ENGLISH LOAN-VERBS IN THE INUKTITUT SPEECH OF INUIT BILINGUALS

by

© Danielle Saint-Aubin

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Department of Linguistics
McGill University
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ABSTRACT

The behaviour of the Eskimo language (Inuktitut) in contact with Euro-American culture is studied by examining the way in which Inuit bilinguals translate English verbs which have no equivalent in the traditional language--in other words, semantic borrowing. This study was carried out in settlements representing three Canadian dialects: Eskimo Point, N.W.T., (Caribou Inuktitut), Sugluk, P.Q., (Tarramiutitut), and Broughton Island, N.W.T., (Southeast Baffin Inuktitut).

The results indicate that the language strongly resists direct borrowing. The tendency is to create a word, using native morphemes, which will define or explain the concept, or to a lesser degree, to extend the meaning of a traditional word. This confirms similar studies where the focus has been on nouns. The Eskimo Point dialect is found to be the most conservative while the Quebec dialect proves to be the least so. This parallels previous findings with respect to phonological and syntactic change in these dialects.

An analysis of several variables suggests that the facility with which a bilingual speaker will express a foreign concept in Inuktitut depends upon whether he has ever been exposed to the Canadian South, and not upon his age or schooling in English.

RÉSUMÉ

Dans cet ouvrage, l'influence de la culture euro-américaine sur la langue inuit est étudiée en examinant la façon dont les Inuit bilingues traduisent les verbes anglais sans équivalent dans le langage traditionel--en autres termes, l'emprunt sémantique. Pour ce faire, les agglomérations suivantes, représentant trois dialectes canadiens différents furent visitées: Saglouc, P.Q., (dialecte Tarramiut), Broughton Island, T. du N.-O., (dialecte de Baffin sud-est), et Eskimo Point, T. du N.-O., (dialecte du Caribou).

Les résultats indiquent que, le plus souvent, le langage définit ou explique une signification étrangère en utilisant les morphèmes propres à la langue; parfois il élabore à partir d'un mot déjà existant dans la langue, mais rarement il emprunte directement à l'anglais. Ces résultats concordent avec d'autres études déjà publiées se concentrant seulement sur les noms. Le dialecte d'Eskimo Point s'avère être le plus conservateur en ce sens; celui du Québec le moins. Ceci confirme aussi les résultats d'études préalables concernant l'évolution phonologique et syntactique de ces dialectes.

Une analyse de plusieurs facteurs nous suggère que la facilité avec laquelle un interlocuteur bilingue exprime dans la langue inuit une signification étrangère dépend du fait qu'il ait séjourné ou non dans le sud canadien et non pas de son âge ou de son éducation.

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INTRODUCTION

In the settlements of the Arctic, the English language is every year increasing in use and importance among the Inuit[1] population, although its influence is quite unevenly spread throughout the community according to age.

Until the 1950's, little English was spoken by the Inuit, and missionaries, traders, etc. from the south usually learned to speak Inuktitut. When the federal government began setting up schools on a large scale in the Northwest Territories about twenty-five years ago, the situation began to change. The school's curriculum was basically southern and the language of instruction English. Within a very short time an entire generation became bilingual. There is now a sharp difference between the older and younger (up to 30 or so years old) generations in the degree of bilingualism. Furthermore, the time during which the young have remained in school has not been spent learning the old way of life, and many Inuit words and customs are dying with the older people.

Is this trend affecting the Eskimo language to a significant degree, and if so, how? Is the linguistic assimilation of new concepts easy or difficult, and what is the nature of this assimilation? These are some of the questions

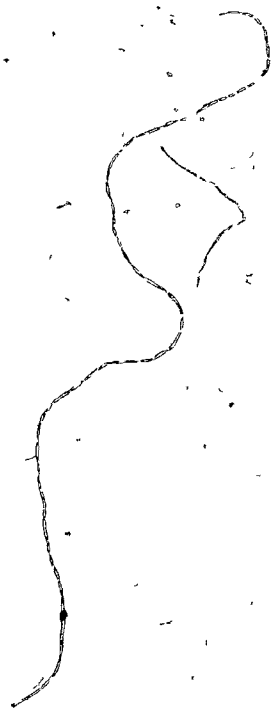
which this study proposes to investigate.

I decided to approach the problem by studying the behaviour of Inuktitut manifested in the verbs when the language is faced with the task of expressing foreign concepts. I have called the resulting verbs "loan-verbs," and include in the term the notion of both word-borrowing and creation of new words within the language.

The work of absorbing these concepts into Inuktitut falls upon the shoulders of the bilingual members of the community. It was this segment of the population which was asked to supply the Inuktitut equivalents of English verbs chosen for their "foreign-ness." Informants in three settlements, each of which represented a different dialect, translated English sentences into Inuktitut. This served two purposes: first, it was a way of comparing dialects, and second, it provided a loose dialect control (i.e. whatever was common to all three dialects was most likely to be basic to the language).

In Chapter I, an overview of the geographic and linguistic background of the study will be presented. A report of previous work in the field will be included as well as a more detailed discussion of the procedure used in this paper. Chapter II will be concerned with the detailed morphemic analysis of the loan-verbs as they appeared in the speech of the informants. Some aspects of grammatical interference

will be examined briefly and the reactions of each dialect will be compared. In Chapter III, the factors of age, schooling, and exposure to the South will be studied in order to determine whether they could affect linguistic behaviour.



NOTE TO INTRODUCTION

[1]"Eskimo" is the general term; the names Inuit (people) and Inuktitut (language) apply to the Canadian Eskimos in particular.

CHAPTER ONE

BACKGROUND

1.1 Eskimo Peoples

The ancestors of present-day Eskimos are believed to have crossed the Bering Strait from Asia about 5 000 years ago and to have very quickly covered the 3 000 miles or so between Alaska and Greenland (Crowe 1974, pp. 13-14).

In 1976, the year this study was started, there were approximately 100 000 people of Eskimo origin spread out over four countries bordering on the Arctic Ocean. These included 1 300 Eskimosy in Siberia (Armstrong 1978, p. 25), 50 000 Eskimo in Alaska, 21 000 Inuit in Canada,[1] and 35 000 Greenlanders in Greenland.[2] Of these, only Greenlanders and Inuit enjoy some preservation of language and culture, although in Canada especially, the equilibrium between preservation and assimilation into southern culture is delicate and difficult to maintain.

The Eskimosy have not increased in population in fifty years and given their small numbers their future seems to be limited. Alaskan Eskimos have been encouraged to speak

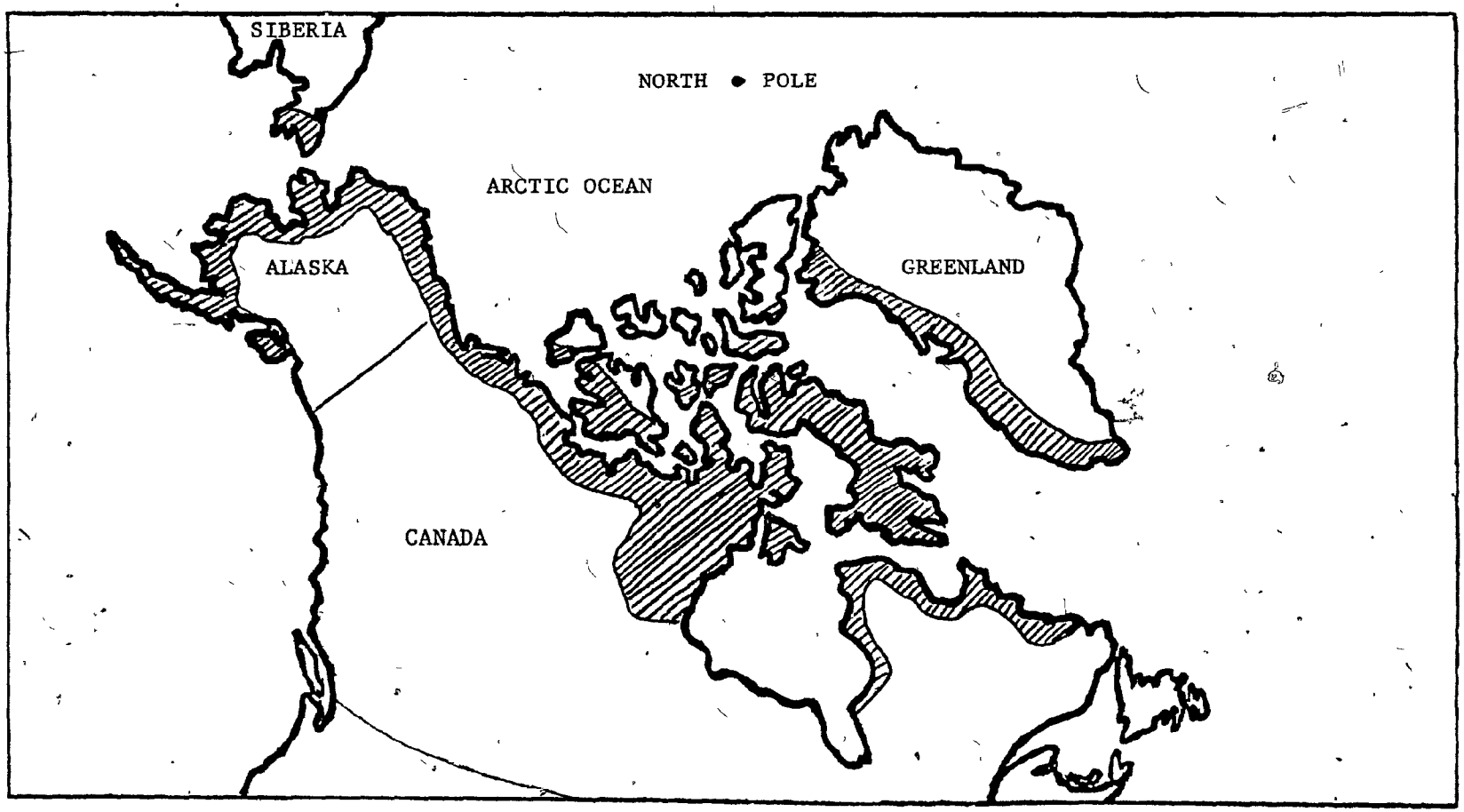


FIGURE 1: DISTRIBUTION OF ESKIMO PEOPLES IN THE ARCTIC REGIONS.

The shaded areas show the regions of the Arctic which the majority of the Eskimo peoples have inhabited.

English at the expense of their native language and although they are much more numerous than the Eskimosy, they are in as much danger of being assimilated into the surrounding culture.

Greenlanders, on the other hand, as a result of an isolationist policy on the part of the Danish government, have flourished as a cultural group and they alone among all Eskimos have developed a literature in their own language. Canadian Inuit lie somewhere in between. Their language has been neither discouraged nor encouraged. In the past twenty-five years the language of instruction in school has been mainly English, but Inuktitut has remained the language of use in other areas of life. Recently there has been a trend towards more native-language teaching in the Northwest Territories and Quebec.

