

CHRONICLING SIGLIT IDENTITIES: ECONOMY, PRACTICE, AND ETHNICITY IN THE WESTERN CANADIAN ARCTIC

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ABSTRACT

The study of hunter-gather identity is mired by theoretical barriers and “untidy” datasets. A practice-centered approach offers a means to revive a meaningful archaeology of ethnicity for northern foraging societies. This paper utilizes faunal remains and settlement patterns to chronicle the development of hunter-gatherer ethnic groups who inhabited the western Canadian Arctic during the fifteenth to nineteenth centuries AD. These peoples, known collectively as the Mackenzie Inuit, or Siglit, were by the late nineteenth century segregated into as many as eight distinct territorial groups, each supported by a unique specialized economy. Engendering culture histories for these groups—understanding the development of this ethnic diversity—requires a detailed historical perspective that incorporates both instrumentalist and primordialist arguments.

KEYWORDS: ethnicity, identity, practice, economy, Thule Inuit, Inuvialuit, Mackenzie Delta, zooarchaeology

INTRODUCTION

The study of ethnicity is a fundamental aspect of archaeological inquiry, which can have direct relevance to modern social politics (Shennan 1989:5–6; Smith 2004:2). Not surprisingly, the identification of distinct cultural identities in the material record is often central to epistemological and heuristic debate among theoretically oriented archaeologists (for overviews of this vast literature, see Jones 1997; Smith 2004; also Lyman and O’Brien 2004; O’Brien and Lyman 2002 for related discussion). Of particular long-term interest is the relationship between the distribution of material remains and prehistoric social groups (e.g. Binford 1968; Binford and Binford 1966; Bordes 1961, 1973; Dobres 1999; Ford 1954a, 1954b; Hodder 1978; Spaulding 1949, 1953).

Despite the large amount of literature devoted to this topic, researchers “continue to experience difficulties in developing an archaeology of ethnicity” (Stark 1999:26), especially for prestate societies and hunting and gathering groups (e.g., Sassaman 1998; Stone 2003). Indeed,

hunter-gatherer ethnicity has often been rejected as a course of study, primarily because it is viewed as tautological in strict ecofunctionalist/adaptationist frameworks (Chrisomalis and Trigger 2004:424–428; Dietler and Herbich 1998:233; Dobres 1999:11–17; Shennan 1989:10–13; Stark 1999:26). In this paper, I apply an alternative approach to hunter-gatherer ethnicity that integrates elements of practice theory and instrumentalist/primordialist discourse (e.g., Barth 1956, 1969; Bentley 1987; Jones 1997; Stone 2003). Moreover, this study evokes a “generative” relationship between economic activities—the very behaviors often believed to obscure the analysis of identity in foraging societies (e.g., Sassaman 1998)—and ethnicity. As I explore this relationship, I highlight the potential of analyzing faunal remains within an “historical processual” paradigm to build up culture histories of hunter-gatherer societies (e.g. Pauketat 2001).

Following Jones (1997:xiii), I define an ethnic group as “any group of people who set themselves apart and/or

are set apart by others with whom they interact or co-exist.” I apply the term to small-scale (band-level) societies that are both nominally and organizationally set apart from their contiguous neighbors (see discussion in Eriksen 1993:5–15, Stone 2003:38–41). The following study is organized around the concept, derived from practice theory, that “ethnic identity is...rooted in ongoing daily practices and historical experience, but also subject to transformation and discontinuity” (Jones 1997:13). This approach is valuable because it acknowledges the historically contingent aspect of identity, while at the same time recognizing its transient and situationally dependent nature. That the concepts explored here are traditionally applied to the study of affinities among more complex (and populous) societies (e.g., Bentley 1987; Jones 1997) is largely irrelevant. The shared behaviors that create group affinities can be perceived to operate at multiple scales, from the multifamily band to the state-level corporate group, and indeed are particularly prevalent among small groups of hunter-gatherers (see discussion below).

Using this theoretical vantage, I will catalogue the economic practices that reinforced affinities and created differences between contemporary groups of Mackenzie Inuit (or Siglit), a hunter-gatherer people who occupied the western Canadian Arctic from ca. AD 1400 to AD 1850. According to ethnohistoric sources, the Mackenzie Inuit were subdivided into at least seven, and perhaps as many as eight, named territorial groups or “socioterritories” (after Burch 1998). Each of these socioterritories practiced a unique subsistence economy focused on a specific area of ecological productivity (Betts 2005a). As used here, the terms “territorial group” and “socioterritory” are synonymous with the expression “ethnic group”; both refer to Mackenzie Inuit groups whose otherness and togetherness was signified by name.

This paper has two primary goals: (1) to chronicle the development of Mackenzie Inuit ethnic groups and (2) to explore the theoretical and methodological requirements necessary to produce such a narrative from the hunter-gatherer archaeological record. A chronicle is simply a description, often in chronological order, of attributes and events—it can be understood as a structured catalogue of specific phenomena in which few, or no, explanations are offered for the patterns being described (O’Hara 1988). Good archaeological chronicles incorporate inter- or intra-regional variability within a detailed diachronic sequence. When explanations are posited for such chronicles, culture history is produced (Lyman et al. 1997; O’Brien and

Lyman 2004:178). Essentially, I aim to generate culture histories for Mackenzie Inuit societies by tracking the development of spatially segregated economic and settlement routines and placing these developments within a context of cultural, subsistence, and settlement traditions.

PRACTICE AND HUNTER-GATHERER ETHNICITY

As Wobst (1978:307) described over twenty years ago, archaeologists typically define hunter-gatherer ethnic groups (based on ethnographic and ethnohistorical records) as:

a unit bounded in space and personnel whose members carry out a number of tightly constrained, closely replicated behaviors concerned with boundary maintenance, group affiliation and group identity...to set themselves off from members of similar such units, in response to stimuli from their natural and social environment.

This definition is clearly applicable to Mackenzie Inuit socioterritories as they were described ethnohistorically and should also be applicable to their prehistoric ancestors. Yet as Wobst (1978, 1999) himself points out, adopting this model may be problematic because these traits are often difficult to tease out of the archaeological record.

I believe this problem is a conceptual one, rather than an issue with the resolution of the archaeological record. As mentioned above, there is a pervasive sentiment amongst archaeologists that the study of ethnicity in “simple” societies is ultimately tautological (Stark 1999:26). This stems from the belief that the “normative” study of ethnicity in foraging societies is obscured by the overwhelming relationship between environment and the material record (see discussions in Johnson 1999 and Lyman and O’Brien 2004). Within the ecofunctionalist framework, archaeologists interpret variability in the distribution and frequency of the hunter-gatherer archaeological record as extrasomatic adaptation (Binford 1965). Here differences in human behaviors represented by the archaeological materials are understood to be epiphenomenal, the byproducts of an overall adaptation to a particular set of environmental stimuli.

This is where the tautology arises, because in this framework any patterning in archaeological signatures that is covariant with environment is always most parsimoniously explained by function or adaptation (Sassaman 1998:93; Wobst 1999:127; see also Roe 1995:34–35). Thus, in situations where large proportions of the archae-

ological record represent a direct adaptation to the local environment (which applies to all hunter-gatherers), it is impossible to isolate the potential social meanings from the overarching functional adaptation (Betts 2008:203; Chrisomalis and Trigger 2004:424; Jones 1997:116–118; Shennan 1989; Stark 1999:26).

Recognizing this problem, archaeologists have suggested the normative study of nonfunctional, or “stylistic,” traits to reveal past social identities (e.g., Binford 1965; see discussion in Jones 2008:326). This focus on stylistic attributes has dominated the study of archaeological ethnicity among prestate and state societies for many decades (Carr 1995; Carr and Neitzel 1995; Jones 1997; see also papers in Auger et al. 1987; Shennan 1989). While recent theoretically complex studies of material style have revealed important insights into the ethnicity of prestate societies (Sassaman 1998; Stone 2003), many analyses are stymied by the ubiquitous problem of shared material types among foraging groups (Hodder 1982; Wiessner 1983; see discussion in Wobst 1999). In many cases, while ethnographic and ethnohistoric evidence indicates the likely presence of unique group identities in the past, style-based approaches to material culture will not neatly parse these identities in the archaeological record (Croes 1997; DeCorse 1989; Hodder 1982). In fact, the “untidiness” of the material record is often considered to obscure the exploration of ethnic identities in the archaeological record (Lucy 2005:93; Shennan 1989:13; Stone 2003). For this reason, Jones (2008:327) suggests that “it cannot be assumed there is any fixed relationship between particular material types and particular identities.”

By focusing on stylistic attributes, we relegate ethnicity studies to a tiny (and often fuzzy) fraction of the available hunter-gatherer archaeological record and dismiss those fundamental subsistence, artifactual, settlement, and architectural data that directly describe their everyday ways of life. The challenge of hunter-gatherer ethnicity studies lies in disentangling the functional attributes of the archaeological record from their social meanings. We must concede that the archaeological record of foraging peoples, who are intimately integrated within local ecosystems, must reflect functional and environmental realities. Yet human interactions with their environment (i.e., functional behaviors) are known to be crucial components of hunter-gatherer identities (Bird-David 1990, 1992; Condon et al. 1995; Kusimba 2005; Sassaman 1998). If we can develop a conceptual means to access the potential social meanings embedded in these “functional” datasets

(i.e., to conduct normative research on nonstylistic data), we can overcome this debilitating issue.

A practice-centered approach to ethnicity provides a potential framework from which to begin this exploration. As proposed by Bentley (1987:36), group identities develop through the recognition, perhaps unconscious, of shared habitus. Defined by Bourdieu (1977), habitus represents the individually unique, and largely unconscious, collection of dispositions arising from recurring experience. These dispositions establish both how the world is conceptualized by individuals and how they act in it (Dornan 2002:305). Practices, or actions, express these dispositions and therefore directly reflect habitus (Pauketat 2001:80). Like dispositions, practices are structured by habitual experience within a social and material environment; however, practices are sometimes altered in the context of changing social and material conditions, directing new structure. Put simply, practices “are shaped by what came before and . . . give shape to what follows” (Pauketat 2001:74). The sharing of practices by individuals represents the foundation of shared identities, as Bentley (1987:32) states: “sensation[s] of ethnic affinity are founded on common life experiences that generate similar habitual dispositions.” To Bourdieu (1977:164), the dispositions of habitus tend towards a correspondence with the “material conditions of existence.” It follows then, that social identities develop through participating in the largely routine practices of everyday life that are exclusive to unique material and social environments (Bentley 1987:33; see also Bourdieu 1977:78).

Routines, or the habitual repetition of practices, are a key component here. Bourdieu (1977) clearly rejected the concept of intentionality, suggesting that much of everyday practice was habitual and cyclical, and therefore habitus and its dispositions were primarily the result of practices that were unconsciously routinized (Dornan 2002:307, although see Giddens 1979, 1984 for alternatives). The day-to-day, season-to-season, and year-to-year reproduction of economies, settlement patterns, technologies, and social relationships necessary to meet the demands of the local environment create a unique and cyclic “rhythm of living” (Bentley 1987:33). Since habitus is a primary structuring component of affinities, and habitus is the quintessence of shared practice, ethnic affinities can be understood to be provoked and reinforced by these shared and cyclical practices (Bentley 1987:32). This concept of ethnogenesis is sometimes called “primordialist” because it suggests that social identities are fundamental, “derived from the affective

potency of primordial attachments” (Bentley 1987:25) to people, places, class, and religion (Jones 1997:65).

