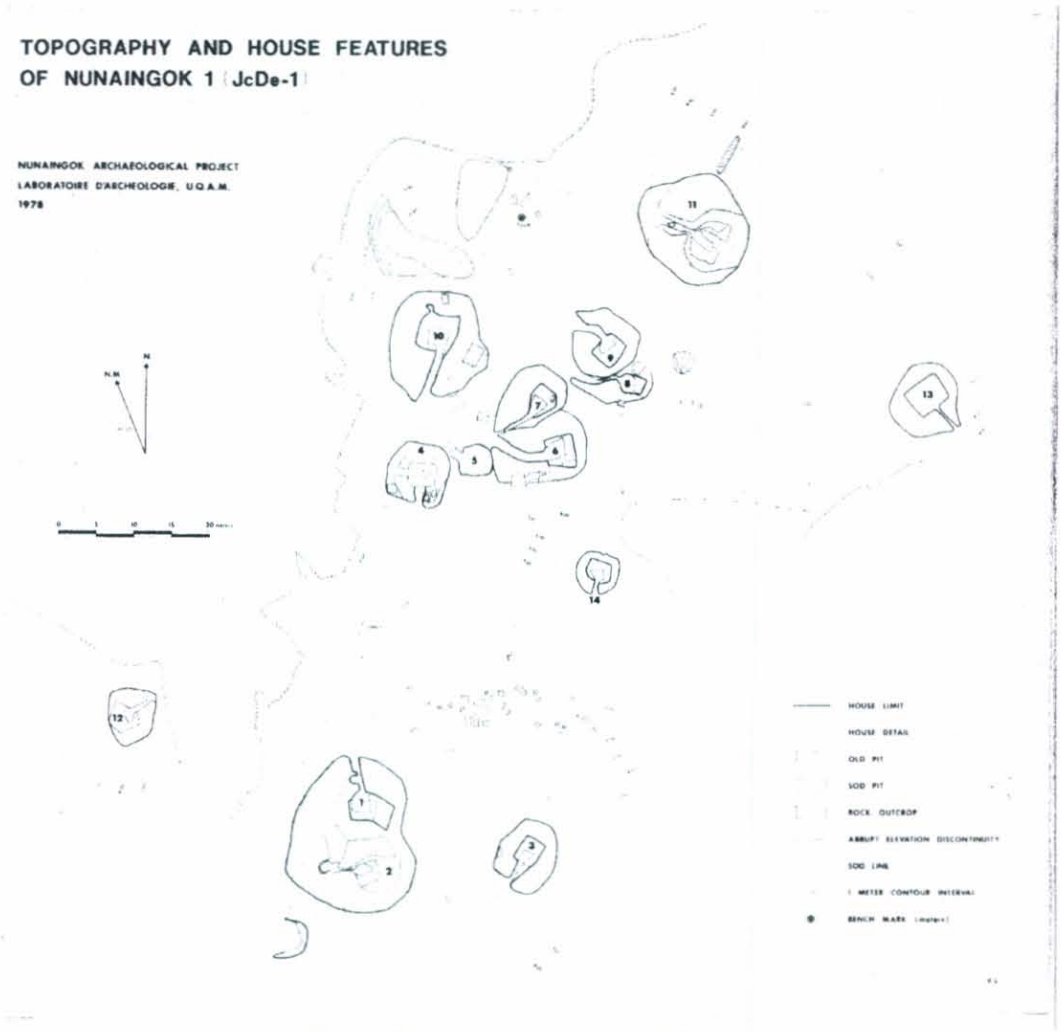
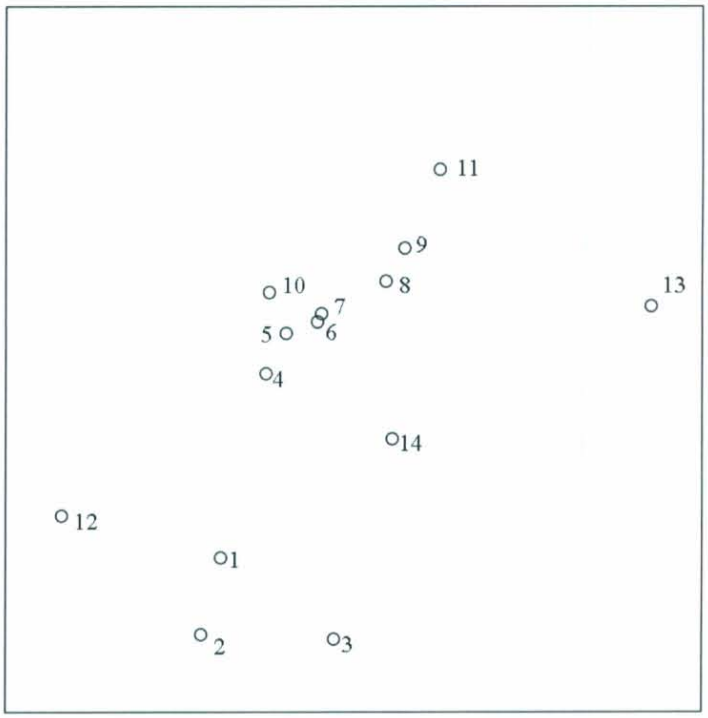


Figure 27. Map of Nunaingok 1 (JcDe-1)
(Stewart 1979: 81)

Figure 28. Nunaingok 1 (JcDe-1) A) Simple plot of site's residential structures B) Stienen diagram C) Stienen diagram with colours showing approximate datation of houses D) Empty space distance diagram



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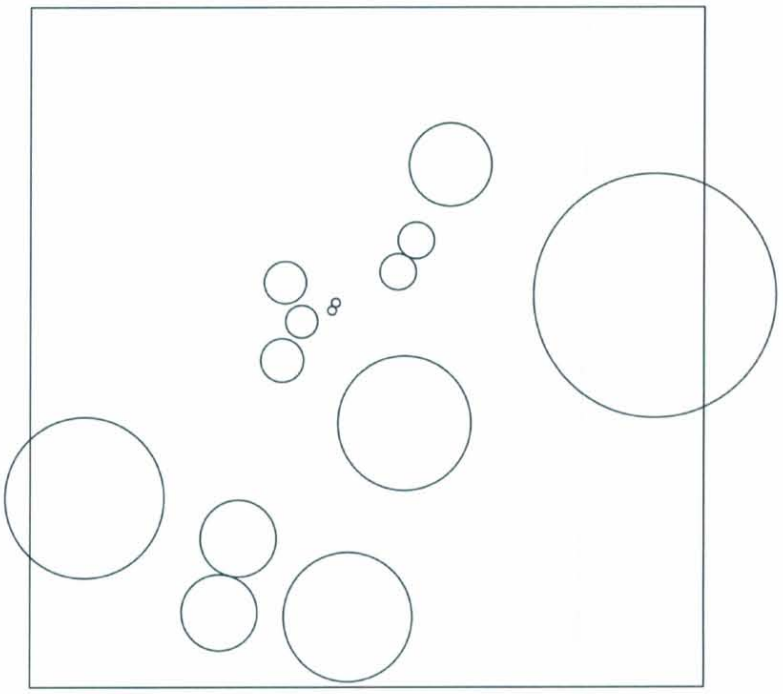