Today, Eskimos in all regions still speak a common language unrelated to any other known language in the world. As can be expected over an area this great, numerous dialects and subdialects have developed. In Canada, Inuktitut is spoken in the Northwest Territories, in Quebec, and in Labrador. There does not yet exist a complete classification of Canadian dialects based uniquely on linguistic criteria. Most often they are identified by political or geographic region, e.g. Mackenzie, Keewatin, Baffin, etc., and subdialects are identified by settlement. Some studies, however, have attempted

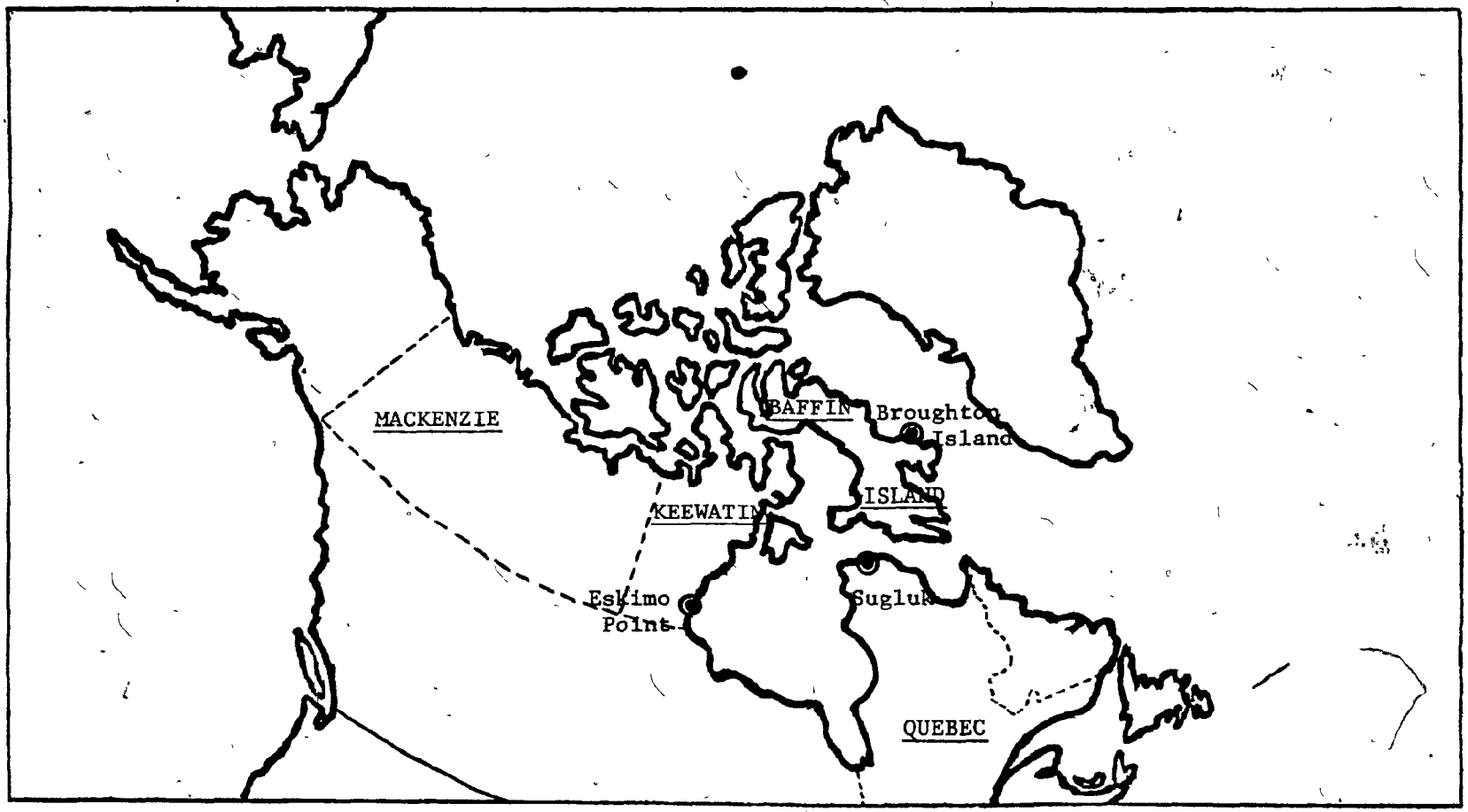


FIGURE 2: SETTLEMENTS INVOLVED IN THE STUDY: RANKIN INLET, SUGLUK, AND BROUGHTON ISLAND.

The underlined names denote regions of the Canadian Arctic.

to account systematically for some varieties of Inuktitut. The work done by Gilles Lefebvre (1964), Kenn Harper (1974), and Louis-Jacques Dorais (1977) in the phonological comparison of eastern dialects are particular examples.

This study aims at a further contribution to our knowledge of the dialect varieties of Inuktitut found in Canada. It concerns the lexicons of these dialects, particularly the section of the lexicon which is newly created under the impact of bilingualism and biculturalism. It will try to determine how different dialects react to the intrusion of foreign cultural concepts normally expressed in English. The settlements chosen for the comparative study were Eskimo Point in the Keewatin, Broughton Island in Baffin, and Sugluk in Quebec.

Eskimo Point is a community of about 850 inhabitants (in 1976) situated on the west coast of Hudson Bay, 1 230 km almost directly north of Winnipeg. The Inuit name for Eskimo Point people is pallirmiut "dwellers of the outlets." Linguistically, their speech is most closely related to that of the people of Baker Lake and both groups are also known as Caribou Eskimo. The Hudson's Bay Company first set up a permanent trading post there in 1924 and families began settling year-round at about the same time. The Roman Catholic Mission established itself in 1924 and the Anglican Mission followed in 1926. The R.C.M.P. arrived in 1933 and the Federal School was opened in 1959 (Williamson 1974, p. 88). In 1976

there were three churches in Eskimo Point--Roman Catholic, Anglican, and the Alliance Church[3] (a Protestant sect)--a relatively high number for a northern community of that size. At the time I was there, a wave of religious fervour was sweeping the settlement (as it was to perhaps a lesser degree elsewhere in the North). Also remarkable was the number of business enterprises. Besides the usual Hudson's Bay store and Co-op, there were two small general stores--Mark's Store and Joe's Store--and a craft shop. The settlement had both telephone and television.

Sugluk is located at the extreme northern tip of the province of Quebec, on Sugluk Bay, 1 835 km directly north of Montreal, and numbered about 500 people in 1976. The sallumiut or people of Sugluk (Graburn 1969, p. 1) speak the Taqramiutitut (Dorais 1977c, p. 1) dialect which includes the speech of Ivujivik and Wakeham Bay. Many of the residents have relatives in Cape Dorset and travel between both settlements is frequent. From about 1915 an independent trader lived in Sugluk, but the first family did not establish itself permanently until the Hudson's Bay Company set up a post there in 1928 (Graburn 1969, p. 123-32). The Anglicans had made converts of most of the Eskimos of the region at the beginning of the century and although the Roman Catholics built a church in Sugluk in 1947, they never experienced quite the success of the Anglicans. Although the Ungava Peninsula has been part of Quebec since 1912, the federal government retained respon-

sibility for the Inuit inhabitants until 1963 (D.G.N.Q. n.d., n.p.). The federal school was opened in the late fifties and has continued until 1976, while the provincial school opened in the early seventies (Graburn 1969, p. 147). The latter, a French-language school, was attended by about 25% of the young school-age children. Many of the men periodically work in mines at Deception Bay or Asbestos Hill, some 65 km or so east of Sugluk. The settlement had telephone in 1976 but, by its own choice, did not have television.

Broughton is a settlement on an island of the same name located just off the east coast of Baffin Island, some 2 400 km north-northeast of Montreal. Its population numbered 350 in 1976. The speech of Broughton most closely resembles that of Pangnirtung and both are part of the Southeast Baffin dialect (Dorais 1977c, p. 1). A permanent settlement only since 1956, Broughton Island was settled by Inuit who moved from Kivitoo to help build the D.E.W. Line station on the island. They were joined in the late sixties by people from Padloping Island when that settlement was closed (TravelArctic 1976, p. 7). The D.E.W. Line station is about ten miles from the settlement and 610 metres up into the hills. Interaction between the station and the community appeared to be slight. Broughton in 1976 was one of the few places left in the Arctic not hooked up to the Anik satellite and hence without telephone and certainly without television.

1.2 Inuktitut

1.2.1 Grammatical Sketch

Eskimo is a highly agglutinating language; that is, syntactical relationships are expressed by means of affixes which are added to the root word in a fixed linear order with little morphophonemic blurring at affix borders. For example, the word

tuktusiurumalaunnginnannuk 'because we two didn't want to go hunting'

is made up of the following root and suffixes:

tuktu-	'caribou'
-siuq-	'to hunt'
-guma-	'to want'
-lauq-	(past tense)
-nngit-	(negative)
-ga-	'because'
-nnuk	'we two'

It is not surprising that Eskimo is in fact considered to be the most extreme example of agglutination among all the languages known to us. In almost every instance when speaking of Inuktitut we can replace the word "affix" with "suffix" since there is only one known prefix in the language, ta-, meaning "which has already been mentioned"

(Schneider 1976a, I, p. 25) added to demonstrative pronouns only.

Root words are either verbal or nominal and affixes are specialized as to whether they can be added to noun or verb stems. Generally speaking, affixes specialized for noun roots either modify (in which case the result is still a noun), or verbify; similarly, affixes specialized for verb stems either modify (in which case the result is still a verb), or nominalize.

Nouns are declined for case, number, and possession; verbs are conjugated for mood, subject person and number, and object person and number. Declension and conjugation apply to the last morphemically indivisible affix added to a stem. A small number of suffixes, called marker affixes (Spalding 1969, pp. 28-29), can be added to any fully formed word. They are usually the equivalent of our conjunctions or exclamations. Examples are -lu 'and,' -li 'though,' -guuq (quotation), -luunniit 'either...or.'

Inuktitut is an ergative language (Martinet 1958, p. 391).[4] Such languages have an ergative or "active" case which marks the equivalent of the Indo-european subject of a transitive verb, while the nominative case marks the subject of an intransitive verb, or the object of a transitive verb (Tesnière 1966, p. 112):

angutiup qimmiq tusaavaa 'the man hears the dog'
'man' (erg.) 'dog' (nom.)
(literally, 'the dog being heard of the man.')

qimmiq aivuq 'the dog goes'
'dog' (nom.)

angut aivuq 'the man goes'
'man' (nom.)

The language is very flexible and productive in the creation of new words since, as we have seen, a word in Inuktitut is often the equivalent of a sentence in other languages. If the number of sentences in any language is theoretically infinite, then so is the number of new words in Inuktitut.

1.2.2 Phonology and Orthography

The phonemes of "standard" Inuktitut[5] include the vowels /a/, /i/, /u/, and their geminates /aa/, /ii/, /uu/, and the following consonants:

	voiceless occlusive	fricative voiced	fricative voiceless	nasal	lateral
bilabial	p			m	
labio-dental		v			
dental	t		s	n	l
palatal		j			
velar	k	ɣ		ŋ	
uvular[6]	q	ʁ[7]			

Each of the consonants can also be phonemically geminated (Gagné n.d., I, p. 17).

There are constraints on the distribution of consonants, and a sequence of three or more vowels or three or more consonants is not permitted. Both consonants in a consonant cluster must be identical as to voicing.

In Gagné's Standard Orthography, the above graphemes are used except for /ŋ/, /ɣ/, and /ʁ/, which are represented as ng, g, and r, respectively.

1.3 General View of Borrowing Mechanisms

Einar Haugen (1950, p. 212) has defined linguistic borrowing as "The attempted reproduction in one language of patterns previously found in another." For the purposes of this study, semantic patterns will be included in this definition. We will be looking at more than borrowed sounds or borrowed meanings; we will be looking at borrowed ideas and how they are translated into language.

The phonomenon of borrowing can be classed into the following types:

1) direct borrowing--a word is borrowed relatively intact both morphemically and phonemically, such as <u>kaapi</u>, 'coffee' in Eskimo. As well as borrowing the meaning, the adopting language borrows the sequence of phonemes

or at least replaces the sequence of foreign phonemes with closely resembling native ones. Most linguists refer to these as "loanwords."

2) extension--a native word in the borrowing language acquires an additional or new meaning patterned on the lending language; e.g. the Eskimo word kamik which used to mean 'sealskin boot' has come to signify 'boot' in general, while the original article is now called kamituinnaq 'real kamik' (Dorais 1970, p. 72). Lehmann (1973) and Weinreich (1970) use the term "extension" but restrict its use to the case of a native word acquiring the meaning of a phonetically similar foreign word. It will be used here to mean a native word which undergoes a shift in meaning under any foreign influence, whether phonetic or other.

3) calque--the expression, by means of native morphemes, of semantemes of a foreign language. This may be a literal translation, as in Eskimo kiinaujaliuqpuq ('money' + 'he fabricates') for 'he earns, makes money,' or it may be a definition or explanation as in pukiqtalik ('having yellow stripes') for 'R.C.M.P.' Other names for this type of interference are "loan translation" or "loanshift." Strictly speaking, the word "calque" is used to indicate a literal translation, while a definition or explanation is termed a "creation" and is considered by many linguists not to be a linguistic borrowing (Haugen 1950). This study, however, being

concerned with semantic borrowing and how it manifests itself in the language, will be conducted within the scope of the broader definition.