In a recent article, Stone (2003:41) suggests that the primordialist (i.e., Bentley’s) model “is hampered in [its] ability to explain variability in the nature of ethnic interaction,” making it “the wrong way to conceptualize” the development of affinities and differences. Stone’s critique largely centers on how the habitus concept minimizes the role of consciousness (intention) in the development of affinities. Along the lines of Barth (1956, 1969), she proposes that an “instrumental” examination of sociopolitical systems, sources of power, and competition for resources must be the focus in ethnic studies in prestate societies because identities are often creatively employed by agents to manipulate access to social and natural resources (Stone 2003:42). Contra Stone (2003:41), I see no reason to believe that “habitus is the wrong way to conceptualize this relationship,” nor do I see it as mutually exclusive from the instrumentalist concept. In fact, Bourdieu (1977:164; see also Pauketat 2001:80) indicates that when confronted with change (as he puts it, a “mismatching” of habitus against changing material conditions), agents are forced into a difficult negotiation as they try to reproduce habitus in the new environment. This does not preclude that this negotiation could not be “improvised,” or creatively structured to exploit new forms of economic and social capital. This allowance might expand the habitus approach beyond Bentley’s original “primordialist” formulation, but it nevertheless provides a means to permit both primordial (unconscious) and instrumental (conscious) actions to engage in the formation and transformation of identities. If we can accept that human identities have a complex developmental history that may be evoked both primordially and instrumentally, and that both concepts are not excluded in a practice-centered approach, we come closer to a means of fully understanding ethnogenesis.

Hunter-gatherer lifeways are characterized by intimate groups of kin sharing in seasonally repeated economic and settlement behaviors on a thoroughly understood landscape. These “material” behaviors represent such a significant portion of daily shared routine in foraging societies that they must also represent a fundamental component of a shared habitus, and thus identity. From a practice perspective, differences in economic and settlement activities as they are manifested on landscapes and between groups must represent a fundamental means in which affinities (and boundaries) are constituted among hunter-gatherers (for a similar interpretation of this relationship see Kusimba

2005:347). As Sassaman (2008:93) states: “labor-action embodies histories of socially valued relations... that link particular people to land and to one another.” Thus among foraging societies, affinities are expressed and embodied, perhaps largely unconsciously, through daily, seasonally, and yearly repeated economic and settlement practices.

Fortunately, these seasonal economic practices are abundantly reflected in the archaeological record through faunal assemblages and settlement remains. While these remains obviously reflect environmental variables, they are nevertheless linked to the social practices that created them. Consequently, “a functional or economic interpretation of a particular nonrandom distribution does not preclude an ethnic interpretation, because ethnicity may have been embedded in variation in subsistence and economy” (Jones 1997:125). Among groups of contiguous hunter-gatherers, the majority of differences in behavior and use of material culture often relate to economic and settlement (i.e., “functional”) practices. The archaeological correlates of such discontinuity are relatively straightforward in the case of hunter-gatherers; contemporary, spatially segregated, and functionally unique differences in archaeofaunal and settlement remains may signify the presence of unique affinities in the archaeological record of foraging societies.

Thus, evidence for the origin of hunter-gatherer identities is to be sought in the early segregation of local and regional economic and settlement activities. Yet practices are historically contingent processes, and hence they are always limited to historical circumstance (Pauketat 2001). If habitus is continually expressed and transformed by practice, and if this alteration only occurs with reference to past practice and existing dispositions, it can only be explained through “reference to the genealogy of practices or the tradition of negotiation” (Pauketat 2001:80), in what has been termed an “historical processual” approach. In short, an historical processual approach presupposes that identities are defined by historical process; human actions at any point in this historical sequence cannot be understood fully without reference to the entire hereditary progression from the earliest archaeological traces to the historical or “modern” behavior of descendant populations. Such an historical analysis requires the integration of multiple datasets of varying complexity (see the exhaustive analyses in Pauketat 2001, 2004). The extensive and lengthy analysis that follows reflects this need for such detail and complexity; I incorporate faunal, artifactual, settlement, demographic, and architectural data to build up Mackenzie Inuit culture histories.

In summary, practice theory provides an opportunity to meaningfully interpret spatially discontinuous patterns in hunter-gatherer economies and settlement patterns along ethnic lines (Dietler and Herbich 1998). By recognizing both the “affective” and “creative” aspects of identity formation, it enables the assignment of cultural meaning to hunter-gatherer spatial (and temporal) chronicles. That is, it allows us to engage in the production of normative culture history (Pauketat 2001:74; for recent discussion see Cunningham 2003; Lyman and O’Brien 2004).

CHRONICLING MACKENZIE INUIT IDENTITIES

If we accept a dualistic primordial *and* instrumental vision of ethnicity, then the focus of identity studies must be to document both the resource and power structures that form the material and cultural environments as well as the daily routines that are reproduced in those environments. As described above, an historical processual approach to the Mackenzie Inuit archaeological record will provide a framework for such an analysis. This analysis begins by documenting a suite of beginning and ending reference events (a lineage of practices and negotiations), which describe the historical environment within which Mackenzie Inuit ethnogeneses occurred. This is followed by documenting the differences in daily economic routines that developed within that environment from a diachronic perspective. Constructing a sequence of historical reference events is relatively straightforward in this instance. The Mackenzie Inuit archaeological record is bracketed on one end by a rich ethnohistoric record produced during the late nineteenth and early twentieth centuries and on the other by a singular cultural event: the migration of ancestral Thule Inuit into an uninhabited western Canadian Arctic, ca. AD 1250 (Friesen 2000b; Friesen and Arnold 2008; McGhee 2000; Morrison 1997b; Yorga 1980).

THE ETHNOHISTORIC RECORD

If we adopt the theoretical position that ethnic groups develop because of exclusive historical contingencies (Jones 1997:13), the ethnographic record that describes contemporary ethnic groups can provide evidence of the unique history of human interactions with the natural and cultural landscape. Thus we begin our investigation of Mackenzie Inuit ethnicities where, in many respects, their chronicle comes to an end—the nineteenth century AD.

The Mackenzie Inuit occupied the Yukon coastal plain and outer Mackenzie Delta region between what is now Barter Island, in northern Alaska, and Cape Parry, east of the Bathurst Peninsula (Fig. 1). Located at the border of the boreal and arctic ecosystems, and influenced by one of the north’s largest river deltas, the Mackenzie Delta region is an ecological crossroads where multiple terrestrial and marine habitats meet and interact. In southern latitudes, deltas typically support a diverse resident fauna, but in arctic areas they also attract vast numbers of migratory taxa (Martell et al. 1984:1). These migratory taxa are gregarious and congregate in large numbers at specific locations on an annual or semiannual basis. This leads to an immensely productive but spatially and temporally heterogeneous resource distribution (Betts 2005a).

During the eighteenth and nineteenth centuries, the Mackenzie Delta was first visited by Euro-American travelers, explorers, and missionaries who directly observed and carefully recorded “traditional” Mackenzie Inuit culture (Armstrong 1857; Franklin 1828; Macfarlane 1891; Mackenzie 1970; M’Clure 1969; Miertsching 1967; Pétitot 1876, 1887; Pullen 1979; Richardson 1851; see also Friesen 2004). This literature has been supplemented by voluminous ethnohistoric reconstructions produced during the early twentieth century (Stefansson 1913, 1919, 2001) and Inuvialuit autobiographies and oral histories (Alunik 1998; Hart 1997, 2001; Nagy 1994; Nuligak 1966; see also Alunik et al. 2003).

Before Euro-American contact, the Mackenzie Inuit were subdivided into eight socioterritorial (after Burch 1998) or ethnic groups. Based largely on the records of Stefansson (1913, 1919) and following Usher (1971), McGhee (1974) documented five Mackenzie Inuit groups (Fig. 2), including, from west to east, (1) the Qikiqtaryungmiut, who occupied the area between Shingle Point and Barter Island; (2) the Kuukpangmiut, who occupied all of Richards Island and the western delta proper; (3) the Kitigaaryungmiut, who inhabited the territory between the Mackenzie River East Channel and the Eskimo Lakes; (4) the Nuvugarmiut who occupied the majority of the Tuktoyaktuk Peninsula and northern Eskimo Lakes; and finally, (5) the Avvarmiut, who lived in the Cape Bathurst area, east of the Kugaluk River. Oral histories (Arnold 1990) and ethnohistoric accounts (Pétitot 1876; Stefansson 1913, 1919, 2001) also describe the presence of two additional Mackenzie Inuit societies: the Imaryungmiut (also known as the Inuktuyuut), who inhabited the central Eskimo Lakes area (Morrison and

Arnold 1994), and the Igluuaryungmiut, the easternmost Mackenzie Inuit group, who inhabited much of the Franklin Bay coast west of Cape Parry, up to and including the Horton River on the Bathurst Peninsula (Morrison 1990). Brief and enigmatic references (P  titot 1876; see also Savoie 1970:131, 215; Stefansson 2001:115) also describe Avvarmiut territory as being divided between two groups known as the Kragmaliveit (Avvarmiut whose main winter village was on Baillie Island) and the Kragmalit (a new group who lived near the Anderson River). The Kragmalit appear to have developed after the area had been substantially transformed by Euro-American contact in the 1900s, and were likely short-lived, a situation congruent with their unusual name (i.e., the lacking a traditional “-miut” suffix) and sparse references to them in oral history.

In the early contact period these territories functioned as the tenure of autonomous social and economic units

that maintained a protected border while retaining crucial trading relationships with other territories in the region (McGhee 1974; Morrison 1990, 1997b). Each group derived its name from a centrally located winter village composed of up to thirty sod and driftwood houses (see Fig. 2), collectively sheltering as many as a thousand individuals (Morrison 1997b). These winter villages could be inhabited from October to March (McGhee 1974; Savoie 1970), when their residents survived largely on stored resources. Importantly, these locations were also occupied in the warm season, when migratory terrestrial, marine, and avian fauna were intensively exploited and stored for winter consumption (Betts 2005a). While Mackenzie Inuit groups did travel seasonally in search of game (McGhee 1974; Nagy 1990; and see descriptions below), and smaller, satellite winter villages within each territory are known (e.g. Stefansson 1919), it is clear that the majority of the year was spent in and around their main winter villages