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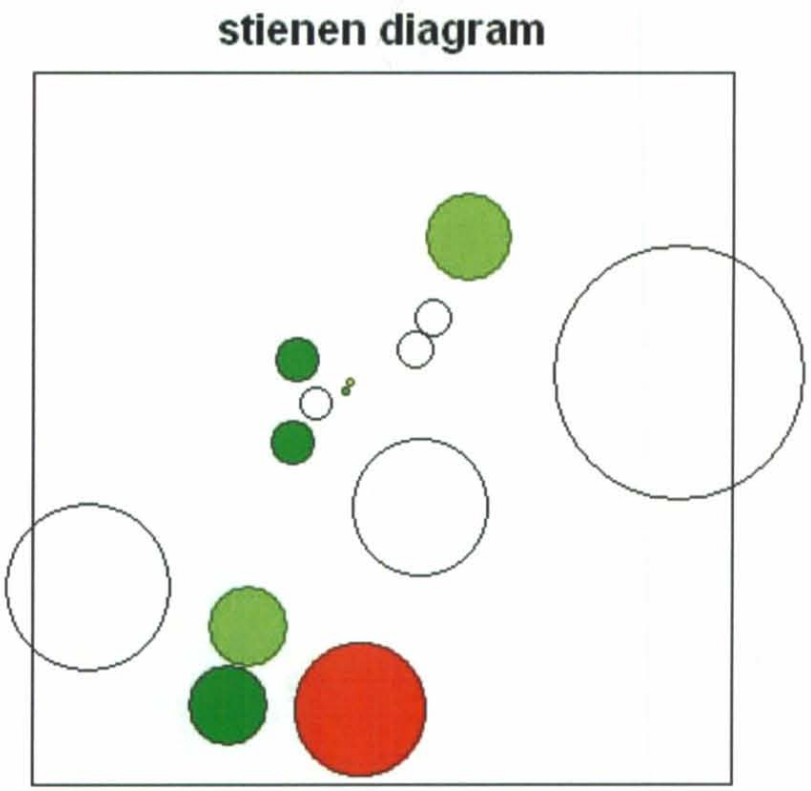
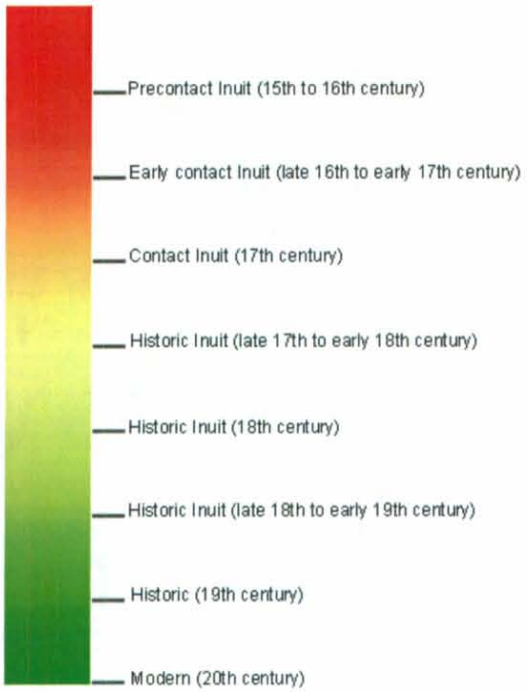

stienen diagram

C)


Precontact Inuit (15th to 16th century)
Early contact Inuit (late 16th to early 17th century)
Contact Inuit (17th century)
Historic Inuit (late 17th to early 18th century)
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Historic (19th century)
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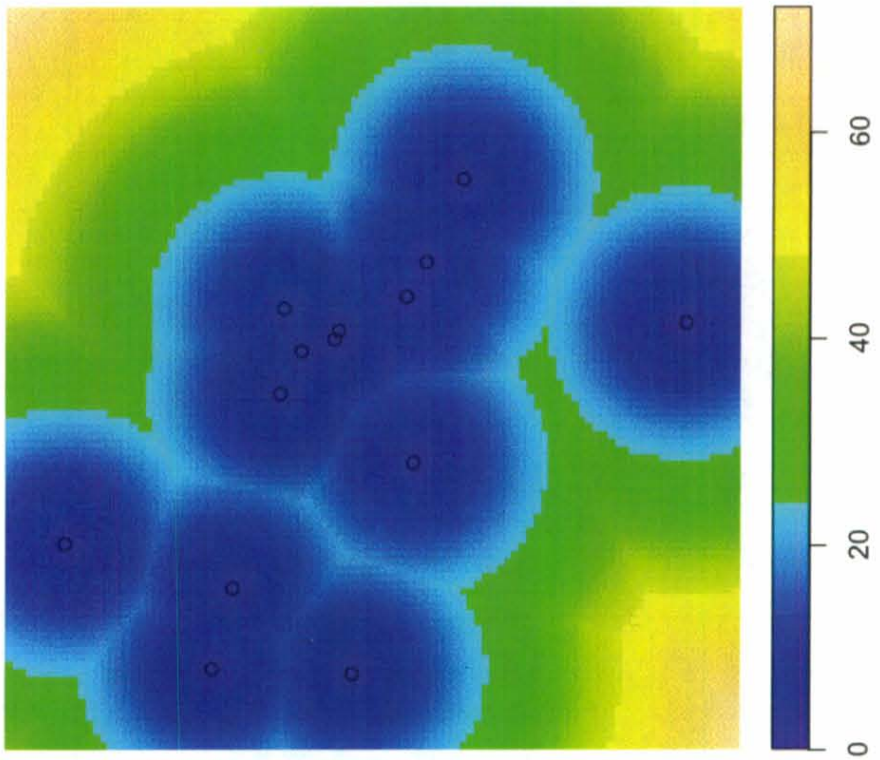

Chapter 6 Discussion

The present chapter aims at understanding the spatial data described in chapter 5. In chapter 4, the Inuit conceptions of otherness, space and time were detailed. The following chapter highlights certain aspects of the way the Inuit experience the universe that came to be understood as particularly enlightening for the present work.

For the Inuit, social distance and spatial distance are directly proportional. During her stay amongst the Utku, Briggs noted that closeness, separateness and hostility were expressed socially as well as spatially, by the distance between camps and the spacing of tents and *illus* within camps. Linguistically, Inuit describe their experiences by visualizing the object of the discourse and linguistically describing the spatio-temporal conditions of their observations, which is reflected in personal pronouns, like "I" (*uvanga*) = "my here very close" and us (*uvagat*)= "our here very close" (Therrien 1987:13). Spatial perceptions are also used to describe a person's relation to another. For example, the root *aki-* "opposite" is used in the term *akilliq*, which refers to a person one considers to be the most different/opposite from him/her, and is also used to describe the neighbour who, in the village, resides in the house opposite to yours. Many emotions are also described in terms of distances, such as *kinngupaa* "he/she misses him", which stems from the root *kingu-* "behind", "of (something to) the rear". Following this, the possibility that spatial positions of houses within settlements have emotional resonance could be examined. However, this would require thorough investigations of each site's occupational history, as described in ethnographical archives and as remembered by elders, a task which cannot be completed in the context of the present thesis.