Although some languages may be more resistant than others, no language in contact with another is immune to linguistic borrowing. This contact is most often effected through bilingual speakers, an aspect of linguistic interference which will be examined in the chapters which follow.

1.4 Previous Work in the Field

It is interesting to note that though much has been written on the social acculturation of the Inuit and on their language, little has been said about their linguistic acculturation. The reason for this may be the fact that social contact between Inuit and Euro-Americans is a relatively recent phenomenon and the degree of bilingualism on either side has been very low for a long time. The only descriptions of Inuit linguistic acculturation deal with the borrowing of nouns. Perhaps these descriptions have focussed on nouns because 1) informants have often been unilingual and objects can be pointed to unlike actions which cannot, 2) nouns are more vulnerable to borrowing than other speech categories, 3) nouns are obvious as targets of study. Whatever the reasons, such has been the case.

Shmuel Ben-Dor reported on bilingualism among both settlers and Eskimo in Labrador (Makkovik) in 1966. He found very little evidence of bilingualism among adults of either group, although young Eskimo schoolchildren spoke both languages as a result of the Enlgish-language school system. In his report he briefly discusses two types of borrowing, direct borrowing and calquing, the former occurring in both English and Eskimo, the latter only in Eskimo. The loanwords or direct borrowings in Eskimo come from German (from Moravian missionaries) as well as English and are always accompanied by phonemic shift (i.e. there is no phonemic borrowing).

Nelson Graburn (1969) undertook his investigation in northern Ungava. He found basically the same thing as Ben-Dor: little evidence of grammatical interference, a very low degree of bilingualism (1%), and phonemic shift accompanying direct borrowing. He lists a number of borrowed words and classifies them into the following categories:

1) loanwords (direct borrowing)--mostly religious words, proper names.
2) loanshift I (extension of meaning)
3) loanshift II (extension of meaning with addition of a descriptive suffix)
4) loanshift III (calque)--most often composed of morphemes describing the function of the object.
5) other--onomatopoeic, unknown, etc.

The most common type by far is the loanshift, the calque in particular. Graburn attributes this to the practical nature of the Inuit and the importance of function in their culture. Extensions will result when the borrowed concepts are similar to traditional models in form or in function. Loanwords are tentatively explained in the following way: (a) the religious terms may have been introduced by bilingual missionaries; in any case, they have no traditional model, (b) some words in English may lend themselves phonetically to direct borrowing, (c) loanwords may be the direct result of bilingualism. Referring to (c) above, Graburn predicts that the frequency of loanwords should rise with the level of bilingualism.

In 1970 and again in 1976, Louis-Jacques Dorais reported on a study of borrowed words in the Inuktitut of both New Quebec and Labrador, and quantified the results according to borrowing category. His categories in the 1976 study are

	Frequency of occurrence (% of corpus)	
1) calque	76,82	
i) describing function		46,35
ii) describing appearance		27,73
iii) trad. word modified		2,74
2) extension	15,84	
i) general word		8,04
ii) specific trad. word		7,84
3) direct borrowings	7,34	
i) from English		6,5 (1970)
ii) from German		2,9 (1970)

Like Graburn before him, Dorais observed that the great majority of the Inuit population was unilingual; however, unlike Ben-Dor, he noted that Labrador was mostly bilingual. He found also that the most productive method of borrowing is the calque, with description of function accounting for two-thirds of all words in that category. Another similarity among the three studies is the low number of direct borrowings and the high level of phonemic shift associated with them.

Dorais makes a distinction between extension of meaning using a general word of the vocabulary and extension of meaning using a specific traditional word which more often than not has lost its native meaning. Both types of extension appeared with about equal frequency in his study. He found lexical structures to be influenced by semantic field, i.e. there were more direct borrowings for food and more extensions for clothing. Dorais discusses this aspect in more detail in another paper (1977) which we shall discuss below.

A difference was found in the frequency of borrowing type among dialects (1976). The Labrador dialect appeared to have proportionally more direct borrowings than the others. Dorais explains this by considering the greater exposure of the Atlantic Arctic coast to southern culture and the resulting greater degree of bilingualism in the area.

As for the Quebec-Labrador region as a whole, he observed (1973) the following:

a) there is more variety among new words from dialect to dialect than among traditional words,

b) dialect boundaries have changed since the late 19th century because of increasing exposure to southern culture and also possibly because of changing political boundaries so that the division which used to be i) Hudson Bay, ii) Hudson Strait and West Ungava, iii) East Ungava and Labrador, has now become i) Hudson Bay, ii) Ungava and Hudson Strait, iii) Labrador,

c) the simplification of Labrador Inuktitut is most likely the result of the high level of bilingualism in the area.

A report in 1976 by Dorais briefly describes the influence of English-language schooling in the eastern Arctic (Baffin Island, Quebec, Labrador, Melville Peninsula). Two results of this schooling are impoverished vocabulary and simplified grammar among the young. The areas of vocabulary which have suffered most are numbers and terms for zoology and spatial relationahips. Some verbal endings have been simplified, such as plural endings (which have been made more regular) and the negative conjunction. These phenomena have been observed in particular in Igloolik and in New Quebec.

Finally, Dorais (1977) has proposed a different and interesting approach to the study of lexical borrowing in Inuktitut. He suggests using semantic field delimited by cultural experience, as a point of departure, rather than morphophonemic structure. He defines two types of field of experience:

1) processes (syntagamatic), where words are associated by being part of the same activity, e.g. the baking of bread,
2) classification (paradigmatic), in which words are related through their being similar in function or appearance, e.g. kinds of bread or kinds of baking tools.

Proceeding in this way, one finds differences in the lexical structure of borrowed words according to field of experience. If the borrowed concepts form a "process" group, the borrowed words are likely to be calques describing function. If the concepts form a "class" group, then the borrowed words will more often be calques describing appearance or some outstanding feature. When a borrowed concept has a traditional analogue, the borrowed word may appear as an extension; a direct borrowing will result only if a concept is totally unassimilable.

This type of investigation allows us to predict to some extent what kind of linguistic borrowing will occur, and perhaps even the effect it will have on the language.

1.5 Method

The first task at hand was to draw up a list of English words having no native Inuktitut equivalent. There were two aspects to consider: class of word and semantic content. Verbs were chosen for this study simply because no one before had looked at them in this context systematically. The semantic content is discussed below.

1.5.1 Choice of Verbs

Finding verbs in English which would have no equivalent in Inuktitut was more difficult than I had at first anticipated. It is easier to import a foreign object across cultural barriers than it is to acquire an alien state of being or activity. Furthermore, verbs have referents which are often more abstract than those of nouns, with fields of meaning which are less precise and whose boundaries are fuzzier. This makes verbs semantically more elastic, with the result that languages can get "more mileage" out of old verbs than they can out of old nouns.

It was finally decided to choose verbs from the domain of modern technology. The exceptions were "to weave," "to purr," and "to bake."[8] These three, while they do not describe activities new to mankind, certainly express concepts which are innovations to the Arctic within the last two centuries.

Each verb was put into the context of a sentence to present as natural a situation as possible, artificial though it must still ultimately be. Tense (simple past) and mood (indicative) were made the same for all English verbs in order to simplify translation and to minimize interference from extraneous factors. The simple past was chosen because it presents the fewest difficulties in both languages. Person and number, on the other hand, being straightforward concepts, were varied to make the sentences a little more interesting. They vary more than tense and mood in natural speech in any case. Twenty-two English verbs were finally chosen and the list of sentences containing these verbs appears in Appendix A.

1.5.2 Procedure

As mentioned earlier, three settlements were visited: Eskimo Point in the Keewatin, Sugluk in Quebec, and Broughton Island in Baffin Island. These will be referred to below as EP, SQ, and BI, respectively. Each visit lasted approximately three months during the winter and spring of 1975-76.

The number of informants was 28 in EP, 23 in SQ, and 16 in BI. At first glance these numbers may appear to be small, but in fact they represent about 20% of the target population in each settlement. The target population is defined as the bilingual segment old enough to have a

good command of both languages, i.e. between 14 and 30 years of age. This range was exceeded in a very few (6) cases where the informant was either younger than 14 or older than 30 but spoke both languages well.

The target population figures were arrived at using the SQ family list as a guide. (Extrapolating from SQ data should result in fairly accurate figures since population figures I have seen in some ten other settlements indicate a very similar pattern of age distribution throughout the Arctic.) In SQ in 1976, 127 people, which represents 28% of the settlement population, were born between 1946 and 1962. Since the number of informants was 23, the proportion of informants to the target population in this study was 0,18. Proceeding in similar fashion, this proportion was also 0,18 in BI and 0,13 in EP.

Informants were selected as randomly as possible. I asked as many fluent bilinguals as I met and whom I considered would not feel imposed upon to take part in the study. (The people of the Arctic have been examined so much in the past that one is sometimes reluctant to approach them with yet another investigation.)

Each person was given a list of 22 sentences to translate from English to Inuktitut, each sentence containing a verb presumably new to the Eskimo language or at

least relatively so. The informant was asked to translate orally into a tape recorder. He was given as much time as he felt he needed between each sentence and was instructed to translate only those words which he felt he understood. (I use "he" in the generic sense, since the proportion of male to female informants across all settlements was roughly 50:50.) When all informants of a settlement had been recorded, I transcribed the resulting tape into R. C. Gagné's Standard Orthography (n.d.) with the modifications described below. A bilingual person who had not himself been an informant and was either from the same settlement or one of the closely related ones transcribed this tape into the Roman alphabet or syllabics as a cross-check and then supplied his own translation.

The modifications to Gagné's orthography are mainly those of S.T. Mallon (personal communication):

1) in any consonant cluster, the first consonant will assimilate to the second for voicing:

	-liuq-	+	-puq	→	-liuqpuq	
	'to make'		'he'			
but,	-liuq-	+	-niaqpuq	→	-liurniaqpuq	
	'to make'		'he will'			

2) Gagné's consonant geminates are not used when the pair of consonants is realized as two phonetically different sounds and is pronounced similarly in all three settlements:

Gagné	tussiarvik 'church'
Mallon	tuksiarvik 'church'

This brief sketch of the Eskimo people and their language may serve the reader to better understand the analysis of the data (i.e. the loan-verbs as they appeared in the informants' translations) which follows in Chapter II.

NOTES TO CHAPTER ONE

[1]Extrapolated from Lu and Mathurin 1973, pp. 29-30, and Canada (D.I.A.N.D.) 1977, p. 18.

[2]The numbers for Alaska and Greenland are approximations based on figures from the 1971 U.S. Census in the case of Alaska and figures provided by the Danish consulate in Montreal in the case of Greenland.

[3]I am not sure whether this is the correct name.

[4]For recent debates about the "ergativity" of Inuktitut, see Lowe (1978) and Dorais (1978).

[5]While there is no official standard Inuktitut, there is the Standard Orthography which is based on a composite of Canadian dialects, and it is the phonology of this composite which I am describing.

[6]I tend to agree with Schneider (1976, I, pp. 7-8) that the nasalized uvular, Gagné's phoneme 'rng,' is not a phoneme but an rC (/ʁ/ plus consonant) cluster. The arguments to support this hypothesis are as follows:

i) Of all Gagné's phonemes, only the uvular nasal "rng" cannot be geminated. An rC cluster cannot be geminated either.

ii) In dialects where Schneider's Law of Alliteration (see Appendix B) applies, "rng" is treated as a consonant cluster. (In the examples below, Thibert's words are from the Keewatin area where the Law does not apply.)

	Thibert	Schneider	Gagné's Orthography
'it leaks'	ernrartok	erngratoq	irngatuq
'blue fox'	krearnartok	qearngratoq	qiarngatuq
'he sows'	kangarsuiyoq	kanngrashuiyoq	karngasuijuq

iii) All rC clusters occur intervocalically only. Among Gagné's phonemes, only r, ng, and "rng" cannot occur initially or finally. It may be acccidental that r and ng on the one hand and "rng" on the other behave in an identical manner, but I suspect that they do so because "rng" is a combination of r and ng.