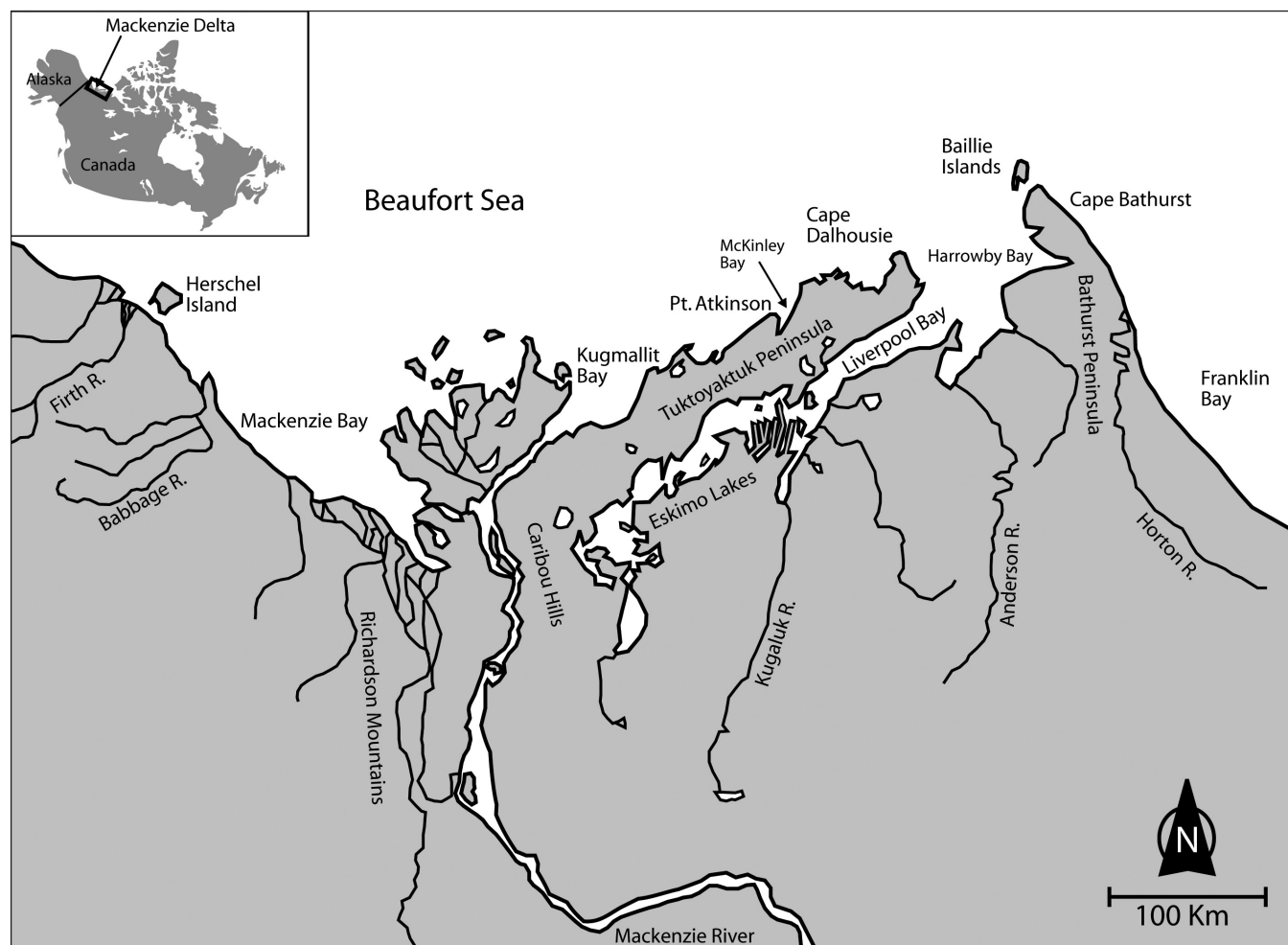


Figure 1: The Mackenzie Delta region (after Betts 2008).

(McGhee 1974:11; see also Richardson 1851:257). The use of the main winter village name as the root of each group name suggests that these villages were iconographically situated in sentiments of identity.

The Mackenzie Inuit were the most territorial foragers in the Canadian Arctic (Morrison 1988:92–93). Ethnohistoric accounts specifically describe hostile interactions between the Qikiqtaryungmiut, Nuvugarmiut, Kitigaaryungmiut, and other territorial groups, which included theft, raiding, dueling, murder, and even warfare (Alunik et al. 2003; Arnold 1990; Morrison and Arnold 1994; Stefansson 2001). Territorial boundaries were well understood, and crossing them without permission had serious consequences (McGhee 1974:10–11; Morrison 1994:318; Morrison and Arnold 1994:124; Richardson 1851:257; Stefansson 2001:109). Undoubtedly then, boundary configuration and maintenance was an important component of group affinities in the Mackenzie Delta region. In fact, the ethnohistorically described territories, their boundaries, and main winter villages embody a history of spatial negotiations between peoples and land-

scapes. Building up an understanding of changes in the distribution of prehistoric Mackenzie Inuit settlements through time may lead to insights about Mackenzie Inuit ethnogeneses.

Consistent with the generative relationship between hunter-gatherer economic practices and identity, the ethnohistoric record documents compelling economic differences between nineteenth-century Mackenzie Inuit societies. The Nuvugarmiut lived on the sea ice during the spring months, where they hunted seals. In the summer, they moved to the interior of the Tuktoyaktuk Peninsula to hunt caribou and waterfowl (Richardson 1851:257). During August and September, they congregated at Nuvurak (their main winter village) for a productive bowhead whale hunt (M'Clure 1969:87). The ethnohistoric record does not describe the Avvarmiut economic round in detail, although it was likely analogous to that of their bowhead whaling cousins at Nuvurak (McGhee 1974:18; see also Richardson 1851:267).

Kuukpangmiut and Kitigaaryungmiut groups also shared similar economies; both took part in a large, but

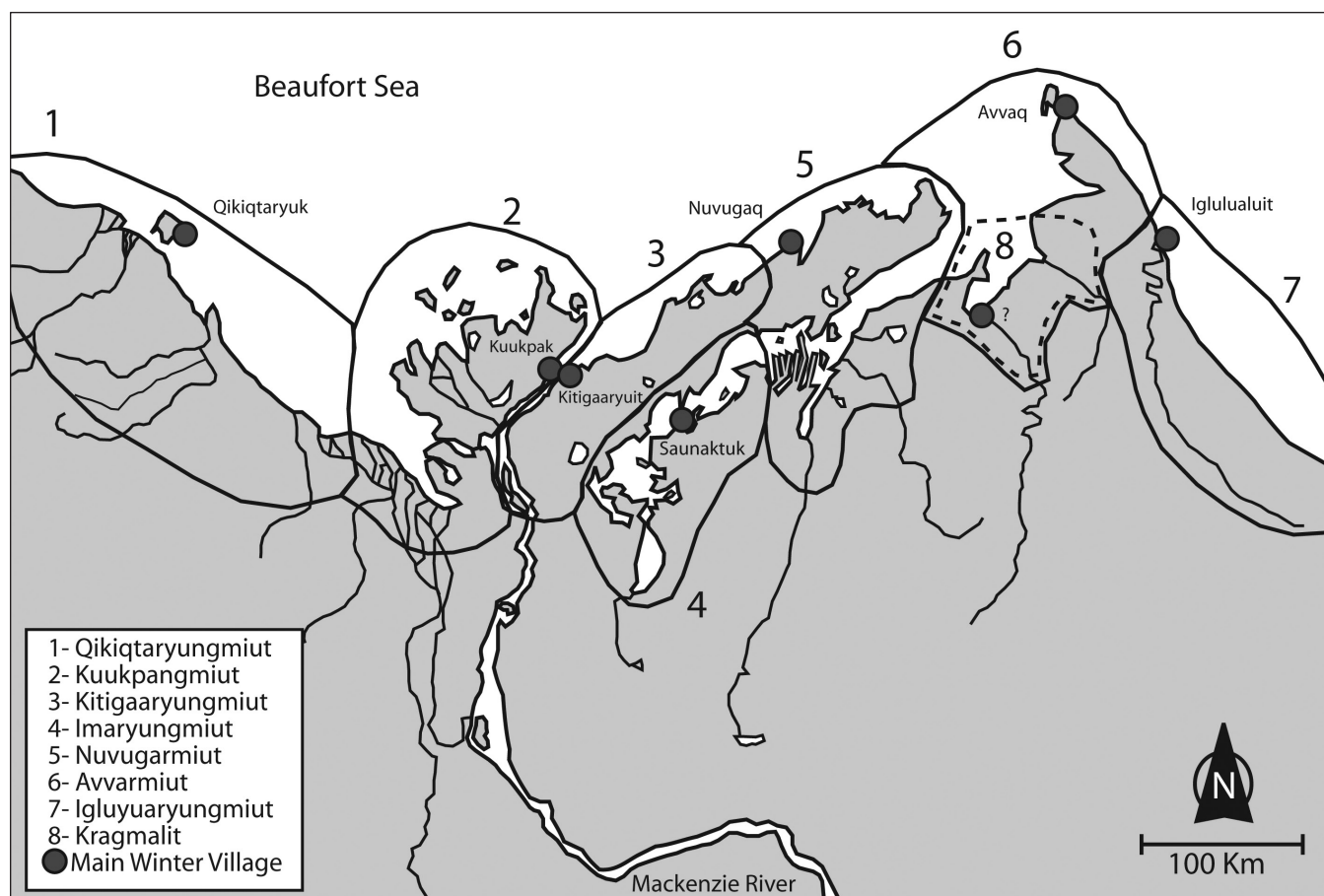


Figure 2: Mackenzie Inuit socioterritories and main winter villages (after Betts 2008).

from all accounts separate, beluga whale hunt in Kugmallit Bay, at the mouth of the Mackenzie River, from July to late August (Nuligak 1966). After this hunt, they both moved to separate fall caribou hunting and fishing stations in the interior. In October, they returned to their beluga whaling villages, Kitigaaryuit and Kuukpak, which they inhabited until January when they again dispersed to interior fishing locations (McGhee 1974).

Like other coastal groups, the Qikiqtaryungmiut also conducted a bowhead whale hunt, but this hunt was focused on the eastward bowhead migration, which occurred shortly after the land-fast ice fractured in July and early August (Franklin 1828:126). This contrasts with the Nuvugarmiut and Avvarmiut groups, who typically pursued bowheads during their westward return migration in the late summer and early fall. Franklin (1928:126) records that the Qikiqtaryungmiut fished and hunted caribou along the Beaufort coast in late spring or early summer, while they waited for the ice to break up. Stefansson documented that they set nets along the coast during the open water season, for both sealing and fishing (Stefansson 1919:186, 1923:74).

Similarly, it is known that the residents of Iglulualuit used nets to catch seals in the silty effluent of the Horton River during the warm season (Stefansson 1919:348), although little else is known about their economic pursuits. Unfortunately, even less is known about the Imaryungmiut economic round, although oral history indicates a focus on the rich fish and waterfowl aggregations of the Eskimo Lakes region (Arnold 1990; Morrison and Arnold 1994).

I have previously (Betts 2005a) documented the near-perfect integration of this socioterritorial economic system with the local environment. As discussed previously, the Mackenzie Delta region represents an extremely diverse and productive but spatially segregated ecosystem. Mackenzie Inuit socioterritories were spatially configured in response to this heterogeneity; most winter villages were located at ecological hotspots, or nodes, where resource aggregations occurred throughout the year. Each node provided access to large terrestrial or sea mammal aggregations as well as nesting or staging migratory waterfowl and spawning fish. Fishing was obviously important, as the boundary configuration of territories seems to have been carefully positioned to provide sufficient access to estuarine environments and spawning rivers (Betts 2005a:Fig. 6).

This economic diversity is among the most prominent societal differences recorded between Mackenzie Inuit

groups. There is little evidence to indicate that any stylistic differences were present in material culture between the different groups. House forms were extremely variable in the region, but there is little evidence to suggest that there were major differences in architectural design between territories. While social and ideological differences may have been prominent, the only recorded instance of such variability was the observance of different taboos governing the cooking of caribou and bird remains between the Nuvugarmiut and Kitigaaryungmiut (Stefansson 2001). As limited as this evidence is, it nevertheless reinforces the link between historic Mackenzie Inuit foodways and group identity. Nevertheless, several crucial economic similarities exist between groups that must be explained.