Like social perceptions, relationships, and emotions, time has an essential spatial dimension. Events are understood as having passed. Events are also expected to happen and are projected into the future. The Inuit thus perceive time in a linear way. However, it is also cyclical. When the sun starts to disappear in October, it is always expected to come back around in what non-Inuit call "January" or " February". People and animals are also part of an endless cyclical motion in time, where a deceased individual may be reincarnated as another human (baring his/her name) or as an animal, and then die again, and be reborn again, and so on. Finally, for the Inuit, the concept of time is also spatial. Events and people that have passed are not terminated and forgotten. Instead, they are perceived more as having shifted into another place or dimension, which only makes them less visible. Perhaps this place can be understood as memory. Perhaps it also is that through memory (in the form of objects, stories, prayers and songs) that past events and people can be summoned. In Inuktitut, the term *sivulliit* "ancestors" refers to "those who are the most in front". In this sense, it literally means that what is in front of you cannot be forgotten (in opposition to something *kingu*-behind, something that one misses). This spatial perception of time suggests two important things for the present work. First, Inuit houses, perceived as uninhabited by non-Inuit would have triggered memories within the minds of settling Inuit, upon their arrival at a site. The nature and intensity of these memories would have influenced, if not dictated, these new occupants' spatial behavior (comprising the building of dwellings). Second, if upon encountering house ruins no memories were triggered, these ruins could still have been considered inhabited,

considering the way Inuit perceive the deceased. The *illu*'s past occupants may have been felt as still present, but in a non-tangible way. This immaterial but real confrontation with otherness also would have influenced the settlers' spatial behavior.

Inuit houses, in Inuktitut *illuit*, are reproductions of the Inuit body. Like the uterus, the house surrounds and protects, and the Inuktitut word that designates a foetus, *ilumiu*, also designates the occupant of a dwelling. A house has a *qingaq* "nose", a *qimirluguti* "spine" and *kajjiq* "hair", and its dome-shaped ceiling refers to the *sila* - the air, the universe. At the core of the Inuit spatial perception of the universe is the body. The Inuit body is the foundation of the entire human experience. Affinities between the body and the natural world merge into a complex system of correspondences between physiological and natural processes. Peoples' illnesses may impact on the land, and people, in turn, suffer from the illnesses of the land (such as drought). Matters of the body also become socio-religious prescriptions (such as reinforcement of social cohesion through sharing) or prohibitions (such as the series of interdictions surrounding menstruating women). These, in turn, orchestrate daily and intergenerational movements and actions. Finally, the Inuit understanding of the universe is a reproduction of the general structural understanding of the body as a "whole", in its multiple "parts", and most importantly in its "articulations". Because houses are reproductions of the human body, we can assume they were subject to the same rules, and imbued with equivalent symbolic and communicative power.

For the Inuit, otherness, as something marginal and not part of the "whole", is preferably avoided. One way to do this is to create extensive, and extendable, webs of socio-relations, within which kinship links can easily be found and activated. Kinship bonds are thus shaped several ways: by partaking in common activities and sharing their by-products, by genealogical or territorial ties, and by ideological or symbolic elements like name sharing. Because an individual possesses his/her parents and grand-parents' memories, as well as his/her namesake's kinship bonds, sharing memories and *atiq* provides a practically infinite source of kinship relations. It can thus be argued that encountering total strangers, or coming across an unknown settlement, was a rare thing. This thought seems to be echoed in the spatial disposition of dwellings within settlements: houses with rrelatively small nearest neighbour distances are far more numerous than houses with relatively large nearest neighbour distances.

Social links that one activated in a settlement setting will vary in intensity, and thus condition people's socio-spatial closeness. One's body is the first level of social space experienced by an individual. Following this, an Inuit immerses him/herself in the *ilagiit nangminariit* (immediate kins constituting the basic family unit). This *ilagiit nangminariit* in turn may join other families, and thus form an extended *ilagiit*. It is more flexible, and may be seasonal. Within it, the intensity of the activated kinship bond can become a little diluted. Again, extended *ilagiit* may gather and constitute large settlements, usually centered around communal subsistence and economic activities. Inside these settlements, the activated kinship relations may be even more diluted. This last level of social

proximity is the most fluid, it is usually seasonal, and of a limited duration (although it may be cyclical). This gradation of socio-spatial proximity became particularly important as each site's spatial data was examined.

The Inuit concepts of land sharing was also used as a central point to guide the interpretations described below. Inuit residing in the same place were classified into one of two categories: *nunaqqatigiit* "those who share the same territory (*nuna*) in a discontinuous way", and *silaqqatigiit* "those who share the same territory, camp, *sila* (literally "air", "environment", "universe"), in a continuous way". Within these two concepts lies the difference between sites or portions of sites showing spatial integration and continuity (*silaqqatigiit*) and those showing looser, less structured spatial arrangements (*nunaqqatigiit*).

Each of the nine sites under study here was interpreted through the lense of the cultural information discussed above. Sections 7.1 to 7.9 describe these interpretations, while 7.10 provides the final interpretations.

6.1 Eskimo Island

Within Eskimo Island 3 (Figure 14), Houses 1, 2, 3 and 4 cannot be qualified as spatially integrated, although they are temporally related to one another: 20 m NN distances are not usual, and may suggest a desire to maintain a recognizable social distance, by *illagiit* sharing only some degree of kinship bond. This proposition is supported by the fact that each house has a different shape and size [13], reflecting different

[13] House 1 is a small rectangular structure (5m x 4m; house 2 is a larger oblong structure (9.6m x 5.4m); house 3 is a rectangular structure (6m x 4.8m); house 4 is a shallow depression.

spatial arrangement needs, and could thus be considered as different stages of a chronological house-type sequence.

Within Eskimo Island 2, houses 4 and 5 probably were spatially related, an assessment reinforced by the fact that both houses' entrance tunnels converge, implying that they shared a common outdoor porch. House 6 is the spatial outlier, a position suggesting discontinuity in potential social relations between structures. The observations presented in chapter 5 are contradictory. On the one hand, architectural similarities, their clustered appearance, and their approximate age argue for a connection between houses 4, 5 and 6 of EI2. On the other hand, both houses 4 and 5 are far enough apart from house 6 not to be considered in spatial relation. This suggests that houses 4 and 5 shared a *silaqqatigiit* relationship, while they were linked to structure 6 by more of a *nunaqqatigiit* type of land sharing.

At Eskimo Island 1, revegetation, architectural similarities and the fact that houses 1 and 3 share walls with house 2, suggest that the three houses were occupied simultaneously. Whether they were or not, their linear side to side spatial arrangement, their homogeneity of shape, size and internal arrangement, and their identical orientation (entrance tunnels point south), suggests that these structures' inhabitants shared strong kinship bonds. A recurrent observation made during this study is the isolated position that southern and late historic and modern structures occupy within sites. This may be due to contacts with Moravians, since the missionaries strongly proscribed past Inuit beliefs,

especially shamanism. Some northern sites seem less affected by this practice, perhaps because the Church had less control over these regions.