[7][ʁ] sometimes acts as an allophone of /q/ (Heffner 1964, p. 14) as well as being a phoneme. See section 1.5.2.

[8]Six verbs not included in this discussion have been rejected because of poor response rates (see Chapter II p. 32). Among these are only two from modern technology, "to distill" and "to publish."

CHAPTER TWO

RESULTS BY SETTLEMENT

The results are first analysed by comparing the settlement responses with each other. I was interested in seeing whether there are differences in the way the three dialects treat foreign concepts and, if so, the way in which these differences are characterized.

In the analysis of the results, three patterns of response emerge: (1) word understood and translated--by far the largest group, accounting for 80% of all responses, (2) word translated but misunderstood, such as atug- 'to spend' for 'to earn,' or parug- 'to paddle' for 'to pedal,' 3) word not translated at all. The last two types have not been examined.

Since the frequency of pattern (1) type response (valid translation) for each word drops sharply after 52%, and a low rate of valid translation could be the result of a badly chosen word on my part, it has been arbitrarily decided to eliminate from the analysis those words with a valid translation rate of less than 50%. There

TABLE I

NUMBER OF RESPONSES FOR PATTERN (1)
(Target verb is understood and translated.)

English Verb	EP	SQ	BI	=total (max. 67)
to paint (house)	28	23	16	= 67
to bake (a cake)	28	23	16	= 67
to telephone	26	23	15	= 64
to film	26	22	14	= 62
to record	26	23	12	= 61
to operate (med.)	26	21	13	= 60
to blast	26	20	13	= 59
to mine (X)	24	20	13	= 57
to farm	25	20	11	= 56
to earn money	23	21	9	= 53
to pilot	20	19	13	= 52
to transfuse blood	24	10	11	= 45
to electrocute oneself (to get a shock)	24	9	11	= 44
to weave X (on a loom)	19	10	13	= 42
to purr	16	12	7	= 35
to televise	14	11	10	= 35

are only six of these: 'to pedal,' 'to publish,' 'to discipline,' 'to hypnotize,' 'to analyse,' and 'to distill,' in order of the increasing difficulty they offered the subjects. The remaining sixteen are listed in Table I and discussed below, also in order of increasing difficulty, and are analysed into constituent morphemes.

2.1 Analysis of Loan-Verbs

The Inuktitut verb has no "infinitive" as such and the convention is to represent it in a neutral 3rd person singular indicative form for which the intransitive or simple ending is either -vuq if the stem ends in a vowel or -puq if it ends in a consonant (-vaa/paa is the equivalent transitive or complex ending). In this section all morphemes at the beginning of each discussion (unlike within the discussion and in the appendices) will appear in capital letters in the form they would have in isolation, minus the -vuq/puq ending; morphophonemic changes will be disregarded. Only those forms given by at least three different people will be considered here in order to get some idea of trends. They account for 90% of pattern 1 responses. A complete and morphophonemically more detailed treatment of the results is available in Appendix B.

The phonemic treatment of the three dialects has

been standardized as far as possible. Where "s" is found, read "h" for EP. Where "ɬ" is found (voiceless "l"), read "t" for BI and "s" for SQ.

'to paint /house/'

	EP	SQ	BI
(a) MINGUAQ-	28	23	-
(b) AMIAQ-	-	-	16

Without exception, all SQ and EP speakers used the stem minguaq- and all BI speakers used the stem amiaq-. Clearly, 'to paint' is a dialect-specific word. The words can be found in exactly these forms in the dictionary which would indicate that they have been in use for some time. Minguaq- may have come from minuk 'slime' (Graburn 1965, p.28) + -aq- (-aqpaa/arivuq) 'to spread,' and it may be that amiq which means the skin covering of a canoe or kayak was used to form amiaq 'a coating' and hence amiaq- 'to paint.'

A curious fact which emerges is that transivity for this word seems to be settlement-specific also. In SQ the intransitive minguarivuq was overwhelmingly popular, while in EP it was the transitive minguaqpaa. A minority of people in both settlements used the form minguaqpuq, i.e. with the intransitive ending but without the transitional affix[1] -i-. In most cases where the intransitive takes the affix, the "no-affix" form is a reflexive verb. In the English

sentence however, there was nothing to imply that the agent was painted or was painting himself. No one in EP said minguarivuq, so usage there may preclude the affix for the non-reflexive intransitive of the verb in this context. No one in SQ used the transitive form and only one person said minguaqpuq, the intransitive without the affix. Was it because this person was quite young (15)? There was nothing to indicate that the subject had any contact with speakers outside the SQ area.

In BI the separation was less well-defined. Ten out of sixteen people used the transitive amiaqpaa and the rest were evenly divided between the intransitive with -i- and the intransitive without -i-.

'to bake /a cake/'

		EP	SQ	BI
(a)	IGA- 'to cook'	14	8	-
(b)	UUTTI- 'to fry' ?	-	-	4
(c)	a noun + -LIUQ- meaning 'to make' 'cake'	13	13	5
(d)	SANA- 'to work on'	1	2	7

Here too, EP and SQ used a word in common, iga-

'to cook' while BI had another, uutti-. The latter probably derives from uutti 'frying pan' and may have the literal meaning 'to fry.'[2] BI also has the word iga- but in this case the informants obviously preferred the more specific uutti-.

Just as popular was 'to make a cake' and this form is spread more evenly over all settlements. There is some variation in the translation for 'cake' however. EP has borrowed the word from English phonetically intact, while SQ and BI have both phonemically adapted the word to Inuktitut, although differently in each case. In order to "Eskimo-ize" the morpheme boundaries (an /l/-initial affix rarely follows a consonant; -liuq- never does), the word becomes /kaiki/ in SQ and /kai/ in BI.

Finally, we have the verb 'to work on, create' sana-, the least specific for bake, especially productive in BI.

As was the case for the preceding verb, all informants were able to translate this word. Perhaps these are activities which are universal and occur in the daily routine of all members of the community with greater ffequency than those which follow below.

'to telephone'

		EP	SQ	BI
(a)	UQALUK-	22	-	-
(b)	telepho-Q-	2	11	2
(c)	UQALA-	-	2	13
(d)	UQALIMA-	-	10	-

This verb is another example of a settlement-specific word. EP speakers said uqaluk- 'to telephone,' BI speakers most often said uqala-, and SQ people said either uqalima or telepho-q-.

Words (a), (c), and (d), are all based on the root uqaq- 'to speak,' much the same as in some Indo-European languages.[3]

Each settlement adds a different modifying affix to the root: EP uses -luk- 'badly' (because of the quality of transmission?), SQ uses -lima- 'continously' and BI adds -la- 'easily' or -a- (repeated action) + -la-.

The fourth word, telepho-q- (telepho-qpuq 'he/she telephones') is remarkable in that, among the verbs, it is one of only two instances of direct borrowing of any frequency in the study. I have been told by some informants that the rate of spontaneous occurrence of such borrowing is somewhat higher. That would have to be verified by further studies. The

borrowed root word telepho-q- ends in a "consonant of liaison," in this case /q/, to facilitate phonemic adaptation to Inuktitut. The stem may also be written as talavuq-.

'to film'

			EP	SQ	BI
(a)	AJJI 'picture'	+ -LIUQ- 'to make'	10	15	7
(b)	AULASUUQ 'which habitually moves'	+ -LIUQ- 'to make'	-	1	3
(c)	TARRALIJAARUTI 'film, projection'	+ -LIUQ- 'to make'	15	6	3

All three words are formed from 'to make' plus a word meaning roughly 'film.' The world 'film' is a little different in each case. In ajji the aspect 'picture, image' is stressed, while in aulasuuq it is movement (aula- 'to move' + -suuq 'something which habitually...') and in tarralijaaruti it is projection (tarraq 'screen' + -lijaaq- 'to show' + -uti 'tool for').

The distribution of the three different forms is dialect-specific only in the case of aulasuuliuq- which was said almost exclusively in BI, but there were settlement differences within each word.

In EP, tarralijaq- from -lijaq- 'to use' was preferred over tarralijaaq-. Also preferred in EP were the contractions tarrijauti for tarralijauti and tarrijausiuq- for tarrijautiliuq-.

The transitive forms of ajjiliuq- and tarrijausiuq- were more popular in EP than in SQ or BI as was the case for minguaq-, and in the intransitive there appeared again the enigmatic case of sometimes -i- (-liurivuq, mostly in SQ), sometimes not (-liuqpuq).

'to record'

				EP	SQ	BI
(a)	NIPI 'voice'	+	-LIUQ- 'to make'	26	17	11
(b)	NIJJAARUTI 'record'	+	-LIUQ- 'to make'	-	5	1

All EP and most SQ and BI informants said nipiliuq- from 'to make' plus 'voice.' Some SQ speakers said instead nijjaarutiliuq- (nijjaq- 'to make a sound' + -a- 'repeatedly' + -uti 'tool for' + -liuq- 'to make').

Again, the same pattern of expression for transitivity emerges as for 'to film.' SQ informants used mostly -liurivuq while completely avoiding the transitive -liuqpaa.

EP speakers used either -liuqpaa or -liuqpuq and BI speakers used either -liuqpaa as in EP or -liurivuq as in SQ. One person in EP said -liurivuq.

'to operate' (med.)

			EP	SQ	BI
(a)	PILAK- 'to cut'	+ -TUQ- (frequentative)	24	13	6
(b)	PILAK- 'to cut'		-	3	5

The most frequent translation was some form of pilaktuq- which is 'to cut' with the affix -tuq- indicating multiple action. Schneider also gives another meaning to -tuq-, that of present or non-perfective. However, one of the translators for EP told me that pilaktuq- means 'to operate' in the medical sense, whereas pilak- alone means 'to cut up' as for a sea mammal; and in fact no one from EP used this second form. BI was evenly divided between pilaktuq- and pilak-.

Again, there was no transitive form in SQ and all pilaktuq- intransitives had the transitional affix -i- (-tuivuq). The situation was identical in BI for pilaktuq- but the transitive did appear in pilak-. EP speakers were divided among pilaktuqpaa, -tuivuq, - tuqpuq, and even

-tuqsivuq, this last using -si- rather than -i- as the transitional affix. In SQ and BI as well, there seemed to be free variation between -i- and -si- for the verb pilak-.

'to blast'

		EP	SQ	BI
(a)	QAAQ- 'to burst, explode'	16	15	11
(b)	SIQQUQ- 'to shoot at' 'to clap, make a cracking sound'	5	-	-

Most people in all settlements said qaaq- 'to burst' in some non-reflexive form. EP used the transitive qaaqpaa 'he/she bursts it, explodes it' as well as the transitional affix -si- in qaaqsivuq 'he/she bursts [something]. The root qaaq- plus -tit- 'to cause to' was said in all settlements but was more popular in SQ and BI than in EP.

In EP another verb as well, siqquq- 'to shoot at' was used to translate the meaning of 'to blast.' This verb was twice used with qaaqtaqtumut 'using dynamite,' perhaps to make it a little more specific. It was said only one-third as often as qaaq- in that settlement.

'to mine /X/'

			EP	SQ	BI
(a)	UJARAK 'stone, rock' +	-NNIAQ- 'to look after, work on'	1	13	-
(b)	UJARAK 'stone, rock' +	-SIUQ- 'to hunt, look for'	2	1	1
(c)	UJARAK 'stone, rock' +	-TARIAQ- 'to go get, collect'	9	-	-
(d)	X + -MIK (obj.)	QINIQ- 'to look for'	8	2	7
(e)	X + -MIK (obj.)	PINASUAQ- 'to try, work on'	-	4	2

Very productive in EP and SQ was ujarak (or ujaraq) 'stone'[4] with an affix meaning 'to look for' or 'to work on.' The affix -nniaq- was more popular in SQ; -tariaq- in EP. The resulting verbs were completed by an object X-mik (X = gold, silver, etc.).

Almost as frequent but less specific in meaning, was the construction X-mik plus the verb qiniq- 'to look for' or pinasuaq- 'to work on.' This was also less dialect-specific although qiniq- was used more often in EP and BI than in SQ and pinasuaq- was not said at all in EP.