THE THULE MIGRATION

All Mackenzie Inuit groups are descended from ancestral Thule who immigrated into an uninhabited western Canadian Arctic in the thirteenth century AD (Friesen and Arnold 2008; McGhee 2000). This event, and its underlying socioeconomic motivations, marks *how* the Mackenzie Inuit chronicle begins; any interpretation of Mackenzie Inuit history is impotent without referencing it.

The Thule Inuit are sometimes viewed as both econophiles and technophiles (Maxwell 1985; Taylor 1966), a kind of “superculture” that enjoyed a comprehensive adaptation to a diverse range of arctic environments and from which all subsequent historic Inuit adaptations were pared (Kankaanpää 1996). While viewing the Thule Inuit adaptation as a techno-economic panacea is an exaggeration, the varied economic profile of Early Thule settlements in Alaska and the Canadian Arctic indicate these people were clearly capable of multiple subsistence specializations (Arnold 1986; Friesen 2000a; McCullough 1989; McGhee 1984b; Stanford 1976; Yorga 1980). Such flexibility served them well when exploring and adapting to the unfamiliar environments of the east, and was likely an important prerequisite for the migration.

Also crucial to Early Thule economic lifeways is the complex social environment in which Thule, and its presumed progenitor Birnirk, developed. During the period ca. AD 500–900, other contemporaneous north Alaska cultures such as Ipiutak and Punuk exhibited increasing territoriality as they competed for control of ecological nodes and the potential wealth they provided (Mason 1998). This technological, economic, and social background characterizes the human environment in which Thule cul-

ture developed. The Thule migration, and the lifeways of its participants, must be viewed as a fundamental cultural legacy that permeates all subsequent Mackenzie Inuit history, including the development of Mackenzie Inuit ethnic groups. As Friesen (2000a:216) states: “Thule people arrived in the eastern Arctic with a social system tuned to inter-group competition and territorial defense, based on their origins in Northwest Alaska.” The largely uninhabited east provided a prospect for wealth, prestige, and perhaps importantly, peace and security that was in short supply in the west (Friesen 2000b; Friesen and Arnold 2008; Gulløv and McGhee 2006; Mason 1998; McGhee 1969/1970, 1984a; Morrison 1999; Whitridge 1999).

If effective culture-histories are to be constructed for the Mackenzie Inuit, the analysis must ultimately be diachronic in focus. As part of this diachronic perspective, this paper adopts a broad chronological framework which divides the prehistory of the Mackenzie Delta region into three chronocultural periods: (1) Thule, from ca. AD 1250 to AD 1400; (2) Mackenzie Inuit, from ca. AD 1400 to AD 1850; and (3) Early Historic, from ca. AD 1850 to AD 1890 (1889 marked the establishment of a permanent Euro-American whaling settlement on Herschel Island). These entities designate specific archaeological “cultures” broadly recognized across the western Arctic, and are more or less consistent with less formal chronological schemes adopted elsewhere (Arnold 1994; Betts 2008; Betts and Friesen 2004, 2006; Friesen 1995; McGhee 1974; Morrison 1997b). The framework is based largely on diachronic shifts in material culture concurrent with well-documented changes in northwestern Alaska (Ford 1959; Giddings 1952; Stanford 1976; for discussion see Betts 2004, 2008).

DEFINING MACKENZIE INUIT ECONOMIES

If daily economic routines are fundamental to building affinities among hunter-gatherers, then differences in these routines embedded in the Mackenzie Inuit faunal record should signify the presence of unique groups in prehistory. The crucial patternings necessary to explore identity (and all archaeological explorations; see Binford 2001:48; Hodder 1991:143) are patterns of similarity and difference in spatially—and chronologically—ordered archaeological data. Bourdieu’s (1984) analysis of contemporary French practice in *Distinction* proves a useful guide for carrying out such analyses. In his groundbreak-

ing study, Bourdieu (1984) used multivariate statistical techniques, particularly correspondence analysis, to empirically track relationships between class conditions and styles of clothing, art, music, and food in late-twentieth-century French society. Archaeological materials (in this instance faunal remains) can be organized similarly to the trait lists compiled by Bourdieu, and an analogous graphical catalogue of dispositions can be created (Whitridge 2001, 2004).

Correspondence analysis (CA) reduces the variability in a data matrix to a low number of dimensions so as to permit a visual interpretation of relationships between variables. The output produces a two- or three-dimensional “plot” of similarities and differences between cases in such a way that those cases (in this case faunal assemblages) with similar variable attributes “cluster” spatially. CA maps can also indicate relationships between row and column variables when these are plotted simultaneously. As demonstrated by Bourdieu, the graphical output of CA can be used to define the shared aspects of practice within groups, while at the same time highlighting the different “rhythm[s] of living” between groups (Bentley 1987:33). Below, correspondence analysis is used to trace Mackenzie Inuit identity relationships embedded in faunal remains.

Here the analysis is conducted on the percent representation of the number of identified specimens, or NISPs. In archaeology, CA is usually conducted on untransformed count data, but there is no computational reason why this must be so; as Greenacre (1994:8) states, “since CA actually displays the relative frequencies in either the rows or columns (or both), it follows that the method can handle data which are already in percentage form.” In fact, with very large datasets composed of multiple contexts, there is a compelling argument for using percentage data exclusively. When comparing contexts with very large and small sample sizes relative to each other (see description of the dataset below), the directionality of the CA can be improperly affected by variables with the highest individual cell counts (typically those with the largest sample size). Transforming the count data to percentages will tend to correct for any sample size effect that can potentially bias the CA output (Greenacre 1994:9–10; see also Baxter 1994:65 for a similar discussion involving principal components analysis).

Table 1 (see also Fig. 3) describes the faunal database used in this report. This is a high-resolution dataset representing twenty-three distinct occupational contexts from nineteen sites. Chronologically, it spans the entire Neoeskimo period and geographically it represents all Mackenzie Inuit territories. All samples are from permafrost deposits that exhibited excellent preservation and that generally were subjected to similar depositional and taphonomic histories (Betts 2004, 2005a, 2008; Betts and Friesen 2004, 2006). The database is composed of assemblages from contexts associated with both winter semisubterranean dwellings and warm season open-air campsites. It should be noted that many of the winter house contexts actually derive from the same main winter villages described in the ethnographic record (compare Figs. 2 and 3); however, where they do not, appropriate analogues exist and will be discussed on a case-by-case basis. All contexts were excavated by trowel and screened, although mesh sizes sometimes varied (between 8 mm and 6 mm mesh). Differences in mesh sizes can affect comparability of zooarchaeological assemblages dominated by fish and bird taxa, but given the large average specimen (element) sizes of species in the region, all assemblages are considered to be comparable (see discussion in Betts 2008:95–96). Sample sizes are universally greater than 750 identified specimens, a size considered adequate for determining relative abundances in permafrost assemblages (see Betts 2004, 2005a, 2008; Whitridge 2001). Further details of the faunal frequencies, contexts, collection methods, and potential comparability issues are meticulously documented elsewhere (Betts 2004:126, 2005a:62–64, 2005b, 2008) and are not repeated here.

As noted previously, it is the replication of shared economic routines in particular places that creates affinities among hunter-gatherer groups. Our exploration of economic patterning therefore must proceed in tandem with an investigation of settlement patterns in the region. Furthermore, it should be noted that in the discussion that follows, the potential for storage to generate cold-season (winter house) assemblages dominated by warm-season resources (e.g., waterfowl, whales) is considered to be implicit. Because these warm-season economic activities are an important component of economic routines, the fact that winter houses represent a palimpsest of year-round activities is beneficial to the following analysis.

Fig. 4 displays the graphical output of a correspondence analysis of the percent NISP values for Neoeskimo

faunal assemblages in the contexts in the Mackenzie Delta region (following analysis in Betts 2008). As described in the figure, more than 50% of the total inertia (variability) is accounted for by this solution, and the simultaneously broad dispersion and strong clustering in the graph indicates significant economic differences but persistent similarities among certain contexts. The first dimension of the plot is dominated by the opposition between small seals (*Phoca* and *Pusa* genera) on the right and beluga whales (*Delphinapterus leucas*) and caribou (*Rangifer tarandus*) on the left. The second dimension is dominated by beluga whales and burbot (*Lota lota*) at the top and caribou at the bottom. The central left portion of the graph indicates assemblages dominated by waterfowl and fish from the Coregoninae subfamily. The dispersion of the plot (where many cases are located near the margins) indicates that certain cell counts contain very high values, a pattern suggesting that many of the cases are characterized by very uneven faunal assemblages (i.e., those dominated by one or a few taxa). Such assemblages are typically associated with a specialized, or focal, economic adaptation (e.g. Lyman 1991; see Betts 2005a, 2008; Betts and Friesen 2004, 2006). In summary, five distinct procurement “options” are suggested, dominated respectively by (1) small seals, (2) beluga whales and burbot, (3) Salmonidae family fish and waterfowl, (4) caribou, and (5) a more generalized strategy of broad composition (see Fig. 4).

Comparing the plot to the spatial distribution of these contexts (Figs. 3 and 4, see also Table 1), and their association with ethnohistorically described Mackenzie Inuit groups (disregarding chronological change for the moment), it is clear that these economic routines are spatially patterned, and that they are generally consistent with the economic pattern described in the ethnographic record. The Iglulualuit contexts at the far left of the plot represent winter economies heavily dominated by small seals, clearly indicating a specialized winter sealing economy among the Igluyaryungmiut. A similar faunal signature also characterizes Washout House 1 and 3, indicating the Qikiqtaryungmiut winter economies were dominated by small seals. The Kuukpangmiut faunal assemblages at the top left of the plot are dominated by beluga whales. Imaryungmiut economies, as evidenced by the warm-season Gutchiak and cold-season Saunaktuk sites, were focused on interior fish and bird resources, with a lesser contribution from caribou. Avvarmiut winter economies are not represented, but the warm-season sites of Bison Skull East and West indicate a heavy reliance on

Table 1: Overview of contexts used in correspondence analysis. See Betts (2005a, 2008) for complete faunal data.