It is hard to explain why people would have decided to build their houses in the 3 distinct pockets observable at Eskimo Island. Unfortunately, Kaplan's map of Eskimo Island 1, 2 and 3 locations does not provide enough details to allow environmental or practical considerations, which may have influenced the sites' particular spatial configuration, to be taken into account. While the possibility that there might have been kinship bonds between the inhabitants of EI1, EI2 and EI3 cannot be discounted, they still chose to establish a considerable (50m being the maximum nearest neighbour distance) spatial distance between themselves and the houses of previous inhabitants. It can be proposed that people associated with each wave did not consider themselves related to previous occupants. They must have known that there had been people there before, but none they knew or shared kinship or *atiq* relations with. Therefore, they had to establish a respectable distance between themselves and the previous inhabitants' *sila*. It may also be that after a given period of time, each site was considered "saturated" with *sila*, and people had to move their houses to a "clean" distance.

This suggests that the Inuit who settled in each of the Eskimo Island site shared a *nunaqqatigiit* type of relationship with the inhabitants of the other two sites. However, within each cluster, the relationship might have been both *silaqqatigiit* and *nunaqqatigiit,* since at least some kinship bonds could be called upon, and activated through simultaneous occupations, blood bonds, *atiq* sharing or memory.

6.2 Avertok 1

Besides the observation that the most recent houses (19, 20 and 21) were built an average of 60m apart from the rest of the settlement (Figure 13), no clear pattern is detected that is related to the different periods of site occupation. This suggests that the site's inhabitants shared kinship bonds that remained active through space and time (especially since Bird (1945) and Kaplan (1983) mention that many houses were built on earlier components), and the observable break with the late historic components of the site supports the suggestion that Moravian influence was instrumental in the segregation of late historic houses.

Avertok is the site of an interesting progression from spatially integrated houses situated near the beach, to less spatially integrated houses situated farther and farther from the beach. Distances between houses grouped in pairs suggest that they shared *sila*, reflecting kinship bonds between them. The same can be said of houses 3, 4, and 16 to 18, which are clumped close together. The inhabitants of each of these groups of houses may have shared a *silaqqatigiit* type of relationship. Minimum NN distances between clusters are of 11.49m, which argues for a socio-spatial relation. However, nearest neighbours also reach a maximum of 26.89m, which suggests distant socio-spatial relationships. While the possibility of a *silaqqatigiit* type of relationship between houses and groups of houses cannot be refuted, the spatial arrangement of houses at Avertok 1 also reflects a *nunaqqatigiit* type of relationship.

6.3 Karmakulluk

A first hypothesis to explain Karmakulluk's spatial arrangement of houses is that two Inuit communities settled at this location more or less at the same time and created these distinct house groups. This proposition is supported by the fact that house styles, which are typologically similar (bilobate structures common among 15th to 16th century early Labrador protohistoric Inuit), are found in both groups. The distance separating the groups would then suggest that there were no strong kinship bonds between them (38m between house 2 and house 5). Simultaneous occupation is not necessarily implied here, more the fact that people, upon arrival at the site, noticed the presence of somewhat recent sod houses and finding no kinship bonds to call upon and justify either the reuse of the structures, or settling near them, decided to build their houses farther apart. One thing that can be hypothesised with more certainty is that within houses 1 to 4b kinship relations likely did exist. Indeed, NN distances tend to spatially associate dwellings. As for houses 5 to 8, their relationship is not as clear, but resembles that of house pairs at Avertok 1. As an outlier, house 8 could be interpreted as an early pioneer house, similar to ones observed at Eskimo Island, Green Island 6, Nachvak and Iglosiatik.

A second plausible hypothesis is that house shapes and sizes have less to do with specific chronological trends than with selective uses responding to immediate spatial needs (number of inhabitants, tasks to be performed indoors and outdoors, as well as individual preferences). In either case, Karmakulluk illustrates the complexity of interpreting Inuit settlement patterns in terms of the spatial arrangement of houses. While the possibility of a *silaqqatigiit* type of relationship between houses cannot be refuted nor

formally proven, the spatial arrangement of houses at Karmakullukappears to reflect a *nunaqqatigiit* type of relationship. The meaning of the name "Karmakulluk" ("Place of low walls of old houses") reinforces this assertion. Indeed, some of the houses at Karmakulluk may have been *qarmait*, and since both types of houses would have left sod berms, the present analysis does not incorporate enough information on each dwelling to tell the two types apart.

6.4 Iglosiatik 1

Because houses 1 to 9 at Iglosiatik 1 are built into the same beach ridge, and because there are no signs of the disturbance (such as overlapping walls) usually associated with chronological breaks, it can be suggested that their inhabitants shared strong kinship relations. Their entrance tunnels are all facing southeast, suggesting that by building on this part of the ridge, a certain ideal house orientation was being reproduced.

A first hypothesis suggests that houses 1 to 9 were built during an initial wave of settlement. Houses 4 to 9 share the same mound, and are close NN, which suggests that their occupants shared strong kinship bonds, and perhaps a *silaqqatigiit* type of relationship. Houses 10 and 11 probably represent the 18th century communal house phase occupation of Iglosiatik's population. They are larger rectangular structures that could have housed several family units, reflecting a shift of lifestyle influenced by the changing subsistence economies stimulated by contacts with Europeans (Kaplan 1983: 462). These two houses are clearly spatially related to each other, for they share the same mound,

which overlaps houses 1 to 9's mound. They still are contiguous though, which suggest that they shared clear kinship bonds with the previous occupants of houses 1 to 9.

While the spatial relationships between houses 1 to 11 can be observed, houses 12 to 15 pose a little more difficulty. Although houses 12 and 15 are both bilobate structures, they are situated so far apart from each other that it seems unlikely they shared kinship relations. In this sense, houses 14 and 15 are more closely related (13.44m). This not uncommon distance (see Figure 10) may be correlated with some degree of spatial and social acknowledgement.

Iglosiatik can thus be read as a relatively homogenous linear arrangement of houses, punctuated by several marked outliers. Structures 13, 14 and 16 may be associated with pioneering occupations of *ilagiit nangminariit.* They may also have housed families who were socially rejected by the rest of the group, as was documented by Briggs during her stay amongst the Utku. Because of its peculiar situation at the back of the main row of houses, H13 is a particularly interesting outlier at Iglosiatik. Houses 14 to 16 seem to fit more with the "pioneer house" hypothesis. Considering that all houses in the row share a more or less equal view over the *sina* in winter, house 13 is in a less favourable position. Outlier houses stand at the limit between the inhabited and uninhabited spaces. The row of houses constitutes the visual focal point of human activity at Iglosiatik. The surrounding space, devoid of human occupation, stands in opposition to this *locus* of human *sila*. Houses 14 and 15, and more so 13 and 16, were built at the articulation between this area of strong human presence, and the empty space around it. Whether this

spatial situation is a product of social alienation or of an absence of kinship bonds, these dwellings and their inhabitants could be understood as occupying a liminal place in the world.