One might have expected a more consistent response from EP informants because of the presence of a nickel mine in nearby Rankin Inlet where many EP Inuit worked and which

was in operation for about five years from 1957 to 1961 (Williamson 1974, p.111). SQ is situated near an asbestos mine where many Inuit are also employed. Can this account for the relative uniformity of response in this case?

'to farm'

		EP	SQ	BI
(a)	PIRUQ- 'to grow' + -TSII- 'to wait until'	7	6	4
(b)	a noun meaning 'land' or 'farm' + -LIRI- 'to work at'	12	1	1
(c)	a noun meaning 'land' or 'farm' + -MI 'on' PINASUAQ- 'to work'	-	6	-
(d)	IQQANAIJAQ- 'to work' NUNA 'land' + -MI 'on'	-	-	3

The greatest single response for 'to farm' was piruqsii- 'to wait until /something/ grows' which can also mean 'to cultivate.' This is a logical way of perceiving cultivation in the Arctic since there is very little in the way of vegetation, edible or not, that does grow on the tundra compared to farms in the south. The frequency of this word was about the same in the three settlements.

Most of the other informants used some form of 'to work,' a word which implies a more active role in the farming process. The total number of those using 'to work'

was greater than that of those saying piruqsii- but each settlement had its own way of expressing the word.

SQ informants said pinasuk- or pinasuaq-, as they had done for 'to mine,' from pi- (general "something" word) and -nasuk- or -nasuaq- 'to try,' followed by nunami 'on the land' or piruqsiivingmi 'on a farm, where one cultivates.'

EP people also used nuna or piruqsiivik but added the affix -liri- 'to work at' either directly to the noun or, more often, as a separate word piliri- (also from pi-). One person in each of SQ and BI used -liri- as well.

In BI the word used for 'to work' was iqqanaijaq- and farming was specified by nunami 'on the land.'

Interestingly enough, each settlement was about equally divided between piruqsii- and one of several Inuktitut forms of 'to work' ('to work' was maybe slightly favoured in EP).

'to earn money'

				EP	SQ	BI
(a)	KIINAUJAQ 'money'	+	-LIUQ- 'to make'	18	8	1
(b)	KIINAUJAQ 'money'	+	-TAAQ- 'to receive'	5	12	7

This verb was fairly straightforward. About half the informants translated 'to earn' by the affix -liuq- 'to make.' It was the preferred expression in EP but was almost not said at all in BI. The BI translator told me that kiinaujaliuq- can also mean 'to fabricate money,' i.e. 'to counterfeit.'

The other half said kiinaujaqtaaq- 'to receive money' using the affix -taaq-. This was said more often in SQ and BI. The contraction kiinaujjaaq- was preferred in both these settlements.

'to pilot'

				EP	SQ	BI
(a)	a noun meaning 'pilot'	+	-U- 'to be'	16	16	8
(b)	AQUT- 'to steer, drive'			-	1	4

Most popular and said with about equal frequency

in each settlement (if we remember that the population of BI is half that of EP) was the equivalent of 'to be a/the pilot.' The word for 'pilot' is different in each of the three dialects.

The people of the Keewatin say timmisuuqti from timmisuuq 'airplane' (timmi- 'to fly' + -suuq- 'something which habitually...') and -ti 'one whose profession is....' In Quebec, people say qangattajuuqti from qangattajuuq, also meaning 'airplane' (qangatta- 'to go up in the air' + -juuq, a variant of -suuq) plus -ti. In BI they say aqutti which is a little more general and means 'driver,' from aqut- 'to steer, drive' plus -ti. The one person in EP who used this word had spent several years in Coral Harbour, a settlement situated midway between BI and EP.

The final forms for 'he/she pilots, is the pilot' were timmisuuqtiuvuq in EP, qangattajuugtiuvuq in SQ and aquttiuvuq in BI.

The second translation was the general aqut- 'to steer, drive,' said most often in BI. This verb seems to be most productive in this settlement.

'to transfuse blood'

					EP	SQ	BI
(a)	AUK 'blood'	+ -LIQTUQ- 'to furnish with'			16	1	-
(b)	AUK 'blood'	+ -TAAQ- 'to receive'	- -TIT- 'to cause to'		-	1	8
(c)	AUK 'blood'	+ -MIK (obj.)	a verb meaning 'to give' or 'to fill with'		6	6	2

Two words for 'to transfuse blood' were dialect-specific: auliqtuq- and autaaqtit-.

The first, used in EP, is formed from auk 'blood' with the affixes -liq- 'to furnish with' and -tuq- which indicates multiple action and may be a type of imperfective. This is the same -tuq- that we saw in pilaktuq-.

The transitive form auliqtuqpaa 'he/she furnishes him/her with blood' appeared here exclusively, as it regularly seems to, in EP. What is perhaps more extraordinary, the passive auliqtuqtauvuq 'he/she is given blood' and its contracted form auliqtugauvuq were said most often of all, even though the English sentence was active. The one SQ informant who also said auliqtuqtauvuq had spent some time in Churchill, Man., and may have picked it up there.

Only BI people, and almost all of them, said 'to cause to receive blood,' autaaqtit-, some using the transitive

autaaqtippaa.

Thirdly, there was the construction aungmik 'blood' (obj.) plus some verb with the meaning 'to give' or 'to fill with.' This appears to be cross-dialectal, unlike constructions (a) and (b). Most SQ informants expressed the verb in this way. A surprisingly low proportion of SQ people responded to this verb, a fact difficult to explain.

'to electrocute oneself'
(get a shock)

		EP	SQ	BI
(a)	UUT- 'to burn'	20	-	-
(b)	SUKAK- 'to be taut, tense' (or SUKAT- 'to be quick')	3	-	11
(c)	QUTSALAK- 'to start' (from surprise)	-	5	-

This verb was strongly dialect-specific. The overwhelming response in EP was uuppuq (a few uuvuq) 'he/she burns.' No one in either of the other settlements said this.

The next word sukak- presented some difficulties. The Inuktitut speakers who transcribed for me did not, as a rule, indicate geminate consonants or consonant clusters so

that sukaktuq 'taut' and sukattuq 'quick' would both appear as sukatuq. The difference between -kt- and -tt- is extremely difficult to hear for a non-native ear and, furthermore, this difference is neutralized in many dialects (Dorais 1977b, pp.49-50). I cannot be sure whether the stem is really sukak- or sukat-. This is compounded by the fact that in all cases, in both EP and BI, the word sukatuq was translated as 'to get a shock.' The only explanation for this that I can see, unless we have here a case of direct borrowing, is that the shift of meaning is complete for the word in this context and the original meaning is not present in the consciousness of the speaker. It is very unlikely to be a directly borrowed word since there was one shock-ippuq (also perceived as such by the Inuit transcriber) which is in accordance with the usual mechanism of adding /i/ as a "vowel of liaison" to adapt foreign words to the Inuktitut phonetic system, and is what most people would say were this an outright transfer.

Of the two, sukak- or sukat-, the former is the more probable source of 'to get a shock' because of its meaning of tension. This word did not appear at all among SQ speakers. It was said by some people in EP and by most in BI. Two BI speakers also added -tit- to make 'to cause to be taut, tense,' sukaktit-.

Finally, only in SQ was qutsalak- 'to start, jump' said, but it accounted for fully half of the responses there. The proportion of total SQ responses was again surprisingly low.

'to weave X'
(on a loom)

			EP	SQ	BI
(a)	X + -LIUQ- 'to make'		8	7	6
(b)	X + -MIK (obj.)	NUVIQSAQ- 'to knit'	4	3	3
(c)	X + -MIK (obj.)	SANA- 'to work on'	4	-	2

The BI people had less diffuculty translating this word than did speakers in SQ or EP. This is not surprising since a flourishing weaving centre has been operating within the last ten years in Pangnirtung, the settlement closest to BI. Nevertheless, responses were not, on the whole, dialect-specific.

Most productive again was the affix -liuq- 'to make.' Quite a few people qualified this verb X-liuq- by adding nuviqsaqłuni 'by knitting' and one very precise and articulate informant said X-liurummut 'with an X-making machine.'

About half as many as used -liuq- said X-mik nuviqsaq- 'to knit X.' This too was said with about equal frequency in EP and SQ and proportionately more often in BI.

Third was the more general X-mik sana- 'to work on X.' This was not said at all in SQ.

'to purr'

			EP	SQ	BI
(a)	NIJJAQ- 'to emit a sound'	+ -A- 'repeatedly'	7	8	-
(b)	NILLIQ- 'to utter a sound'	+ -A- 'repeatedly'	4	4	5
(c)	PIQPALUK- 'to make a lot of noise'		4	-	-

Most of the responses were made using one of three verbs, all of them meaning to produce sound in one way or another. None were onomatopoeic.

The stem nilliq- 'to utter a sound' (or nillia- for continuous sound) appeared in all settlements, while nijjaq- 'to emit a sound' (or nijjaa- for continuous sound) was said only in EP and SQ. The translation piqpaluk- 'to made a big sound, a lot of noise' is hard to explain if it is to be understood literally. It was said only in EP.

The 'continuous' versions of nilliq- and nijjaq-, nillia- and nijjaa- respectively, were favoured by more than half the informants using these verbs. A more descriptive translation?

EP was divided among three verbs, SQ between the first two, and BI uniformly responded with nillia-.

'to televise'

				EP	SQ	BI
(a)	TAKUKSAU- 'to be visible'	+ -TIT- 'to cause to'		5	-	3
(b)	TALAVISA 'television'	+ -LIUQ- 'to make'		-	4	2
(c)	a noun meaning 'television'	+ -KKUUQ- 'to go through'	+ -TIT- 'to cause to'	-	2	1
(d)	a noun meaning 'television'	+ -KKUT 'through'				
	NUITA- 'to be visible'	+ -TIT- 'to cause to'		1	2	-

The second of two instances of direct borrowing, this verb was built on the root talavisa and in a few cases on tivi.

This mechanism was avoided in EP, the only settlement of the three to have television at the time of the study. There, people said takuksau- 'to be visible' (taku- 'to see' + -ksaq 'potential for' + -u- 'to be') with -tit- 'to cause

to' forming takuksautit- 'to cause /something/ to be visible.'

Related to this was nuitatit- also meaning 'to cause to be visible' or 'to show' from nuita- (nui- 'to appear' + -taq-, frequentative) and -tit-, coupled with talavisakkut 'through television.' This too was said in EP, although once only, and in SQ.

SQ and BI both used -liuq- as in talavisaliuq- 'to make television' or verbified 'through television' to make talavisakkuuqtit- 'to cause to go through television.' Some informants borrowed "TV" (tivi) instead of "television."

This section has dealt in detail with the ways the loan-verbs appear in the three settlements. The next section will attempt to trace patterns or correlations in the responses in order that we may see more precisely where and how the three dialects differ. The features of differentiation which will be considered are as follows:

i) choice of lexeme (settlement specificity of words used)
ii) transitivity
iii) method of borrowing
iv) miscellaneous features which, though not directly related to loan-verb analysis, appear in the data and, I feel, are of interest.

(In addition, Appendix D discusses two findings which are not relevant to the topic but which are nevertheless worth noting.)

2.2 Settlement Specificity of Words Used

The verbs analysed in section 2.1 were examined to see whether any two settlements aligned themselves with one another in the use of certain forms. Only the forms which were found at least three[5] times in the responses of the subjects were considered. Table II shows which words are common to two settlements, and Table III, those which are common to all three communities. Table IV lists the words exclusive to a particular settlement.