Site	Cultural Area	Excavated Context	Context Type	Calibrated ¹⁴ C Range, AD (1 sigma, from ungulate)	Inferred Period/Date	Sample Size (NISP)	Sources
Washout	Qikiqtaryungmiut	House 1	Winter House	No data from terrestrial sample	Thule ca. AD 1000–AD 1400, based on artifact styles	1,243	Friesen and Hunston 1994; Salter 1978; Stuart-MacAdam 1978; Yorga 1980
		House 3	Winter House	1467–1649	Mackenzie Inuit, ca. AD 1450–1650	1,105	Friesen 1991, 1992, 1995
Pauline Cove	Qikiqtaryungmiut	House 1	Winter House	No data from terrestrial sample	Early Historic, likely dates to ca. AD 1870–1890, based on artifact styles	1,384	Friesen 1991, 1992, 1995
		House 5	Winter House	No data from terrestrial sample	Early Historic, likely dates to ca. AD 1890, based on artifact styles	840	Friesen 1991, 1992, 1995
		House 7	Winter House	Not reported	Mackenzie Inuit, ca. AD 1400–1850	1,750	Friesen 1991, 1992, 1995
		House 1	Winter House	1685–1950	Mackenzie Inuit, ca. AD 1650–1850	1,782	Betts 2000; Friesen 1992
Avadlek Spit	Qikiqtaryungmiut	House 1	Summer Tent	1481–modern	Mackenzie Inuit, ca. AD 1500–1850	1,673	Nagy 1990
Kuukpak	Kuukpangmiut	House 1, Area 1	Winter House	1442–1642	Mackenzie Inuit, ca. AD 1450–1650	7,341	Arnold 1994; Friesen and Arnold 1995a, 1995b
		Midden, Area 2	Winter House	1302–1649	Mackenzie Inuit, ca. AD 1400–1650	28,615	Arnold 1992, 1994; Balkwill and Rick 1994; Saxberg 1989
Cache Point	Kuukpangmiut	House 8	Winter House	1287–1316	Thule, ca. AD 1300–1350	3,756	Friesen 2009; Betts and Friesen 2004, 2006
		House 6	Winter House	1161–1279	Thule, ca. AD 1150–1300	2,802	Friesen 2009; Betts and Friesen 2004, 2006
Pond	Kuukpangmiut	House 1	Winter House	1302–1406	Thule, ca. AD 1350–1400	4,969	Arnold 1994; Betts and Friesen 2004, 2006; Meadows pers. comm.
		House 2	Winter House	1323–1486	Thule, ca. AD 1350–1400	3,329	Arnold 1994; Betts and Friesen 2004, 2006; Lewis and Reeves 1993
Kitigaaryuit	Kitigaaryungmiut	M2, M3, M4a, M4, Old House	Winter House	No data from terrestrial sample	Mackenzie Inuit, ca. AD 1400–1880, based on artifact styles	Not included in faunal analysis	McGhee 1974

(continued on next page)

Table 1 (continued from previous page)

Site	Cultural Area	Excavated Context	Context Type	Calibrated ¹⁴ C Range, AD (1 sigma, from ungulate)	Inferred Period/Date	Sample Size (NISP)	Sources
Radio Creek	Kitigaaryungmiut	House	Winter House	No data from terrestrial sample	Thule ca. AD 1000–1400, based on artifact styles	Not included in faunal analysis	McGhee 1974
Cache	Kitigaaryungmiut	Midden	Warm Season Hut	Not dated	Mackenzie Inuit, based on artifact styles	1,475	Swayze 1994
Pokiak	Unknown	House 1	Winter House	Not dated	Early Historic, likely dates to ca. AD 1870, based on artifact styles	2,647	Morrison 2000; Morrison and Whitridge 1997
Saunaktuk	Imaryungmiut	House 1	Winter House	1325–1453	Mackenzie Inuit, likely dates to ca. AD 1400, based on artifact styles	5,803	Arnold 1990; Morrison and Arnold 1994
Gutchiak	Imaryungmiut	Context 1	Warm Season/Procurement/Processing Site	<100	Mackenzie Inuit, likely occupied from ca. AD 1400 and later, based on artifact styles	31,399	Morrison 1994, 2000
McKinley Bay	Nuvugarmiut	House 1	Winter House	1433–1659	Mackenzie Inuit, ca. AD 1450–1650	1,471	Arnold 1992; Betts 2005b
		House 2	Winter House	1521–1660	Mackenzie Inuit, ca. AD 1500–1650	2,029	Betts 2005b
Kugaluk	Nuvugarmiut	House 1	Winter House	No data from terrestrial sample	Early Historic, likely dates to ca. AD 1850–1875, based on artifact styles	27,544	Morrison 1988
Bison Skull	Avvarmiut	East	Warm Season Procurement Site	1522–1659	Mackenzie Inuit, ca. AD 1500–1650	826	Morrison 1997a
		West	Warm Season Procurement Site	modern	Early Historic, likely dates to AD 1850–1900, based on artifact styles	757	Morrison 1997a
Rita-Claire	Avvarmiut		Warm Season Procurement Site	1467–modern	Mackenzie Inuit/Early Historic transition	5,541	Morrison 1997a
Barry	Kragmalit	House 1	Winter House	Not reported	Early Historic, based on artifact styles	6,282	Morrison 2000; Morrison and Whitridge 1997
Iglulualuit	Igluyuaryungmiut	House 11	Winter House	1284–1811	Mackenzie Inuit, ca. AD 1400–1800, based on artifact styles	1,706	Morrison 1990
		House 20	Winter House	1291–1947	Mackenzie Inuit, ca. AD 1400–1850, based on artifact styles	1,867	Morrison 1990

caribou hunting, similar to the ethnohistoric description of Nuvugarmiut summer activities (see above).

Finally, the cluster composed of the Nuvugarmiut site McKinley Bay and the Qikiqtaryungmiut sites Avadlek Spit and Pauline Cove represent a generalized winter procurement adaptation, unique among the very specialized economies displayed by the plot. I have speculated, considering the ethnographic evidence for bowhead whaling by the Nuvugarmiut and Qikiqtaryungmiut, that this generalized economy is actually one underwritten by specialized bowhead whale procurement (Betts 2005a, 2008). In this situation, extreme size-sorting and other taphonomic processes associated with the processing of whale carcasses resulted in a dearth of bowhead bone, skewing the faunal signature in these assemblages. In effect, the removal of this focal taxon from the archaeological record resulted in a more “even” and generalized faunal signature.

In sum, Fig. 4 indicates that many of the specialized economies described in the ethnohistoric record existed,

in the same locations (compare Fig. 2 with Fig. 3), in the prehistoric period. However, the plot adds considerable resolution to the relatively shallow descriptions of local economies in the ethnohistoric record. For example, the analysis displays a dual orientation towards both sealing and bowhead whaling for the Qikiqtaryungmiut contexts of Washout, Pauline Cove, and Avadlek Spit (see discussion below). Also, despite the importance given to fish in the ethnohistoric record, fish are almost completely absent from well-screened Iglulualuit faunal assemblages. In contrast, the East Channel sites of Cache Point House 6 and House 8 reflect cold-season contexts heavily dominated by burbot. Other contexts, such as Saunaktuk and Gutchiak, are characterized by their heavy reliance on coregonids (whitefish and ciscoe) and Salmoninae subfamily fish (trout and char).

Further refinements to the ethnographic model are also suggested. The Avvarmiut Bison Skull East and Rita-Claire sites and the Qikiqtaryungmiut Trail River site,

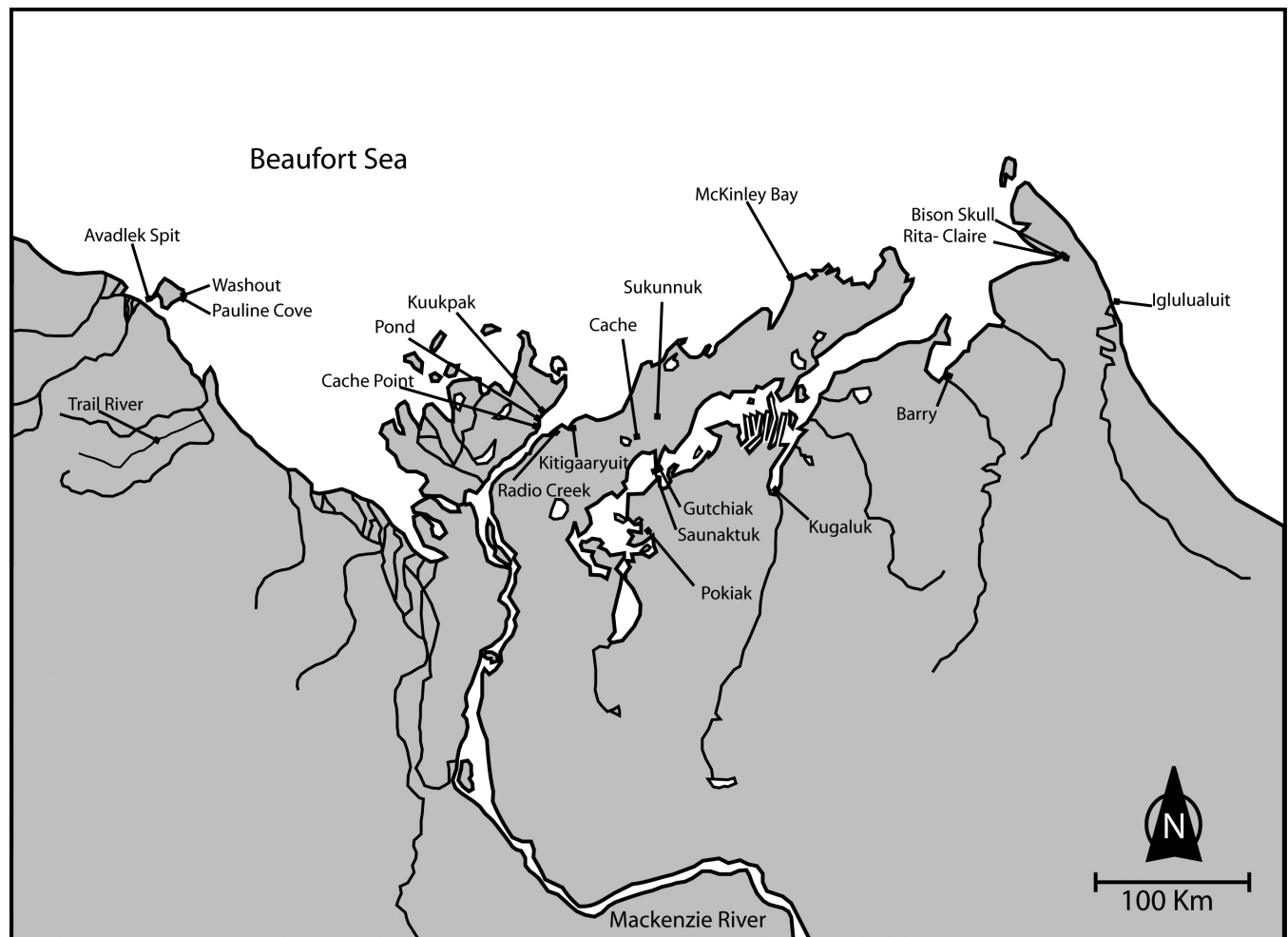


Figure 3: Location of sites mentioned in text (after Betts 2008).

all warm-season campsites, represent economies heavily dominated by caribou and migratory waterfowl, suggesting an adaptation similar to the coastal Nuvugarmiut in the warm season. Yet in contrast to the ethnohistoric record, the Qikiqtaryungmiut winter-house faunal assemblages indicate both a bowhead whaling (Avadlek Spit, Pauline Cove House 1) and sealing (Washout, Pauline Cove House 5) specialization. One possible explanation for this dual pattern is that, season to season, the Qikiqtaryungmiut may have vacillated between a focus on bowhead whales and seals, depending on resource availability, creating two unique faunal signatures (Betts 2005a). Interestingly, abundant baleen and whale bone in the Washout House 1 contexts suggest the exploitation of bowhead whales, despite the seal-dominated faunal profile (Yorga 1980). However, the success of this hunt may have

been unpredictable, a result of uncertainty associated with a bowhead hunt, which relied on highly variable spring ice leads (see discussion above). In contrast, the Nuvugarmiut and Avvarmiut instead focused on a late summer/fall open water hunt, which may have provided somewhat less uncertainty. Given the available archaeological and ethnographic evidence, the Avvarmiut and Nuvugarmiut economies appear very similar, both grounded in a productive open-water bowhead hunt, supplemented by warm-season caribou hunting. In good years with a stable lead system, Qikiqtaryungmiut subsistence was likely very similar, although the unreliability of spring leads may have forced a reliance on sealing to fill in the shortfall (likely manifested as intensive sealing during the following winter).