6.5 Johaness Point 1

The spatial distribution of houses at Johaness Point 1 seems to reflect two distinct sets of occupations dividing the site into east and west sectors. The earlier wave is represented by the western group of houses, and started during the protohistoric period with house 12 at the northwestern-most end of the site. House 12 was reused later on in the protohistoric period. Houses 8 and 9 were built on top of other structures, indicating that people sharing close kinship bonds used this portion of the site for several episodes (the length of which is hard to determine because structures were not dated). Both structures share a wall, and because house 8 cuts into house 9, it is probably later. This implies that their inhabitants shared *sila*. However, they are not oriented the same way. Indeed, the orientation of house 8's entrance tunnel diverges from all the other *paat* at the site. Perhaps precautions had to be taken regarding the *sila* of house 9's previous occupants, or the later house's midden prevented the inhabitants of house 8 from orienting their houses the same way. Houses 8, 9, 10, 11 are likely socially tied together, and most likely shared a *nunaqqatigiit* type of relationship. However, because they are aligned and their NN distances do not exceed 7m, it is also reasonable to think some might have shared a *silaqqatigiit* type of relationship.

It is here hypothesized that houses 3 to 7, situated in the eastern section of the site, represent the second set of occupations at Johaness point 1. Cultural material found in both house 7 and 16 tend to associate this group with an 18th to 19th century occupation. This seems consistent with the idea that later groups, having been in contact with Europeans, changed subsistence economies, which in turn affected people's spatial needs. Houses 4 and 5 have been identified by Kaplan as two houses which were at some point joined together through the dismantling of the middle wall (Kaplan 1983: 582). However, they retained their distinct entrance passages. This spatial peculiarity exposes a contradictory spatial relationship. While all *ilagiit nangminariit* inhabiting the dwelling would have shared interior space, they made a point in keeping two distinct links to the outdoors. It can be argued that while sharing a *silaqqatigiit* type of relationship, the extended *ilagiit* created by the joining of the multiple families who lived inside houses 4 and 5 chose to reduce social tension by keeping two entrance passages. Houses 3 to 7 probably shared a *silaqqatigiit* kind of relationship. However, both groups (houses 8 to 12, and houses 3 to 7) most likely can be regarded as *nunaqqatigiit*.

While they share similar assemblages, houses 1, 12 and 13 were spatially built at considerable distances from the other, and along different beaches. This would suggest that their inhabitants did not share kinship bonds, although they may also reflect a social statement of segregation. House 17, dated to the late 19th to early 20th century is one of the most extreme outliers of all Labrador Inuit coastal sites (Figure 10). This location supports the hypothesis that Moravian influence was instrumental in the self-segregation

of late historical houses. These outlier houses can thus be regarded as having a *nunaqqatigiit* kind of relationship with each other, and other houses at Johanes Point 1.

6.6 Ikkusik

Both the Stienen diagram and the Empty space distance diagram divide the site area into three sections. This spatial arrangement of houses seems to reflect simultaneous as well as sequential occupations of at least three distinct extended *ilagiit*. Indeed, each area features houses of the protohistoric and historic Inuit periods, and each area is separated from the others by at least 36.58m. Within each of these, houses would have shared a *nunaqqatigiit* type of relationship, perhaps even *silaqqatigiit,* while from one group to the other, houses would have been considered as *nunaqqatigiit*.

Within each house concentration, some dwellings are spatially associated. Houses 5 and 6 from the central area directly shared *sila* with the past inhabitants of houses 17 and 18. Perhaps this represents the reoccupation of the larger communal house structures (houses 17 and 18) by smaller *ilagiit* associated with the late 19th century, when houses reverted to smaller sizes.

Houses 2, 7 to 11, are all associated with the communal house period, and share the same mound (without signs of the disturbance sometimes associated with sequences of occupations), which suggest they were united by a *silaqqatigiit* type of relationship. House 12, built slightly at the back, has its own mound. This suggests that while it has a spatial relationship with houses 2, and 7 to 11, it did not share *sila* to the same level.

Houses 12, 21-22 and 23 seem to have shared a *nunaqqatigiit* type of relationship with the other houses at Ikkusik. However, the fact that they were built one on top of the other, reflects the likelyhood that they shared strong kinship bonds together.

Ikkusik has 4 distinct isolated structures. House 1, 3, and 4 were built at considerable distances from other houses, which suggests a will to express social distance, and perhaps a *nunaqqatigiit* relationship.

Early solitary house 16, dated to the protohistoric period, could be interpreted as pioneering joint *ilagiitnangminariit* occupation. Because dates have not been provided for structures 1 and 4, it would be difficult to propose the same explanation for their apparent isolation. Indeed, their shape and sizes also could associate them with late 19th century Inuit, whom, without sharing kinship bonds with previous occupants of the site, overwintered there nonetheless. Finally, their possible significance as social outliers is not to be discounted. These houses could have been inhabited by families or individuals whose social condition or status prevented them from settling near other houses.

6.7 Nachvak Village

The linear arrangement of houses 10 to 17 combined with the fact that NN do not exceed 9.20m, suggest that these houses' inhabitants shared close kinship bonds, and probably a *silaqqatigiit* type of relationship. Houses vary in shape and size, and could thus represent different periods of occupation. However, as previously discussed, chronologies cannot be established based on these characteristics alone.

It cannot be ascertained that houses 2 to 5, and 6 and 7, shared a socio-spatial relationship with houses 10 to 17. However, houses 3 to 5 could have shared a *silaqqatigiit* relationship, as did houses 6 and 7, while house 2 likely was separated in time, if not only in space, and reflects a *nunaqqatigiit* way of sharing the land.

Houses 2, 6 and especially 7, are the largest structures on site, and are not included within the line. Their increased size perhaps marks the beginning of the contact period (for house 2) and historic period (for houses 6 and 7), after which the population of Nachvak Village likely moved to Kongu. This would seem consistent with the hypothesis stating that gradually through contacts with Europeans, the spatial logic of house arrangement shifted. This is especially true given the fact that communal houses could shelter many more people, and thus be more isolated as structures, while their inhabitants found themselves closer to many more people than ever before.

Houses 1, 8 and 9 are the greatest outliers at the site. Houses 8 and 9, however, have each other as nearest neighbour, and perhaps reflect a pioneering occupation. Over all, the site of Nachvak Village seems to be the result of several occupational sequences, within which can be read both *silaqqatigiit* and *nunaqqatigiit* relationships.

6.9 Komaktorvik 1

At Komaktorvik 1 clusters and isolated structures are associated with different time periods, and share a *nunaqqatigiit* type of relationship. The distances between each of these components suggests that, as they built their houses, the site inhabitants wished to spatially express the social distance they felt towards earlier occupants. This seems

especially true in the cases of house 1 and 11, which are the most isolated structures in terms of NN distances.