TABLE II

SETTLEMENT ALIGNMENT IN THE USE OF ENGLISH LOAN-VERBS: WORDS COMMON TO TWO COMMUNITIES

EP-SQ	EP-BI	SQ-BI
minguaq- 'to paint'	takuksautit- 'to televise'	pilak- 'to operate'
nijjaa- 'to purr'	X-mik sana- 'to weave'	X-mik pinasuaq 'to mine'
kiinaujaliuq- 'to earn money'	sukak- 'to get a shock'	talavisaliuq- 'to televise'
'cake'-mik iga- 'to bake (a cake)'	X-mik qiniq- 'to mine'	

TABLE III

SETTLEMENT ALIGNMENT IN THE USE OF ENGLISH LOAN-VERBS:
WORDS COMMON TO ALL COMMUNITIES

'cake'-liuq-
'to bake /a cake/'

ajjiliuq-
'to film'

tarralijaarutiliuq-
'to film'

nipiliuq-
'to record'

pilaktuq-
'to operate'

qaaq-
'to blast'

piruqsii-
'to farm'

kiinaujaqtaaq
'to earn money'

'pilot'-u-
'to pilot'

X-liuq-
'to weave'

X-mik nuviqsaq-
'to weave'

nillia-
'to purr'

TABLE IV

SETTLEMENT ALIGNMENT IN THE USE OF ENGLISH LOAN-VERBS: WORDS UNIQUE TO EACH COMMUNITY

EP	SQ	BI
uqaluk- 'to telephone'	telepho-q- 'to telephone'	uqala- 'to telephone'
siqquq- 'to blast'	uqalima- 'to telephone'	aqut- 'to pilot'
ujaraktariaq- 'to mine'	ujaranniaq- 'to mine'	nunami iqqanaijaq- 'to farm'
nunaliri- 'to farm'	nunami pinasuaq- 'to farm'	aulasuuliuq- 'to film'
auliqtuq- 'to transfuse blood'	talavisakkuuqtit- 'to televise'	uutti- 'to bake (a cake)'
piqpaluk- 'to purr'	qutsalak- 'to get a shock'	kaimik iga- 'to bake (a cake)'
uut- 'to get a shock'	nijjaarutiliuq- 'to record'	amiaq- 'to paint'
		autaaqtit 'to transfuse blood'

The results are relatively inconclusive. No one combination of any two settlements seemed to show more evidence of common usage than other pairs of settlements. In fact, the three settlements more often either shared a word amongst all three or did not share at all.

2.3 Transitivity

There is a distinct difference in the way informants

from each community make use of the transitive, or complex, form.

It is generally accepted that the transitive form of the verb approximates the definite article in English and the intransitive form, the indefinite article, for example:

tr.	qimmiq 'dog'	tusaavaa 'he/she hears it'	= 'He/she hears the dog.'
intr.	qimmirmik 'dog'	tusaavuq 'he/she hears'	= 'He/she hears a dog.'

This is in accordance with the fact that the transitive was never used to translate any of the English sentences which have indefinite objects. There is some inconsistency, however, in the manner in which sentences with definite objects[6] were translated.

First, the transitive was used in EP for seven of the eight sentences with definite objects; in BI for four. But the intransitive was also used for all of them. Second, not one of the SQ informants ever used the transitive form. It may be premature to speculate that this is evidence of grammatical simplification or "levelling" given the size of the corpus, but the pattern does parallel the different degrees of phonemic evolution which are present in these dialects (Dorais 1977b), i.e. EP most conservative; SQ, least so.

2.4 Method of Borrowing

Looking at the results classified by borrowing method (Table V), we find that calquing was the mechanism most used by far. Sixty-eight per cent of all borrowings were of this type; next were extensions, 28,5%, and last were direct borrowings, 3,5%. These figures are not very different from those of Dorais (1970, p. 72). Compared to the figures in Table V, the proportion of extensions in Dorais' study was lower and that of direct borrowing was higher, but the frequency of the most productive category, calquing, was about the same (72,4%). The three methods had the same relative order of productivity. The results are even closer when Dorais' figures are compared to those of SQ alone in Table VI below. This is not surprising, since of the three settlements considered here, SQ is actually in the area under investigation in Dorais' study. We can see that the percentage of direct borrowing is significantly higher in SQ than the average; in SQ, 7% of all responses were of the direct borrowing type.

No single word was borrowed in all three ways. Only four words, 'to bake,' 'to pilot,' 'to telephone,' and 'to televise,' were borrowed in two different ways, one of which was always calquing--a remarkably uniform response.

Calquing, then, was the most productive borrowing method. It was done through the use of a small number of

TABLE V

DISTRIBUTION OF RESPONSE ACCORDING TO BORROWING METHOD

English verb	Percent of pattern 1 response		
	DIRECT BORROWINGS	CALQUES	EXTENSIONS
to paint			100
to bake		61	39
to telephone	24	76	
to film		100	
to record		100	
to operate			100
to blast		100	
to mine		100	
to farm		100	
to earn money		100	
to pilot		89	11
to transfuse blood		100	
to electrocute oneself			100
to weave		100	
to purr			100
to televise	60	40	
OVERALL	3,5	68	28,5

TABLE VI

COMPARISON OF THE DISTRIBUTION OF BORROWING METHOD

Borrowing Method	EP - SQ - BI	SQ	Dorais
direct borrowing	3,5%	7,0%	9,4%
calquing	68,0%	68,0%	72,4%
extension	28,5%	25,0%	17,8%
	100,0%	100,0%	100,0%

very productive affixes. Certainly, the preferred affix was -liuq- 'to make.' It appeared in the translations of six out of the twelve English verbs borrowed as calques. Stems or affixes with the meaning 'to work on, at, with' were often employed as well. There were six of these: sana-, iqqanaijaq-, pinasuk-, pinasuaq-, -liri-, and -nniaq-. They were used to translate four of the verbs. Affixes -taaq- 'to receive' and -tit- 'to cause to,' either alone or in combination with each other, also appeared in the translations of four verbs. It should be realized that since calquing accounted for the greatest proportion of borrowings, these three groups of affixes were very prominent overall as borrowing tools for loan-verbs.

The settlements were compared in their use of borrowing mechanisms. Table VII shows each settlement's share (by percentage) of the response in each borrowing category.

TABLE VII

SHARE AMONG SETTLEMENTS OF THE RESPONSE
IN EACH BORROWING CATEGORY

Borrowing Mechanism	Share of Each Settlement			
	EP	SQ	BI	
direct borrowing	11%	70%	19%	= 100%
calque	44%	33%	23%	= 100%
extension	47%	30%	23%	= 100%
OVERALL SHARE	44%	33%	23%	= 100%

EP, SQ, and BI are consistent in all categories except direct borrowing. Here, SQ's share jumps to 70% compared to 11% for EP and 19% for BI. It is true that the dialects of the central Arctic tend to be more archaic than those of the east while those from Quebec/Labrador seem to be evolving at the quickest rate. This tendency, or lack of it, towards archaism may be affecting resistance to direct borrowing, resulting in the pattern observed in Table VI.

2.5 Other Observations (Miscellaneous Features)

Looking through the corpus, I have found other phenomena which, although not directly related to the study of loan-verbs, may nevertheless be of interest for the purposes of this study and may corroborate the previous findings. They might also be pursued in further investigations.

2.5.1 -JUQ/TUQ vs. -VUQ/PUQ

In Inuktitut, the normal 3rd person singular indicative ending of the intransitive verb is -vuq/puq. There is a participial ending, -juq/tuq, which means 'one who...' and which is often used instead of the regular verb form to translate an indicative English verb.

	3rd person		1st person	
ind.	igavuq	'he/she cooks'	mumiqpunga	'I dance'
part.	igajuq	'the one who is cooking' or 'he/she cooks'	mumiqtunga	'I who am dancing' or 'I dance'

The grammar books are not clear on the form to be used in a given context. Schneider (1976, I, p.143) speculates on a perfective aspect for the participle. Ellis (1978, II, p.7) proposes the progressive aspect for this form; he discusses the third person only.

The corpus[7] was examined to determine whether the use of one form or the other was predictable. Table VIII lists the number of times each form was used, both by settlement and by English verb.

What emerged was a strong correlation between the

TABLE VIII

FREQUENCY OF USE OF -JUQ/TUQ VS. -VUQ/PUQ

English Verb	Number of Occurrences -juq/tuq form				-vuq/puq form			
	EP	SQ	BI	total	EP	SQ	BI	total
to paint /house/	14	18	12	= 44	14	5	4	= 23
to bake /a cake/	13	18	11	= 42	15	5	5	= 25
to telephone	7	4	7	= 18	17	19	8	= 44
to film	8	7	7	= 22	18	15	5	= 38
to record	14	17	8	= 39	12	6	4	= 22
to operate (med.)	14	15	10	= 39	12	6	3	= 21
to blast	11	13	9	= 33	13	6	4	= 23
to mine /X/	9	14	9	= 32	14	4	4	= 22
to farm	16	15	7	= 38	9	5	4	= 18
to earn money	20	17	7	= 44	3	4	1	= 8
to pilot	5	1	6	= 12	13	15	6	= 34
to transfuse blood	11	6	8	= 25	13	4	3	= 20
to electrocute oneself (get a shock)	13	5	7	= 25	11	4	4	= 19
to weave X (on a loom)	12	6	9	= 27	7	4	4	= 15
to purr	6	9	3	= 18	10	3	3	= 16
to televise	5	6	5	= 16	9	4	4	= 17
GRAND TOTALS	178	171	125	=474	190	109	66	=365

form used and the person of the verb (see Appendix A for person of the verb). All and only those verbs which were in the first person (singular or plural) showed a greater number of -vuq/puq responses. Unfortunately, there were no verbs in the second person included in the sentences to be translated. From evidence in Inuktitut (Schneider 1976a) and other languages (Benveniste 1966), however, it is probably safe to say that the second person would behave in much the same way as the first. This tendency to reserve the participial (or relative) form for the third person was strongest in SQ. Similarly, the converse was also true: the -vuq/puq forms were most often restricted to the first person in SQ. Only the former tendency was observed in EP; only the latter in BI.

When the corpus is examined according to respondent, it is found that EP and BI people were more likely to use one form exclusively than were persons in SQ. This may explain the skewed results observed in the two settlements.

2.5.2 Past Tense

As discussed earlier, the simple past was used in the English sentences. However, the settlements were uneven in their treatment of tense.

There are several affixes in Inuktitut which render

various degrees of time past. Some of these are, in order of degree: -rataaq-' immediate past: -qqau-, recent past (same day); -lauq-, (yesterday and earlier); -lauju-, remote past; -viniq-, past applying to -juq/tuq ('one who') participles and which may imply that the speaker was not present. It must be noted that about half the time in all three communities, the Inuktitut version had no time morpheme at all and could best be interpreted as being in the "neutral present."

Only -lauq- appeared in EP. In SQ and BI, both -qqau- and -lauq- were used as well as the participial past -viniq and its variant -miniq. Not only did SQ and BI use the same forms, they also used them to the same degree, i.e. the frequency of each of the three forms was between 10% and 16% of all responses. I cannot be sure what this means. EP certainly behaved differently from the other settlements in this case. Is this the result of a different reaction to foreign words or evidence of some other mechanism altogether?

2.5.3 Direct Borrowing of Nouns (as found in the corpus)

Although the focus of this study is on verbs, it may be useful to note some examples of nouns which were borrowed from English since, here again, EP shows specific characteristics. This examination must of necessity remain superficial and only those nouns which were directly borrowed,

TABLE IX

NOUNS DIRECTLY BORROWED

Word Borrowed		Number of Responses		
English	Inuktitut	EP	SQ	BI
TV	talavisa	1	8	6
	tivi	15	6	5
gold	gold, gulu, guli	17	12	12
silver	silver, sivari	16	14	5
a dance	mumiqtut	all	-	11
	tanisiqtut	-	all	4
cat	kat	-	1	1
	puusi	13	12	2
	puusikat	1	1	8
bicycle	paisikuuk, paisikuq-	12	4	2
cake	cake	23	3	1
	kaiki	-	21	-
	kai	-	-	15
two minutes	(two-)minutes	14	5	10

as opposed to calques or extensions in meaning, will be discussed. Table IX lists the nouns in their English and Inuktitut forms, and the number of people in each settlement using each form.

We have already seen how, compared to SQ and BI, EP seems to resist the direct borrowing of verbs. This appears to be the case for nouns as well, though to a lesser degree. Let us take the case of "TV."

The only settlement with television, EP preferred a calque for the verb "to televise," unlike SQ and BI which borrowed directly from English. No calques were used for the noun "TV," but whereas talavisa and tivi were equally popular in both SQ and BI, people in EP all essentially agreed on one word: tivi.[8] Perhaps, since the concept of television is more concrete in EP, the use of the word has stabilized there, while remaining in flux in SQ and BI.