Moving further into the interior, the cluster composed of the cold-season Saunaktuk context and the

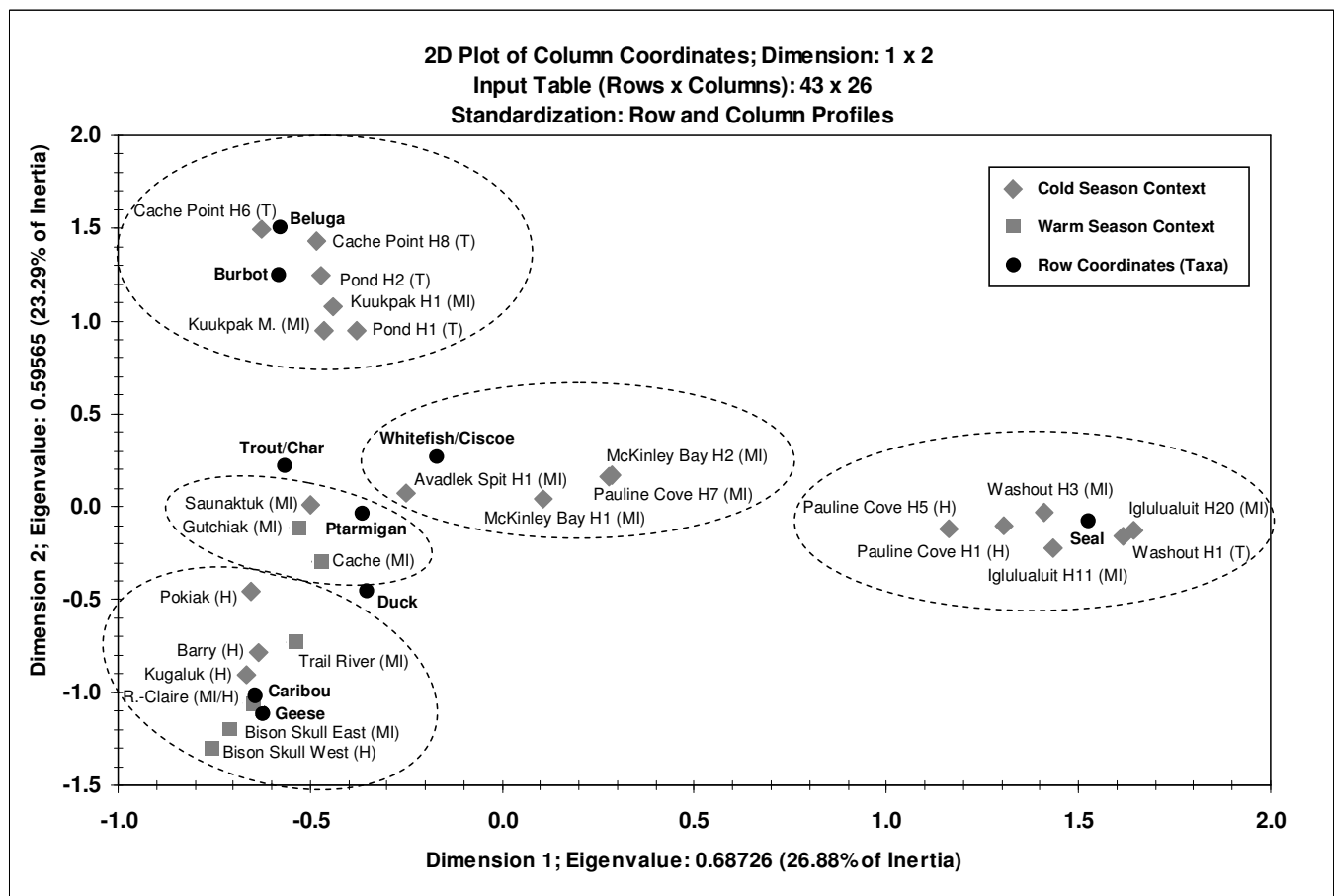


Figure 4: Correspondence analysis (% NISP) on faunal assemblages from the Mackenzie Delta region. Archaeological contexts have been coded with an associated time period (T = Thule, MI = Mackenzie Inuit, H = Historic). Dashed lines enclose contexts with similar faunal assemblages, representing five different procurement “options.” All archaeological contexts (columns) have been plotted; however, only row variables (taxa) with relative inertias greater than 0.05 (5%) have been displayed. Relative inertia can be thought of as the proportion (out of 1) of the variability in the plot accounted for by a particular taxon.

warm-season Gutchiak and Cache contexts is intriguing because it indicates distinct similarities between warm- and cold-season procurement; Salmoninae subfamily fish (char and trout), coregonids, ptarmigan, and waterfowl heavily dominate all three faunal assemblages. This suggests: (1) that Imaryungmiut (Gutchiak and Saunaktuk) specialized birding and fishing economy changed very little on a seasonal basis, (2) that it shared aspects with Kitigaaryungmiut (Cache) warm-season activities, and (3) that Imaryungmiut (birding- and fishing-focused) warm-season activities contrasted significantly with those of the Qikiqtaryungmiut and Avvarmiut (which were caribou-focused).

The latter contrast obviously also applies to the Kitigaaryungmiut Cache site, whose fish- and bird-dominated assemblages are strikingly different from the caribou-dominated warm-season assemblages recovered from the Avvarmiut (Bison Skull and Rita-Claire) and Qikiqtaryungmiut (Trail River) sites. It is probable that Kuukpangmiut warm-season activities were generally similar to those noted at Cache (McGhee 1974:12), and therefore, as might be expected given their proximity, Kuukpangmiut and Kitigaaryungmiut economies were likely nearly identical, if still spatially segregated.

Finally, in contrast to the other coastal settlements, the faunal remains from Iglulualuit indicate only a heavy reliance on seals. While it is possible that the Igluyuaryungmiut also hunted bowhead whales, given the presence of bowhead bone in Iglulualuit houses (Morrison 1990:16), the dominance of seals may indicate that whaling occurred at a very low, perhaps only opportunistic, level at Iglulualuit. Regardless, the site's economic signature stands in stark contrast to those of the more advantageous hunting promontories further west.

Looking at the totality of ethnographic and archaeological evidence, the picture is one of extreme economic and settlement heterogeneity for nearly all territories. While some groups were relatively mobile during the warm season, traveling from interior fishing, birding, and caribou hunting grounds back to coastal whaling and sealing locations, others, such as the Imaryungmiut, may have been relatively sedentary with only a few short movements over the entire year (Morrison 2000; Morrison and Arnold 1994). Even among groups who shared many aspects of their economic round, such as the coastal bowhead whaling groups, there were significant differences in the scheduling and success rate of procurement, which is well-reflected in the available faunal assemblages. In total,

therefore, it is likely that the seasonal economic routine was substantially different between most Mackenzie Inuit groups, a pattern that was ripe for the ethnogeneses of different Mackenzie Inuit societies.

Yet, several puzzling economic similarities remain to be explained, which do not fit neatly within a primordialist explanation. For example, the Kuukpangmiut and Kitigaaryungmiut, through their sharing of the same ecological niche on the East Channel of the Mackenzie River, practiced a virtually identical economic and settlement system, centered on a large summer beluga hunt (Betts and Friesen 2006; McGhee 1974). While no Kitigaaryungmiut winter houses were included in the above analysis, field analyzed materials from Kitigaaryuit (McGhee 1974:34–35) are beluga dominated, suggesting an economy that was similar to Kuukpak House 1. However, despite shared economic and settlement routines, ethnohistoric records clearly document that these groups considered themselves to be distinct and even engaged in ritualistic warfare (Stefansson 2001:109–110). Other similarities between economic and settlement strategies, such as occurred between the Nuvugarmiut and Avvarmiut, are also potentially significant. Given the similarities of shared practice at these locations, which should have engendered affinities, how did these separate identities develop? As I will explain later, these are cases where Mackenzie Inuit identities developed from purely instrumental negotiations between peoples (see discussion below).

DIACHRONIC VARIABILITY IN THE MACKENZIE INUIT ARCHAEOFAUNAL RECORD

The above comparison of the archaeological record to the ethnohistoric record indicates a significant time-depth for a heterogeneous spatial distribution of subsistence practices in the Mackenzie Delta region. This analysis in itself clearly displays evidence for the types of long-term, segregated, and recurring economic practices that are responsible for engendering hunter-gatherer identities. However, a more detailed diachronic analysis is possible.

Fig. 4 shows that two economic options are represented by Thule-period contexts, a beluga hunting and fishing economy on the East Channel of the Mackenzie River and a sealing economy on the Beaufort coast of Herschel Island (refer to Fig. 3 for site locations). Both of these contexts (Cache Point House 6 and Washout House 1) date to the earliest Thule occupations in the Mackenzie Delta region (Friesen and Arnold 2008), suggesting a long history

of segregated and specialized economies at these two resource-rich locations. More importantly, both of these locations are associated with the known main winter villages of the Kuukpangmiut and Qikiqtaryungmiut. Fig. 4 clearly indicates that the specialized economies (focused on fish and beluga) instituted by the earliest Thule occupants of these locations remained essentially unchanged for more than six hundred years.

By the Mackenzie Inuit period (ca. AD 1400–1850), we see a diversification of these strategies. In particular, correspondence analysis indicates that the Thule-period pattern was augmented by the addition of winter economies dominated by bowhead whaling (inferred) on the coast and fishing and birding in the interior. Furthermore, we see the first evidence of warm-season economies, which are focused on fish and birds, or caribou, respectively. From a settlement perspective (Fig. 3) this represents a diversification of procurement systems towards interior warm-season and cold-season sites. In fact, the Mackenzie Inuit period in general seems to represent a settlement diversification, with the first evidence of semipermanent winter villages in Imaryungmiut, Igluyaryungmiut, and Nuvugarmiut territories (Betts 2005a). It is noteworthy that these ruins are all located at, or nearby, the main winter villages described in the ethnohistoric documents and that the faunal assemblages recovered from these locations are fundamentally different from each other in terms of seasonality and/or taxonomic focus.

This record documents at least 400 to 450 years of unique and virtually uninterrupted economic routine at the main winter villages of at least five territories (note Avvarmiut winter sites have been destroyed by erosion, and Kitigaaryungmiut samples are not included because of sampling issues). While there is archaeological evidence to suggest that some of these specialized procurement activities did change over time, such as among the Kuukpangmiut (Betts and Friesen 2004) and Qikiqtaryungmiut (e.g. Betts 2004; Friesen 1995), these changes largely appear as a reorganization of the procurement of low-ranked resources, such as furbearers and birds, and not the high-ranked resources on which each group specialized.