Dwellings 4, 5, 6, 7, and 8, 9 and 10 were associated with precontact Inuit (Peter Whitridge, personal communications 2008). While the distance between the two house groups tends to indicate a break in kinship continuity, the fact they were built in the same area suggests that there was some degree of social recognition between their inhabitants. Within the cluster composed of houses 8 to 10, nearest neighbour distances indicate kinship bonds between the inhabitants, because they are larger than *illuit* 4 to 7 and are not arranged sequentially. Houses 8 to 10 might reflect the beginning of changes in subsistence economies historically observed during the 18th century. The spatial effect of this shift would be, first, larger distances between each *illu*'s *paa* (tributary to the fact that each house itself is larger), resulting in the dilution of direct outdoor interaction zones, and second a different spatial positioning of houses, which encourages each dwelling's inhabitants to focus their social interactions on members of the dwelling, and not amongst dwellings.

House 1 is a little cluster of 2 houses, where a smaller one (house 1b) was built right within the larger (house 1b). House 1b is associated with the late historic period (late 19th century), when people seem to have abandoned, especially in most northern communities, more communal life-styles to revert back to smaller production units (usually consisting of one or two *ilagiit nangminariit*). The superimposition of these two houses suggests that the inhabitants of house 1 and house 1b shared close kinship. Of course, an opportunistic

reuse of structure is also a plausible hypothesis. However, I argue here that it seems unlikely since this superimposition implies a direct sharing of *sila*, and would probably not happen unless some kinship link could be called upon.

The latest occupation at Komaktorvik 1 is associated with the house 2 complex. All of the structures share the same mound, and some are even built on top of previous ones (2d, e, and f). This indicates close relationship between their inhabitants. However, NN distances vary greatly, which suggests that kinship bonds were not evenly spread amongst the inhabitants of the house 2 complex. Furthermore, each house is pointing in a different direction (resulting in a greater distance between each *paa*), with their backs to one another (the same phenomenon can be seen at the site of Big Head 1, Seven Islands Bay). These combined observations suggest that the inhabitants of house 2 complex shared kinship bonds established through economic partnerships (closer in the case of overlapping houses). Each economic unit, however, seems to have desired a dilution of interaction zones. The result of this divergence in entrance tunnel directions is that the inhabitants of the house 2 complex did not have equal views over the fiord (presumably of seals, bears and other travellers), a characteristic shared by all other houses at the site, nor were they all sheltered from the wind. On the other hand, less importance might have been given to orienting houses towards the fiord. In either case, this layout is a late 19th century peculiarity, and had a definite impact of the way people interacted on site, and related to past inhabitants.

6.9 Nunaingok 1

Figure 28 shows that NN distances at Nunaingok 1 are quite disparate, suggesting that interactions between houses were not deliberatly cultivated. The Stienen diagram and Empty space distance diagram show that houses 6 and 7 are the closest related dwellings on site. The fact that their *paa* almost join further suggests a close kinship relation between the two houses. An interesting phenomenon is observable in this area of the site: houses 5 to 10, situated at a maximum distance of 6.21m, are oriented towards one another, creating the impression of a shared space where outdoor interactions would have been concentrated, situated at the exit of the entrance tunnels. Although they may have been built this way for practical reasons influenced by environmental variables, this seems an interesting, and somewhat unique 19th century display of affinity amongst the inhabitants of different dwellings. While it is situated near these structures (8.30m), house 6's entrance passage does not point towards these other dwellings, and so their inhabitants would not have been able to access as directly the area of possible interaction described above. Houses 8 and 9 have not been dated, but the fact that they are built one on top of the other (9 above 8) tends to indicate that their inhabitants shared kinship bonds.

Houses 1 and 2 share the same mound, and have been respectively associated with the late historic and modern periods. Interestingly, Stewart (1979) mentions that these houses may have been reused later on, for he thought he could observe smaller structures within houses 1 and 2. Like the house 2 complex from Komaktorvik and houses at the site of Big Head 1, their entrance tunnels are not facing the same direction. Whether this was for practical reasons remains to be examined by further research. However, it is still

possible to suggest they were built to express a certain social distance, while still being close enough to profit from mutual assistance in various socioeconomic activities.

There are five isolated structures at Nunaingok 1. House 3 is the earliest documented structure at the site. It is associated with the protohistoric period (Stewart 1979), and may reflect a pioneering occupation. Houses 12 and 14, of about the same size, are also isolated structures, and may be interpreted the same way, although their small size is not necessarily typical of protohistoric occupations, as was explained above. Houses 3, 12 and 14's entrance passages face different ways than other houses at the site. In this regard the most extreme outlier is house 13, which is also characterised by it's NN distance, which is the largest at the site. While Stewart does mention its peculiarly isolated spatial position, he did not excavate it. Its size and segregated location suggests that it was built during the 18th century. Without further research, though, nothing more can be said.

House 11 is the largest dwelling at Nunaingok 1. Associated with the 18th century, it stands far enough apart from any other dwelling to be singled out. Once again, it would appear that 18th century communal or corporate types of dwellings were built apart from previous houses on a site.

6.10 Concluding observations on the Spatial Patterning of Houses within Labrador Inuit Coastal Settlements

Nunaqqatigiit relationships are found in every settlement examined in the present thesis. This spatio-temporal type of relationship is immediately created as people settle in

an area that had been inhabited before: the land unites the people that dwell upon it. *Silaqqatigiit* relationships are different in the sense that bonds are not diluted by time: while *nunaqqatigiit* implies only a sharing of place, *silaqqatigiit* implies a sharing of both place and time, and a mutuality of *sila*. However, the latter is much harder to identify within archaeological settlements. Some cases can comfortably be interpreted as *silaqqatigiit* occupations, for example when houses share sod mounds that do not show traces of the disturbance associated with chronological breaks (such as overlapping walls). On the other hand, houses built farther apart may also be united by *silaqqatigiit*. Following this line of thought, it may be argued that there were different degrees of intensity in this type of relationship, an intensity which was expressed spatially. Much the same way, *nunaqqatigiit* relationships also could be of variable intensities, and these were also expressed spatially. Indeed, while houses may have been far from each other in time, their inhabitants' memories or *atiq* could have contributed in bringing them closer in space.

It thus appears that the spatial patterning of houses within Labrador Inuit coastal settlements may be considered in terms of a series of increasing socioæ-spatial removes (Figure 28). The closest expression of clustering would be the grouping of living areas, presumably occupied by one or two *ilagiit nangminariit* ("those who share a part of the closest) within the same house, as reflected in multilobed structures sharing an entrance tunnel. This level of kinship was elaborated during the communal house phase of the 18th century. At the next remove are houses grouped into shared-mound clusters, either

arrayed in a line or clumped. It could be argued that both of these spatial patterns reflect *silaqqatigiit* types of relationships. At another remove are houses and house groups that are relatively distant from other houses at the settlement. This suggests more distantly related or even unrelated factions. Finally, at the farthest remove are outlier houses. Both of the latter could be seen as expressions of *nunaqqatigiit* types of relations.