The words "gold" and "silver" were most often rendered as gold and silver, especially in EP, occasionally with Inuktitut phonemicization giving gulu or guli and savari,[9] more common in SQ and BI. It is interesting to note that the informants used these words sometimes in the singular, sometimes in the plural. It may be that their being mass nouns in English caused some confusion in Inuktitut. (Grammatical interference is briefly discussed in Appendix D.)

The phrase "a dance" in English was translated as 'people who are dancing' and took the form mumiqtut from mumiq- 'to dance' or tanisiqtut from the English word "(to) dance." Once more, SQ was the greatest user of the directly borrowed form while EP was the least. BI preferred mumiqtut but used tanisiqtut also.

The word "cat" was translated most often as puusi in EP and SQ, and puusikat in BI. There were two instances of kat, one in SQ, one in BI. Because of its phonetic structure this word lends itself well to direct borrowing.[10]

The word "bicycle" did not appear as a noun in the English sentences but was used to translate 'to pedal.' As such, it was directly borrowed from English both as a noun paisikuuk and as a verb paisikuq-. The word paisikuuk is a dual noun, presumably because of the two wheels. (I did not learn the word for tricycle.)

"Cake" and "two-minutes" are discussed elsewhere.[11] Suffice it to say that both words were, in almost every instance, borrowed directly from English and, with regards to phonological adjustment, the least phonemic change took place in EP.

We see that each time a noun is directly borrowed, the form it takes resembles the English model most closely in EP. When Haugen (1950, p.216) discusses borrowing and biliguals,

he says, "A bilingual speaker introduces a new loan-word in a phonetic form as near that of the model language as he can . . . if he has occasion to repeat it, or if other speakers also take to using it, a further substitution of native elements will take place." This is consistent with the hypothesis that either 1) EP bilinguals have come under the influence of English at a later time than bilinguals in SQ or BI, or 2) EP bilinguals by nature resist direct borrowing to a greater extent.

NOTES TO CHAPTER TWO

[1]Schneider 1968, p.30. He uses the term "infixe de transition."

[2]My own hypothesis.

[3]German and Greek, for example.

[4]As a matter of interest, in SQ (and maybe elsewhere) the word 'stoned,' as in 'on drugs,' is translated into Inuktitut as ujaraktuq (or ujaraqtuq).

[5]A form was considered, even when it appeared only twice in a settlement, if the number of times it appeared elsewhere was three or four, i.e. twice in one settlement was at least 50% of the number of times in another.

[6]This includes not only phrases with a definite article or possessive adjective, but personal pronouns as well.

[7]In this case, the verbs listed in Appendix B before neutralization to -vuq/puq forms.

[8]talavisa is used in EP, but only in the context of the verb 'to televise.'

[9]The point at which silver-i becomes sivari or gold-i becomes guli is almost impossible to determine. There is a phonetic continuum in this case, unlike the transition from gold to gold-i which involves the addition of a discrete phoneme.

[10]Both k and t are phonemes and may be either word-initial or word-final in Inuktitut as well as in English. kat does not violate syllable structure, conforming as it does to the Inuktitut (C)V(V)(C).

[11]See the discussion of 'to bake' for "cake" and Appendix D for "two-minutes."

CHAPTER THREE

OTHER VARIABLES

We have seen that there are some qualitative differences among the dialects in the way in which they handle the importation of foreign concepts. Let us also consider briefly a quantitative aspect of settlement differences, i.e. the rate of pattern (1) response (sentence understood and correctly translated--" proper translation"). The difference of the means test will be used, first to compare the settlements with each other, and then to compare the groups of informants which had been south with the group which had not. In this test we calculate the z-score[1]--a statistical formula which is used to determine whether the difference between group averages is great enough to be significant--for each pair of groups we wish to consider.

The overall average number of pattern (1) response per individual was 12,8 out of a possible 16. Breaking that down by settlement, we have an average of 13,4 in EP, 12,5 in SQ, and 12,4 in BI. The z-scores settle out to significance at the 0,24 level for EP vs. SQ, the 0,92 level for SQ vs. BI, and the 0,35 level for EP vs. BI, i.e. no significant difference among settlements.

The results are different when the group of informants which had been south for anywhere from a few months to a few years (group S) is compared with the group which had never left the Arctic (group N). In this case, the average for group S was 13,9, the average for group N was 12,2, and the significance level of their difference works out to 0,01. In other words, the response of group S was significantly higher.

These last results are to be expected, since one can easily understand the influence exerted by the anglophone (or francophone) milieu of southern Canada.

Are qualitative and quantitative differences due to extraneous factors such as age, schooling, and exposure to the South, or are they inherent to the dialects and/or due to some other, unknown factor(s)? An exhaustive examination of the causes is beyond the scope of this study; I have chosen the three above factors because I consider them important or most likely to have had an effect on the results.[2] They may offer clues as to who in the Inuit speech community is most likely to be the instrument serving to introduce foreign concepts into the language. As we look at these factors, the possibility of a correlation existing between any two of them will be explored and the nature of such a correlation will be examined.

3.1 Age

Age is perhaps the most important of the variables under discussion. It is the marker delimiting the population which has been most intimately exposed to southern Canadian language and culture. By examining age more closely, we may determine, among other things, whether there is a trend away from the native language among the younger generation. However, we may eliminate age as a factor in dialect differences.

The overall average age of informants was 21,4. In EP, the average age was 21,5 with a standard deviation of 5,83, in SQ it was 22,1 with a standard deviation of 6,06, and in BI it was 20,1 with a standard deviation of 5,38. The standard deviations indicate a good spread in ages which is fairly consistent among the settlements. The signifcance level of the z-score was 0,76 for EP-SQ, 0,27 for SQ-BI, and 0,40 for EP-BI. There was therefore no difference among settlements in the ages of informants, and differences in dialect response cannot be attributed to age.

Turning to the ages of group S (exposure to the South) and group N (none), we arrive at the following figures:

	Average Age	Standard Deviation
group N	20,43	5,94
group S	23,17	5,13

The significance level of the z-score for these two groups is 0,05. Thus, there seems to be a significant difference in the ages of both groups, group S being older, and we shall see how this affects the distribution of pattern (1) "proper translation" response.

If we look at age alone when analyzing the distribution of pattern (1) response, we may tend to expect the number of "proper translations" to increase with age. We find, instead, a symmetrical curve which peaks roughly between ages 24 and 26 (see Figure 3). To explain this we should now turn to examining the factor of exposure to the South.

3.2 Exposure to the South

The informants were each asked whether they had ever been to southern Canada and how much time they had spent there. Among those who had, most had gone to the big centres such as Winnipeg, Montreal, or Ottawa. The reasons for going were usually work, school, sickness (there are few hospitals in the Arctic), or travel. About one-third of all informants had been south for varying periods of time, ranging from a few months to seven years.

Because of practical limitations, exposure to the South has been reduced to an "all or nothing" factor;[3]

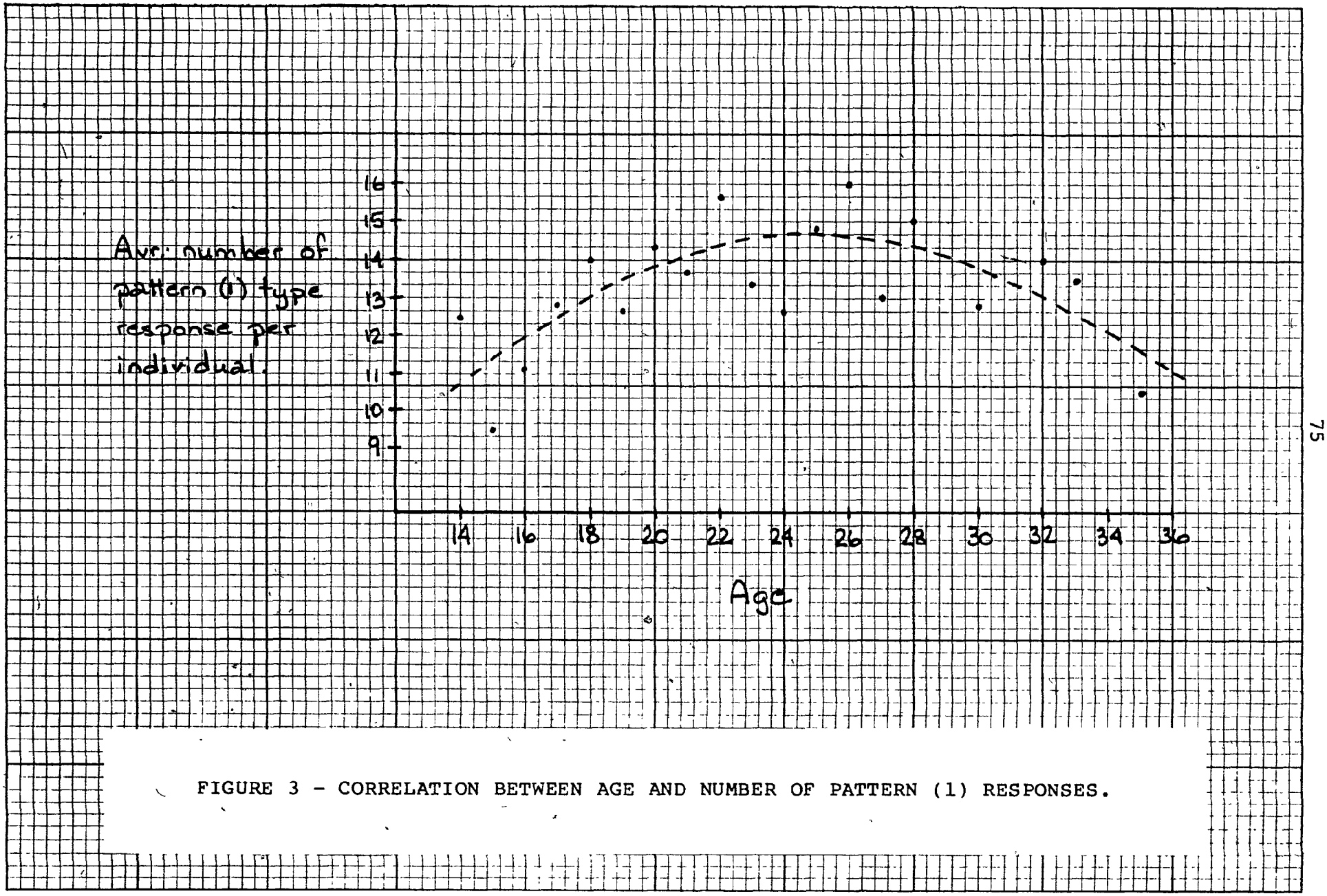


FIGURE 3 - CORRELATION BETWEEN AGE AND NUMBER OF PATTERN (1) RESPONSES.