The Early Thule contexts and their segregated beluga and sealing/bowhead whaling-dominated economies on the East Channel and the Beaufort Coast respectively indicate a very early genesis for the primary economic and settlement activities of the Kuukpangmiut and Qikiqtaryungmiut, coeval with the earliest settlement

in the region. While the impact of coastal and riverbank erosion has limited our understanding of the antiquity of these adaptations, a near-complete lack of warm and cold-season sites in the interior suggests the ethnographically described interior-focused economies and (by default) ethnic groups are a post-AD 1400 phenomenon (Betts 2005a).

Moving to the historic period, several other settlement and economic changes are evident. Most apparent is the increased reliance on the interior, with the addition of winter house sites at riverine locations east of the delta proper (Fig. 3). All of these sites (Kugaluk, Barry, and Pokiak) are located close to caribou river crossings, a situation congruent with their uniquely caribou-focused faunal profiles. Crucially, the Barry site, the only winter house site thus far located in the Kragmalit home territory, may have been that group's main winter village.

CONSTRUCTING MACKENZIE INUIT CULTURE HISTORIES

The preceding analysis has revealed much about changes in the nature and distribution of prehistoric and early historic economies and settlement patterns in the Mackenzie Delta region. An historical perspective suggests that the institution of distinct specialized economies throughout the Mackenzie Inuit sequence created an environment ripe for ethnogenesis to occur, and from the available evidence it is possible to suggest a chronology of its development. Qikiqtaryungmiut and Kuukpangmiut affinities may have developed over some six hundred years, coincident with early Thule settlements on Herschel Island and the Mackenzie River. Others, like the Nuvugarmiut, Igluyaryungmiut, Avvarmiut, and Imaryungmiut, probably had a shorter gestation period—perhaps three hundred to four hundred years. Still other economies and their associated routines, such as among the Kragmalit, were barely established by the time Euro-American influences caused the collapse of the system in the early twentieth century. For most territories, then, the archaeological record suggests at least four, and in some cases as many as six, centuries of what amounted to long-term, segregated routinization of economic activities. Given the relationship between routinized practice and shared habitus, procurement activities within each territory, but especially at the main winter villages, were likely fundamentally linked to aspects of identity.

While the above analysis has provided a chronicle of the possible relationship between economies and identity

and its sequential development in the Mackenzie Delta region, it makes for poor culture history. If the development of identity relationships is an historical process, any understanding of its evolution can only be revealed through an “historical perspective” (Bentley 1987:49). This requires that we place the Mackenzie Inuit record within a context of a shifting social and natural environment.

Changes in the cultural and natural environment of the Mackenzie Delta are best understood by reference to a complex of sites located on the west bank of the East Channel of the Mackenzie River (Table 1), which span the early Thule period through the Mackenzie Inuit period. The earliest occupation in the sequence occurs at Cache Point, House 6 and House 8, two Thule semisubterranean winter houses that both date to the latter part of the thirteenth century. Just downstream from the Cache Point site is the Pond site, also containing two semisubterranean Thule-era houses occupied slightly later than the Cache Point contexts (see Table 1). Interestingly, the earlier house at this site (House 2) has a faunal assemblage very similar to the Cache Point contexts, dominated by beluga and burbot. However, the later context (House 1), though heavily beluga-dominated, exhibits increased frequencies of net-captured fish in the Salmonidae family (burbot was primarily captured in this region using a species-specific jigging technology), furbearers, and migratory waterfowl. The last context in the sequence—House 1, Area 1, at the Kuukpak site, dated to the early Mackenzie Inuit period—continues these trends, with a primarily beluga-dominated faunal assemblage containing higher frequencies of net-captured fish, waterfowl, and furbearers than House 1 at the Pond site. Betts and Friesen (2004) have interpreted this economic shift as part of a process of economic intensification that took place on the East Channel (and likely throughout the region, see Betts 2005a), over a period of approximately two hundred years.

As presaged by the above shifts in fish exploitation, during the end of the Thule period the archaeological record indicates that fishing technology changed significantly. Again, this is best demonstrated by the East Channel sequence of sites. The Thule period contexts from the Pond site exhibit between 0% (House 2) and 3% (House 1) of net-fishing gear as a proportion of all hunting implements. In contrast, Kuukpak House 1, dating to the Mackenzie Inuit period, exhibited a significant (more than two-fold), increase to 8% of net-fishing gear (Betts 2004). Other technological changes between Thule and Mackenzie Inuit houses have not been explored in detail, primarily

due to a lack of published artifact catalogues, although a similar sequence on the east bank on the Mackenzie River suggests that relatively little technological change, aside from the introduction of fish nets, occurred over the entire Neoeskimo sequence (e.g., McGhee 1974:79, Table 1).

Along with economic and technological change, populations were increasing rapidly during the Thule period. Again, this is most clearly demonstrated by the East Channel complex of sites, but also generally seems to be corroborated by evidence throughout the Mackenzie Delta region. The earliest houses on the East Channel, Cache Point House 6 and House 8, are characterized by single-alcove semisubterranean dwellings. At the Pond site, which was occupied a few generations after Cache Point, two-alcove dwellings (for multiple families) appear in the archaeological record. Finally, around AD 1400, with the occupation of Kuukpak, very large three-alcove, or cruciform, houses appear in the record. This increase in dwelling size is associated with an increase in village size and increasing midden depths over the sequence (Betts and Friesen 2004, 2006). Taken cumulatively, this evidence strongly implies a major population increase over the two hundred to four hundred years that the Thule occupied the western Canadian Arctic.

Finally, it should be noted that significant climate change occurred during the Neoeskimo period in the Mackenzie Delta region. Two wide-ranging climatic episodes dominated temperature trends in the western Canadian Arctic over the last thousand years: the Medieval Warm Period, ca. AD 900–1300/1400, and the Little Ice Age, ca. AD 1400–1850. The former is associated with generally warmer temperatures than exist today (Hughes and Diaz 1994; Overpeck et al. 1997:1253), while the latter corresponds with drastically cooler temperatures than at present (Graumlich 1992:565; Larsen and McDonald 1998:116).

If identity relationships are an historical process, then all of these fundamental shifts contributed to the development of the distinct ethnicities of the Mackenzie Inuit period (Betts 2005a). To Bourdieu (1977:164), change is stimulated through a mismapping of habitus and the current environment, when existing dispositions are confronted by alternate social or material settings (Pauketat 2001:80). In this situation of conflict, agents attempt to reproduce habitus along established routines, but these practices are subverted by the requirements of the new environment. This forces a difficult “negotiation” between existing and historically embedded dispositions and the conflicting structure of the new surroundings.

The florescence of new Mackenzie Inuit groups and their new identities, ca. AD 1400, occurred as part of a complex negotiative process, as Thule era populations reproduced their styles of living while being bombarded by significant cultural and natural shifts. The mismapping of existing habitus with the effects of climatic degradation, the development of intensive net-fishing, and increasing populations that occurred during this period resulted in a creative renegotiation of existing economic and settlement dispositions in response to these stimuli. This eventually led to the development of multiple new economies and settlement patterns, which fundamentally altered regional, political, and social dynamics. In short, the development of these groups ca. AD 1400 was an instrumental response, a creative negotiation born from the mismapping of existing habitus with changing material and social conditions.

How might these processes have occurred? An appropriate analogue may exist with the development of the Imaryungmiut and their unique economic and settlement practices. Their economy was dominated by fish and birds, and was entirely interior in focus, with both warm-season (Gutchiak) and cold-season (Saunaktuk) settlement occurring in the Eskimo Lakes. Interior warm- and cold-season contexts appear in the archaeological record for the first time during the early Mackenzie Inuit period, ca. AD 1400. Despite intensive interior survey over the last three decades, no Thule-era interior sites have been discovered in the Mackenzie Delta region. Thus, one part of the response to intense natural and cultural forces ca. AD 1400 was a reorganization of earlier Thule warm-season procurement options, which appear to have been primarily tied to the coast, to include intensive interior components.

This economic and settlement shift may ultimately be responsible for the development of Mackenzie Inuit socioterritories and ethnic groups, and the archaeological evidence from the Kitigaaryungmiut Cache site and the Imaryungmiut Gutchiak and Saunaktuk sites suggests one way this might have occurred. The Cache site, a warm-season Kitigaaryungmiut procurement location, is, like the Imaryungmiut cold-season Saunaktuk and warm-season Gutchiak sites, dominated by birds and fish (Fig. 4). That the long-standing East Channel beluga hunting strategy was augmented by interior fishing and birding at sites like Cache in the Mackenzie Inuit period is significant. Given the proximity of Saunaktuk and Gutchiak (Fig. 3), it appears that establishing the Imaryungmiut socioterritory was possible because of a reorganization of this newly developed interior birding and fishing procure-

ment option at an ecologically rich location that could support year-round occupation.

The Imaryungmiut appropriated jig and net fishing gear to this year-round life, and artifact assemblages from Saunaktuk and Gutchiak sites are heavily skewed towards both jig and net fishing (Arnold 1990; Morrison 2000). Thus, the Imaryungmiut socioterritory was made possible by reorienting and intensifying existing economic and technological dispositions along an altered seasonal schedule, in effect creating a new rhythm of living. For other groups, it appears that the well-established sealing and beluga/bowhead whaling lifeways were largely maintained, although the development of net-fishing techniques nevertheless profoundly altered the economic activities of most groups, particularly during the warm-season spawn and running periods (Morrison 2000).

In fact, the addition of net fishing at locations that already supported intensive procurement and storage of sea mammals was a significant boon. The recurring potential for plenty at these locales provided a powerful incentive to consolidate rising populations in the large winter villages (from which local groups eventually drew their names), and possibly may have even intensified the process of demographic increase (Betts and Friesen 2004:379). From a primordialist view, the institution of these new economic and seasonal rhythms, and the subsequent establishment of large villages at these focal places, would have been essential in the development of different group affinities.

How these demographic and technological processes are linked to the massive climate change that occurred during this period (ca. AD 1400) is uncertain. If persistent cold conditions affected the distribution and duration of sea ice during the warm season, it may have had a catastrophic impact on the bowhead and beluga hunts and the increasingly populous groups that relied upon them. Indeed, severe ice events still affect beluga harvest rates in the region by reducing the length of the hunting season, as they did on the East Channel in the summer of 1985 (Norton and Harwood 1986). Such persistent ice conditions were almost certainly a common occurrence during the Little Ice Age and must have severely affected groups that relied upon open-water beluga and bowhead whaling. Given this evidence, it is tempting to speculate that some of the diversification and settlement expansion that occurred in the Mackenzie Inuit period may have been part of a process whereby the relatively stable socioeconomic groups of the Mackenzie River and Yukon coast fissioned in response to resource stress.

However, all three components (demographic, climatic, and technological shifts) acted in unison to fuel these socioeconomic changes. Increasing populations undoubtedly would have exacerbated any shortfalls in the traditional whale hunt caused by severe ice conditions. At the same time, fissioning is a common response of hunter-gatherers to the stress caused by rapid demographic increases (Friesen 1999). Finally, technological change may have provided the means to quite literally feed this population and territorial expansion, particularly towards interior regions where new net-fishing techniques could be intensively applied. In short, the years surrounding AD 1400 represented a point of “critical mass” of population, climate, and technology; the Thule responded by fundamentally altering the composition, distribution, and economic focus of local corporate groups.