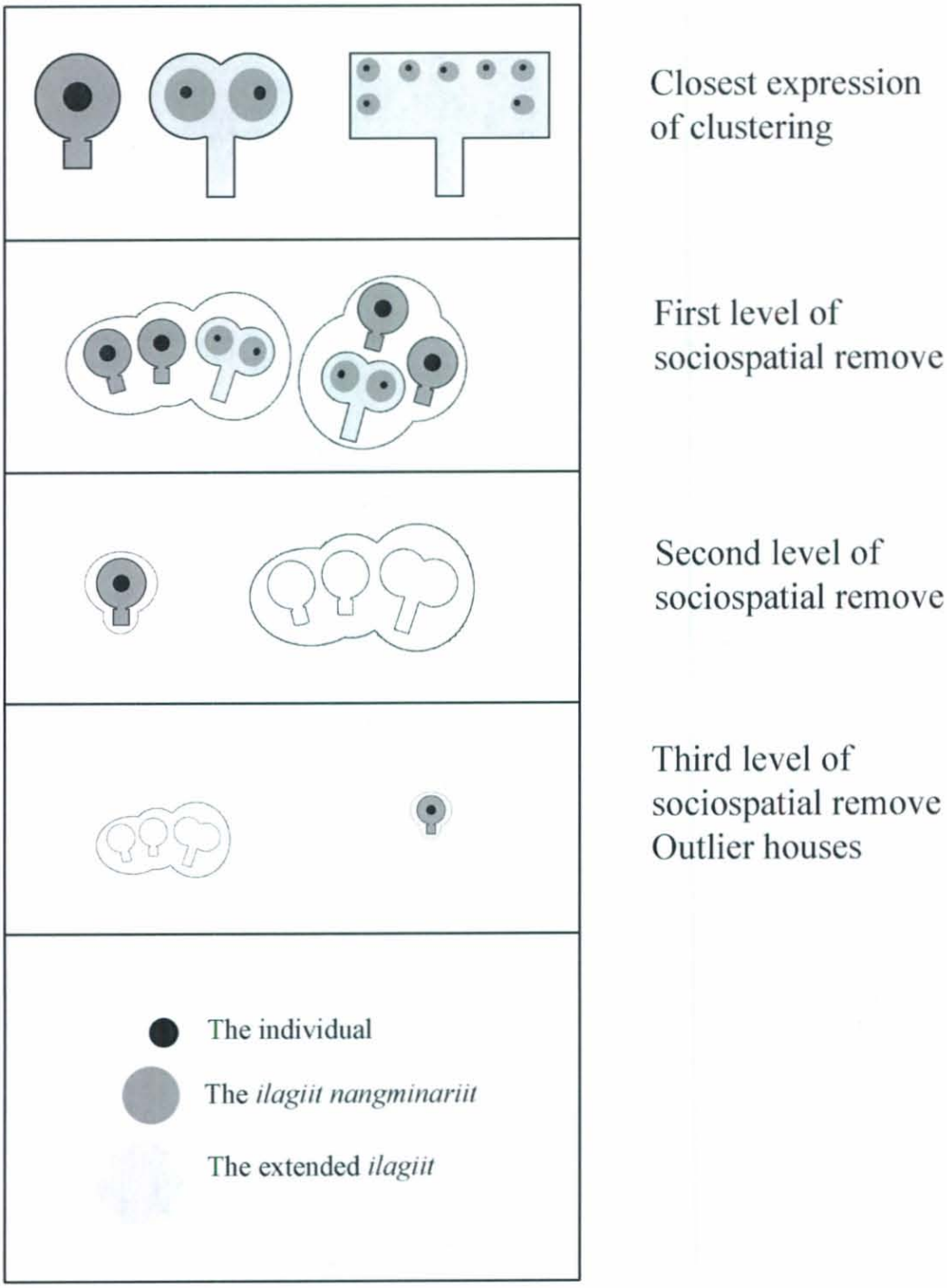

Figure 29. Gradation of socio-spatial remove observed within and amongst Labrador Inuit costal settlements.

Chapter 7 Conclusions

This thesis is an examination of long-term spatial organization of 16th to 20th century Labrador Inuit coastal settlements, and of the role played by Inuit perception of otherness, time and space in the spatial positioning of houses within sites. I argue that these abstract notions were key elements in the reproduction of social relations, actions, and units, as well as major determinants in people's interaction with *nuna* (the land), and everything that lives, dwells, or simply *is* on it. Previous research in archaeology has demonstrated that the spatial distribution of dwellings in a site reflects the social decisions made by past people to regulate interactions between members of the group (Grier & Savelle 1994).

This thesis adopts a multidisciplinary and geographically broad approach to the study of Labrador Inuit spatial organization. The goals, methods and conclusions of this research were informed by several methodologies and theories of more general interest to archaeology, namely materiality, landscape archaeology, spatial analyses, and ethnolinguistics. The concept of materiality was fundamental here, for houses as material object stand at the core of this research. Here, it is understood and accepted, first, that physical things have the power to shape and influence the living. Landscape theory was also vital for this thesis, because it provides the conceptual tools that are essential for understanding the Inuit physical and social environment, its symbols, and corporeality. For the Inuit, people, houses and the landscape are mutually constituted.

This thesis explored the Inuktitut meaning of different elements of Inuit houses, body and landscape, and how they can help interpret the archaeological record at hand. The

Inuktitut language allows us to understand the extent to which the Inuit body can teach us about Inuit technology, social organisation, symbolic and religious thought, and perception of the natural world. Finally, the present work combines all the previously mentioned wider theoretical frameworks to spatial studies and settlement pattern analyses.

This research follows and builds upon an extensive body of work conducted by previous researchers on Labrador Inuit prehistory and history. The primary goals of early archaeological research in Labrador were to document the evolution of settlement patterns in pre-Inuit or Inuit cultures, focusing on architectural trends as well as group cultural ecology. In her 1983 PhD thesis, Kaplan discusses Inuit cultural changes that occurred during the last 500 years in central and Northern Labrador. The extensive record of Inuit settlements, including maps and house plans, provided by her thesis was the foundation of the present project. More recent archaeological research in Labrador includes various studies of long-term changes in Inuit social structures, through settlement patterns, architecture, and environmental data. This thesis also had to include work conducted in northern Québec, the Central Arctic and the Central High Arctic, which considered the spatial distribution of pre-Inuit settlements, and Inuit settlements.

The earliest claim for the Inuit occupation of Labrador is made for Staffe Island, around the 13th century A.D. However, such an early date as not yet been documented from other archaeological sites in Labrador. It is more widely accepted that Inuit populations migrated to Labrador around the 15th century A.D. Most precontact Inuit

winter settlements (16th-17th century A.D.) are associated with a maritime-oriented economy that focused on whale hunting, a subsistence activity of high social and symbolic significance. Precontact fall-winter Inuit houses usually consisted of small semisubterranean sod wall structures, with turf and skin roofs, although there were larger multi-lobed structures.

During the 16th century, changes in regional subsistence economies occurred throughout the Canadian Arctic, including the decline of whale hunting over much of the Eastern Arctic, and Labrador Inuit culture gradually differentiated and specialised. This period is also associated with a serious demographic drop, and the first signs of contacts with Europeans. Winter settlements containing communal sod houses were built in inner bays and along the coasts. This type of house was elaborated during the 18th century, when contacts between Europeans and Inuit became more frequent, especially in the regions directly touched by the Moravian missions (established 1771).