While the mechanisms described are largely responses to natural and cultural stimuli, other processes may have been at work. Elsewhere, and following Barth’s (1956) instrumental approach, I have posited that the development of Mackenzie Inuit socioterritories was a creative solution to the heterogeneously distributed resources of the Mackenzie Delta region (Betts 2005a; see also Andrews 1994; Yesner 1985). In this instance Mackenzie Inuit groups benefited through exclusive access to resources that were then traded throughout the region, as they were in the ethnohistoric period (for an archaeological example of this trade see Betts 2007). The benefits of exclusive access and trade were undoubtedly a key component of the development of these new groups, part of the creative negotiations between peoples as they navigated the turbulent period around AD 1400.

For emerging Mackenzie Inuit groups, recognizing the benefits of exclusive access to resources was possible because of the already well-developed identity politics in the region, which had been in place since the earliest Thule times. There were at least three socioterritorial groups by the end of the Thule period. For example, there is evidence to suggest that both Kitigaaryungmiut and Kuukpangmiut groups on the East Channel had been developing simultaneously since Early Thule times (Betts and Friesen 2004, 2006). Qikiqtaryuk, on Herschel Island, was likely also occupied at this time, as evidenced by Washout House 1 (see Table 1). Since the bowhead and beluga hunting seasons overlapped, independent groups must have exploited these different locations simultaneously, each caching and living off the proceeds in separate winter villages. Given the economic analysis above, the economies of these dif-

ferent groups represent some six hundred years of uniquely routinized and specialized procurement. Consequently, the florescence of an ethnic pattern consistent with the ethnohistoric sources around ca. AD 1400 occurred within a constellation of developing affinities already several centuries old and therefore simply represented a single, albeit crucial, stage in the complex development of Mackenzie Inuit ethnicities.

Yet the emergence of the Mackenzie Inuit and their diverse identities must be viewed as part of a lineage with much deeper roots. The Thule pioneers who arrived in the region brought with them deeply engrained social, economic, and technological traditions (Friesen 2009:73). As noted above, Thule developed in a complex social environment in northwestern Alaska, conservatively characterized by competition, prestige, segregation, exclusion, and violence (Mason 1998, 2000). When the Early Thule arrived in the Mackenzie Delta region, they set up a segregated economic system focused on the intensive exploitation of large sea mammals at different advantageous locations on Herschel Island and the East Channel of the Mackenzie River, respectively. This pattern is broadly consistent with what Early Thule groups did in other areas of the eastern Arctic (Arnold 1994; Friesen 2000a; Friesen and Arnold 2008; Holtved 1944, 1954; Le Mouél and Le Mouél 2002; McCullough 1989; McGhee 1984b; Mary-Rousselière 1979; Morrison 1999). A consensus is generally building that these activities are consistent with prospecting, perhaps entrepreneurial, immigrants exploring opportunities for wealth and prestige in new lands (Friesen 2000b, 2009; Friesen and Arnold 2008; Gulløv and McGhee 2006; McGhee 1969/70; Morrison 1999). Thus, in the Mackenzie Delta region, Thule peoples attempted to reproduce a familiar territorial socioeconomic system that they knew was capable of generating the security, and hopefully wealth and prestige, they desired. The establishment of two (and possibly three) segregated socioeconomies at two different locations, by two (or three) contemporaneous groups, set up a system more or less consistent with established Alaska convention (Friesen 2000b, 2009; Friesen and Arnold 2008; McGhee 1984a; Morrison 1999).

In sum, the entire history of Mackenzie Inuit ethnic groups still involved a series of novel and creative negotiations between pre-existing cultural traditions and shifting natural and cultural surroundings. According to the evidence presented, the pattern throughout the prehistoric period is one in which people settled at new ecological

hotspots and by reorganizing existing technological, economic, and settlement traditions slightly, instituted fundamentally changed economic and settlement rhythms, in effect creating new group affinities. These affinities were a result of recurring and unique behaviors experienced between individuals over seasons, years, and generations, giving each socioterritory its own history. However, the settlement of groups at these new locations was a conscious, innovative response by people to cultural and natural change.

There is ethnohistoric evidence to support this complex mechanism of primordial and instrumental ethnogenesis. In fact, the historic record of the region indicates this Mackenzie Inuit ethnogenesis continued right up to the moment of Mackenzie Inuit cultural collapse and perhaps even beyond. In a situation similar to the fifteenth century AD, the development of the unusually termed Kragmalit territory in the late nineteenth century AD appears to have also occurred within a complex constellation of demographic, climatic, technological, and social shifts. During this period, temperatures rose rapidly as the area emerged from the Little Ice Age, which potentially negatively affected seal denning habitat and decreased seal natality (Betts 2004, 2005a). Furthermore, bowhead yearlings, the preferred prey of Neoeskimo hunters, were becoming increasingly scarce due to Euro-American overhunting in Alaska (Friesen 1995). Technology was also radically changing, as firearms and metal traps were introduced and the Mackenzie Inuit began to participate in the world system through the fur trade (Friesen 1995). Finally, the ethnohistoric records from this period, and shortly after, indicate that epidemics were ravaging the local population, resulting in a significant demographic decrease (Morrison 1997b).

It was during this period that the Igluuaryungmiut abandoned their traditional village, Iglulualuit, as their sealing and intermittent whaling economy completely collapsed (Betts 2005a; Morrison 1990). Around the same time, dating to the mid-to-late nineteenth century AD, winter villages with caribou- and furbearer-dominated faunal assemblages were established on the Anderson River (Morrison and Whitridge 1997). Despite relatively intensive survey, earlier village sites have not been discovered in the area, suggesting these villages were a nineteenth-century phenomenon. Given this evidence, it appears the response of the struggling coastal groups to these powerful forces was historically consistent, seen in the founding of a new settlement on the Anderson River, likely consist-

ing of members from many coastal groups (Betts 2005a). This new socioterritorial group, who called themselves the Kragmalit, or Anderson River people, were positioned to access the abundant caribou and smaller furbearing animals in the near-interior. The large caribou herds would have provided security in the face of a foundering coastal economy and the density of furbearing mammals provided inventory to participate in the developing Euro-American fur trade. Other coastal groups, such as the Nuvugarmiut, participated in a similar process, and at least some members of their population set up a winter village on the Kugaluk River, supported by intensive caribou hunting (Morrison 1988). In a situation similar to the founding of Mackenzie Inuit socioterritories four centuries earlier, this process also appears to have been aided by the adoption of new technology, specifically firearms and metal traps, which were becoming increasingly available through trade.

Even the rich and populous Kuukpangmiut and Kitigaaryungmiut were not immune to these processes. Although the traditional beluga hunt seemed to have been as productive as ever (Betts and Friesen 2006; Friesen 2004:230), there is evidence that the Kuukpangmiut socioterritory collapsed sometime before the mid-nineteenth century, likely due to introduced Euro-American disease. In a testament to the powerful affinities created by nearly six centuries of shared routine, the remaining Kuukpangmiut set up a small settlement, named Tchenerark, on the outskirts of Kitigaaryuit, as described by the missionary Stringer in 1893 (Friesen 2004). However, there is evidence that these affinities were at last breaking down, and the Kuukpangmiut were by this time calling themselves the Tchenegamioot, a name referring to this new village. Tragically, by the time of Stringer's visit only ten Tchenegamioot remained (Friesen 2004:232), the last of an arguably wealthy and powerful Mackenzie Inuit group.

These reorientations of the socioterritorial system, including the establishment of new ethnic groups known as the Tchenegamioot and Kragmalit on the East Channel and Anderson River, respectively, can now be viewed as the last and undeniably desperate attempt to reproduce deeply entrenched traditions in the face of overwhelming change. However, the mismapping was too great, and the traditional socioterritorial system soon disintegrated under the pressure of Euro-American technological and economic influence, disease, and Alaska Inupiat emigration. Yet it is important to point out, as a postscript, that these cultural traditions may still be prominently visible in

modern times. One of the more recent local responses to the massive change of the nineteenth and twentieth centuries has been the formulation of yet another distinct Inuit group, the Inuvialuit (translated as “true human beings”).

The Inuvialuit are descendants of Mackenzie Inuit who survived the epidemics and immigrant Nunataarmiut (Inupiat) who settled in the region during the late nineteenth and early twentieth centuries. Like their Mackenzie Inuit and Inupiaq forebears (Burch 1998), the Inuvialuit continued a process of renegotiating existing social groups, economies, and associated land tenures, leading in 1984 to the establishment of a new territory under a land claim settlement with the Canadian federal government (Morrison 1997b:49). Through this settlement, the Inuvialuit Final Agreement, the Inuvialuit created a new homeland, and in effect redefined their cultural and economic rights as a distinct aboriginal society (Alunik et al. 2003:182). Placed within historical context, this might be viewed as the most recent expression of a tradition of ethnogenesis that shaped the cultural landscape of the Mackenzie Delta region over the last eight centuries.

CONCLUSIONS

As suggested by Bentley (1987:48), “rooted in preconscious patterns of practice . . . , ethnic identities implicate, in a phenomenological sense, who people are.” A practice approach views the development of hunter-gatherer identities as coeval with the development of unique economic and settlement traditions (Dietler and Herbich 1998:246). However, it is through sharing in the continual maintenance and transformation of these traditions that affinities are created. As outlined in this paper, it is possible to chronicle these shared experiences through detailed regional analysis of the archaeological and ethnohistoric records.

When such chronicles are placed in detailed and contextualized historical contexts, meaningful culture histories can be produced. What is perhaps most striking from the reconstruction of these multiple culture histories is the strong relationship between location (and the unique daily routines and interactions necessary to exist at these locations) and Mackenzie Inuit identities. In fact, the “traditional” Mackenzie Inuit response to changing ecological, technological, demographic, and social environments was to engender new socioterritorial groups with reorganized land tenures, effectively creating new identities. In essence, Mackenzie Inuit reoriented exist-

ing economic and technological traditions along altered settlement, demographic, and perhaps even social lines, during times of “critical mass,” when faced with major natural and culture changes. Like all cultural processes, Mackenzie Inuit ethnogenesis (or more accurately ethnogeneses) was/were always creatively constructed to participate in specific evolving cultural and ecological environmental milieus.

Yet, this primarily instrumentalist explanation belies the primordial attachments of tradition, people, and place, which must also have been associated with the process. In historical perspective, the configuration of these groups, and perhaps even their repeated spawning and mutation, has a hereditary analogue and therefore must be viewed as a re-creation of traditions that evolved in Alaska and that were transferred to the western Canadian Arctic. After several centuries of occupation in the region, new traditions developed, and the affinities of Mackenzie Inuit groups clearly became primordially intertwined with key places, as is suggested by the use of village names as roots for the names of each ethnic group. The archaeological record indicates such bonds had ancient roots, expressed in the durable remains of economic routines continually re-created at these unique places over hundreds of years.

Such social attachments to place can also be seen in the development of two distinct ethnic groups on the East Channel, the Kuukpangmiut and the Kitigaaryungmiut, and their unique “sharing” of a particularly important ecological niche despite rising populations and overt hostilities. In fact, so important was this location that it still figures prominently in Inuvialuit identity today (see Alunik et al. 2003). Moreover, the bonds created between people when they share repeated experiences is exposed by the reticence of the remnant Kuukpangmiut to merge with other Mackenzie Inuit groups despite their decimation by disease in the nineteenth century. In retrospect, Mackenzie Inuit ethnogenesis was always an instrumental and yet still deeply primordial response to the changing material and social conditions of life in the western Canadian Arctic.

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