Near the end of the 18th century, Moravian missionaries used economic strategies to challenge the activities of powerful Inuit men. Because of this and since whale and walrus populations were decreasing, large sea mammal hunting was almost entirely abandoned, which undemined the need for cooperative hunting techniques (further discouraged by the introduction of firearms). Four different categories of sod houses are associated with the 19th century: large communal houses similar in form to those of the 18th century; smaller semisubterranean sod houses; small single-family dwellings with side walls longer than rear and front walls; and small rectangular sod houses constructed on the ground surface,

with stone foundations. This particular period is a good reminder that, although house form can help determine general intra-site and inter-site chronologies, it should always be used with care and combined with other chronological markers.

The present research, focused on Inuit sod houses settlements, for which maps based on actual measurements were produced and available, and containing structures dated to at least two of the following time periods: precontact Inuit (15th to 16th century), early-contact/protohistoric (16th to 17th century), historic (late 17th to mid-19th century), late historic (mid-19th to early 20th century). Iglosiatik 1 and Nachvak are exceptions, and the reason why they were incorporated in this research has been explained. Ultimately, the following 9 sites were selected: Eskimo Island (GaBp-3), Avertok (GiCb-1), Karmakulluk (GjCb-6), Iglosiatik (HbCh-1), Johaness Point 1 (IbCq-1), Ikkusik (IdCr-2), Nachvak Village (IgCx-3), Komaktorvik 1 (IhCw-1), and Nunaingok 1 (JcDe-1).

The exploratory tools favoured for the present research were the Stienen diagram, and the Empty space distance diagram. In order to visualize general patterns and trends in the spatial arrangement of Labrador Inuit coastal sites, each house's nearest neighbour (NN) distance was recorded (for a total of 142 houses), and a typical cloud of points graph was generated (Figure 10).

This research project was realized following a set of multiple interconnected objectives, which were as follows:

- *Conduct a comparative analysis of Labrador Inuit intrasite spatial arrangement of houses based on the study of quantifiable trends observed within Labrador Inuit coastal settlements featuring structures that have been dated to at least two of the following period: protohistoric Inuit (15th to 16th century), early-contact/protohistoric*

(16th to 17th century), historic (late 17th to mid-19th century), late historic (mid-19th to early 20th century) and modern (20th century to today);

- *Investigate the relationships existing between these spatial patterns and Inuit social phenomena as defined in ethnohistorical records and linguistic studies of Inuktitut;*

- *Investigate the possible cultural explanations for the segregation of certain dwellings (i.e. outlier houses).*

The data generated in this study were applied to the following questions:

- *Can point pattern analysis methods be used to highlight possible trends and patterns in the intrasite spatial arrangement of houses within Labrador Inuit coastal sites?*

- *Is there evidence for a correlation between the spatial positioning of houses and the social relationships, or lack thereof, which existed between dwellings' inhabitants?*

- *Can the evidence of Inuit cultural conception of otherness, space and time in the ethnohistorical record, be tied to the spatial positioning of houses within settlements?*

It can be said that the above-mentioned objectives and research questions were satisfactorily met and answered. The present thesis demonstrated that general trends could be deciphered from the spatial patterning of houses within Labrador Inuit costal settlements. It was determined that the most common NN distances are situated between 3.1m and 6.2m (for a total of 46 sod houses) followed by 6.3m to 9.4m (for a total of 34 sod houses). Second, NN distances tend to increase and become more disparate from southern to northern locations. More precisely, while distances below 12.5m remain essentially constant throughout all sites, distances above 18m drastically increase starting at Iglosiatik (Ig). Finally, sites with components with the wider range of dates also

exhibit a wider range of NN distances, while others present more homogeneity. This observation can be explained by the fact that spatial needs, reflected in the spatial patterning of houses (as well as in house architecture and internal arrangement of house features), fluctuate through time. The wider timespan a site covers, the greater the variability in spatial arrangements it will display. Furthermore, the most extensively a site is inhabited, the more elaborate its spatial arrangement becomes.

The ethnographic data collected in the present work suports the following assertions. First, for the Inuit, social distance and spatial distance are directly proportional. Second, abandoned houses or house ruins may in fact have been considered inhabited by the Inuit, just in a less tangible manner than in the case of simultaneous occupations. Third, Inuit houses, just like Inuit bodies, can be used to communicate, and feel, social closeness or distance. Fourth, the concepts of *silaqqatigiit* and *nunaqqatigiit* lie are essential for understanding the Inuit spatial patterning of houses. The following portrait of the Labrador Inuit spatial patterning of houses can be sketched.

The spatial patterning of houses within Labrador Inuit coastal settlements may be considered in terms of a series of increasing socio-spatial removes (Figure 29). The closest expression of clustering would be the grouping of living areas, presumably occupied by one or two *ilagiit nangminariit* ("those who share a part of" the closest) within the same house, as reflected in multilobed structures sharing an entrance tunnel. This level of kinship in elaborated during the communal house phase of the 18th century. At the next remove are houses grouped into shared-mound clusters, either arrayed in a

line or clumped. At another remove are houses and house groups that are relatively distant from other houses at the settlement, and suggest more distantly related or even unrelated factions. Finally, at the farthest remove are outlier houses. Finally, since estrangement and outlierness could be avoided in many ways, outlier houses are not just spatial aberrations but should be examined as essential Inuit cultural phenomena.

7.1 Future Research

While it did bring forth essential elements of Inuit cosmology, and demonstrated their utility for the understanding of the Labrador archaeological record, this thesis is only a sketch of its complexity. A set of potential research avenues is revealed at the conclusion of this research. Inuit phenomenology was brushed upon, as the body and its symbolic ramifications were discussed, but not formally included in this research. It would indeed be interesting to further our understanding of past Inuit perception of space, in terms of what was considered close or far. The nearest neighbour distances calculated for this research could provide foundation data for such an examination. Another topic pertaining to Inuit phenomenology would be "settlement musicality". As one examines each site map and Stienen diagrams, a certain rhythm seems to accompany the reading, and the eye is brought at different speeds to different areas of the site (presumably faster where houses are most concentrated). This brings to mind the importance given by the Inuit to the visual and sonorous quality of footsteps over the Labrador winter landscape. It is likely that areas of heightened significance, such as a particular dwelling or outdoors area, would be visually highlighted by a concentration of foot tracks (*tumiujaq*).

Following this, the sounds of footsteps would also be more intense around these areas. Seeing how Inuit mark the difference between places "with footsteps" *tumitaqaqtuq* (associated with safety), and places "without footsteps" *tumitaittuq* (considered to be the realm of the *inua* "spirits", a place of insecurity), the spatial positioning of houses could be considered as a reflection of each house's inhabitants' status within a group. Furthermore, site musicality could provide useful foundation material to further explore outlier houses, since they often stand at the margin between *tumitaqaqtuq* and *tumitaittuq* places.

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