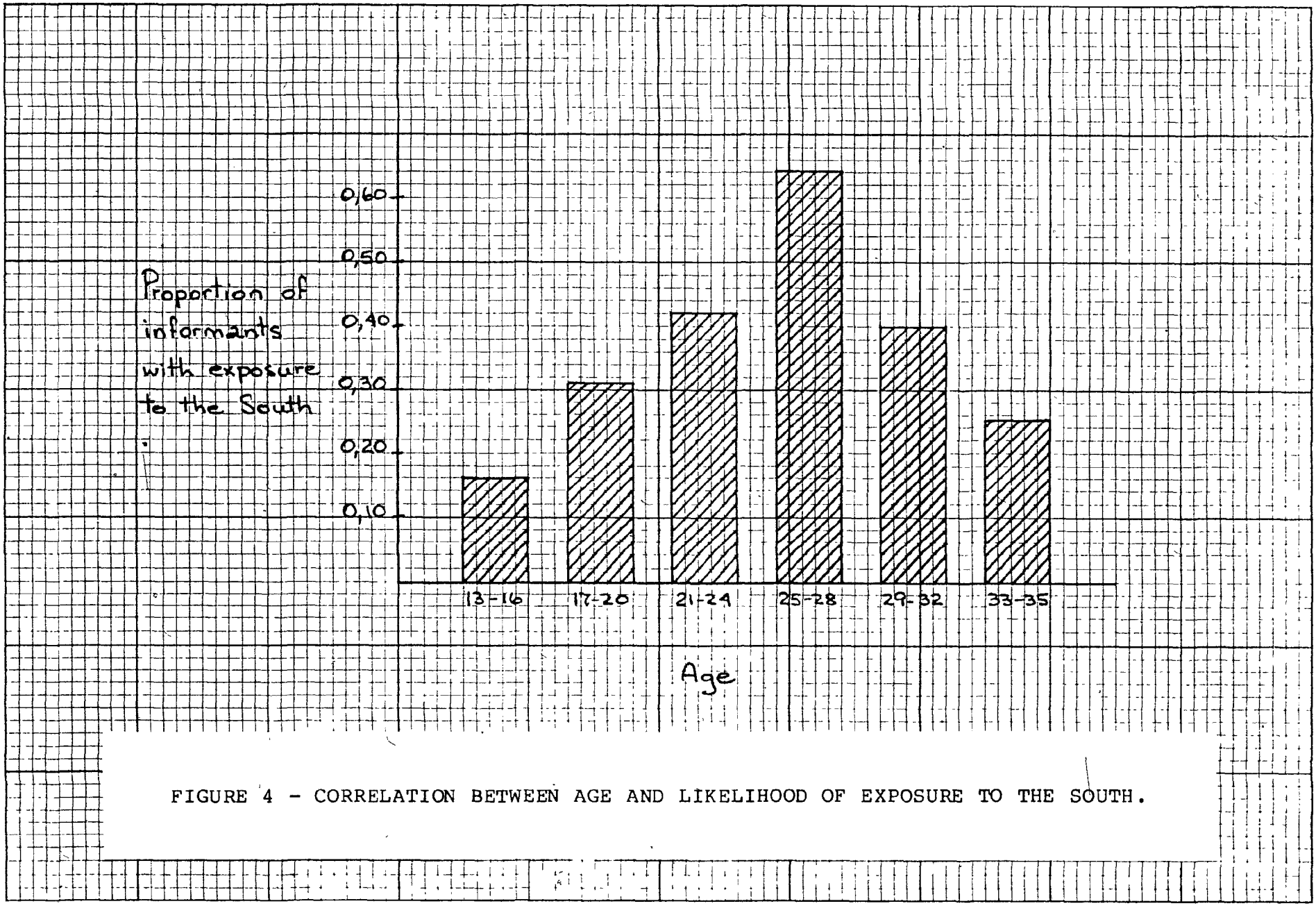


FIGURE 4 - CORRELATION BETWEEN AGE AND LIKELIHOOD OF EXPOSURE TO THE SOUTH.

duration will not be considered here. In many cases, the informants could not remember exactly how long they had stayed in the South, especially if they had been very young at the time, and the margin of error would be too great if duration were to be computed.

Let us examine the correlation between age and exposure to the South. We have already seen that the average age is higher for group S than for group N, but if we look at the graph in Figure 4, we find that the correlation is not linear. In fact, it is a curve which is very similar to the one in Figure 3 (age vs. pattern (1) response), being nearly symmetrical and peaking between the ages of 25 and 28. This suggests a strong positive linear association between exposure to the South and "proper translation." However, in this study, lack of data precludes the quantification of exposure to the South and a graphic representation of this correlation will have to await further investigation.

3.3 Schooling

The amount of schooling each informant had received could be determined only slightly more reliably than amount of exposure to the South. Grade levels were difficult to ascertain since northern and southern standards are not quite the same. In some cases, informants were officially at a grade level greater than the number of years they had actual-

ly spent in school. This was especially true of those who had been through adult education. In other cases, informants had spent more time in school than their grade level would indicate. Nevertheless, I thought it would be interesting to see whether there is a correlation, however rough, between schooling and any of the other factors.

The average grade level was 8,0 in EP, 7,1 in SQ, and 8,07 in BI. The z-score for each pair of settlements works to significance at the 0,33 level for SQ vs. EP, the 0,94 level for EP vs. BI, and the 0,33 level for SQ vs. BI. Once more, there is no significant difference among the settlements.

The figures for group S vs. group N are similar. The average grade level for group S was 8,38, and for group N, it was 7,4. The significance level of the z-score is 0,27. Schooling does not seem to be significantly different for the two groups.

There seems to be no correlation between schooling and rate of pattern (1) response. Figure 5 shows a curve whose slope varies constantly between 1 and -1. These results are surprising. It would be reasonable to expect a tighter relationship between the two because of the exposure to southern culture which schooling brings to the North. This too will have to await further investigation.

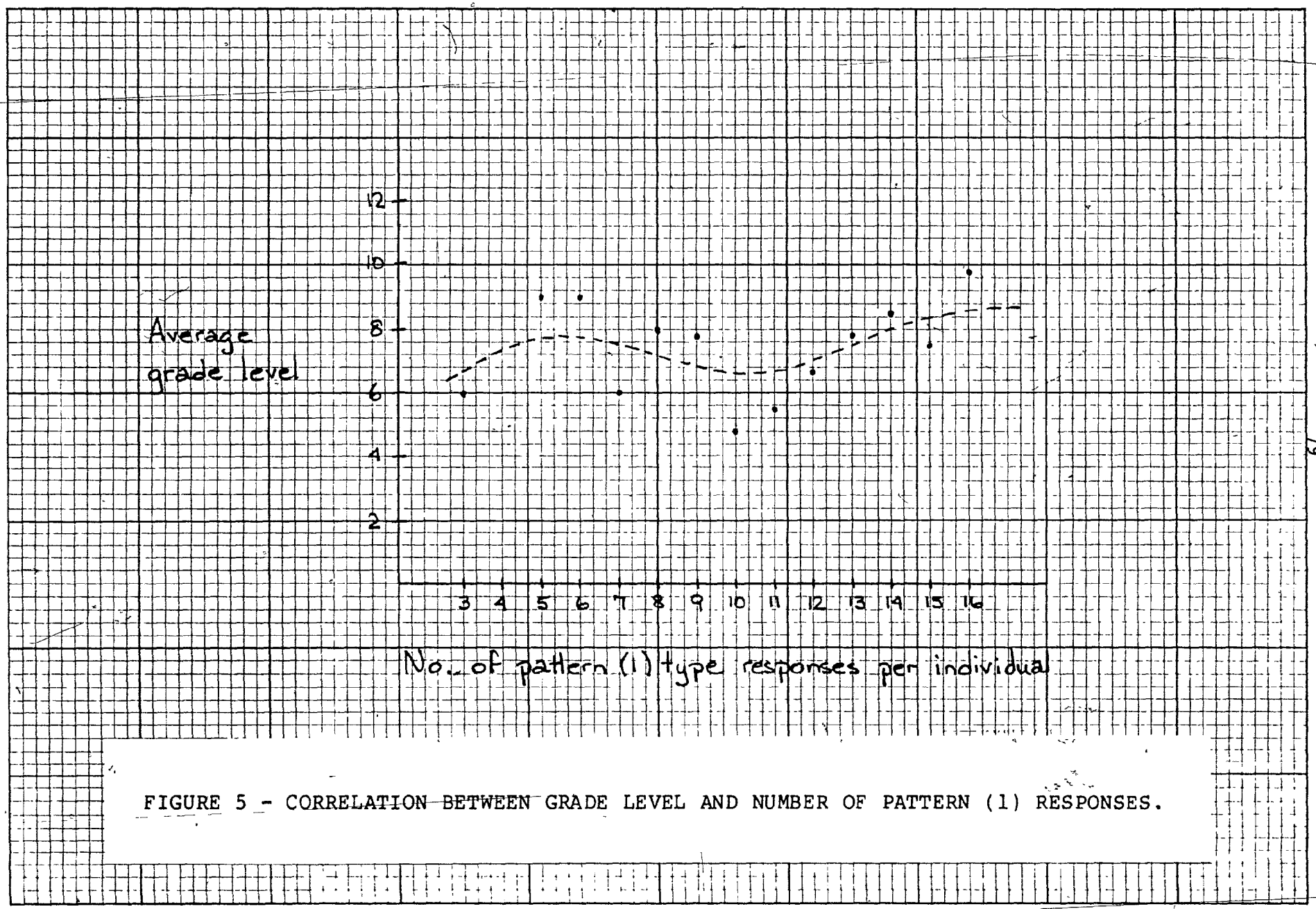


FIGURE 5 - CORRELATION BETWEEN GRADE LEVEL AND NUMBER OF PATTERN (1) RESPONSES.

Schooling, therefore, appears at this stage to be an irrelevant factor.

In recapitulation, the following generalizations concerning differences in the rate of pattern (1) response can be made based on the preceding data.

1) Amount of schooling seems to have no influence on rate of pattern (1) response.
2) Dialect differences also apparently have no effect.
3) Exposure to the South appears to be the important factor, increasing the chances that a native speaker of Inuktitut will understand and correctly translate an "unstranslatable" English verb.
4) Age seems to be unimportant except that it is a function of exposure to the South. (The graphs in Figures 3 and 4 suggest that the latter factor began to increase about 24 - 28 years ago.)

TABLE X

SIGNIFICANCE OF DIFFERENCES ACCORDING TO Z-SCORES

(+ = significantly different
- = not significantly different)

	EP vs. SQ vs. BI	Group N vs. Group S
Average age	-	+
Average grade	-	-
Rate of pattern (1) response	-	+

NOTES TO CHAPTER THREE

[1]The z-score is calculated as follows:

$$\text{z-score} = \frac{(\text{mean for group A}) - (\text{mean for group B})}{\sqrt{\frac{(\text{standard deviation for group A})^2}{\text{number in group A}} + \frac{(\text{standard deviation for group B})^2}{\text{number in group B}}}}$$

The significance level of the z-score can then be determined from statistical tables.

[2]These are the most common factors affecting the development of Inuit bilinguals in the North. Other influences are relatively rare, such as mixed marriages, or difficult to measure, such as attitude.

[3]Seven months, the duration of the shortest visit, was long enough to be of possible significance.

CONCLUSION

The results of this work have shown that the Inuit language strongly resists direct borrowing when faced with the necessity of expressing a foreign concept. Of the three settlements visited, this tendency is strongest in Eskimo Point and weakest in Sugluk, reflecting the relative degree of conservatism of these dialects in other respects, e.g. on phonological and syntactic levels.

The preferred method of semantic borrowing is to calque, i.e. create a new word using native morphemes which will define or explain the concept, or to a lesser degree, to extend the meaning of a traditional word. In calquing, the most productive affixes are -liuq- 'to make,' and those affixes which mean 'to work on, at, with.'

Overall, the occurrence of direct borrowings, calques, and extensions in the translation of English verbs with no traditional equivalent is 3,5%, 68% and 28,5%, respectively. Although this study has dealt with verbs, the results are almost identical to those of similar studies which focus exclusively on nouns. This would support the notion that resistance to direct borrowing is a characteristic of the language in general. In my opinion, this is due to the polysynthetic nature of the language which results in a high degree of native lexical flexibility.

An analysis of the three variables of age, schooling in English, and exposure to the South suggests that the facility with which a bilingual speaker will express a foreign concept in Inuktitut depends chiefly upon the amount of time he has spent outside the Arctic, although his chances of having been south are to some extent a function of his age.

In the course of this study, other minor differences among the dialects have been noted apart from degree of resistance to direct borrowing. Sugluk, Eskimo Point, and Broughton Island differ slightly in their use of the participial ending, the transitive, and the past tense.

In general, the choice of mode of semantic borrowing is consistent throughout the language, with deviations slight and due mainly to dialectical differences, whereas facility of translation is a function of the bilingual individual and his access to the southern milieu.

APPENDIX A

ENGLISH SENTENCES AS PRESENTED TO INUIT BILINGUALS FOR TRANSLATION

1. He hypnotized the doctor.
2. I analysed this sentence.
3. He earned lots of money.
4. I piloted for /name of regional airline/.
5. I telephoned south today.
6. He painted his house black.
7. The doctor operated on the boy's big toe.
8. They recorded two of Charlie Panigoniak's songs.
9. The teacher disciplined the children.
10. He electrocuted himself fixing the T.V.
11. She pedalled home in two minutes.
12. He farmed his land for two years.
13. She wove a blanket.
14. CBC televised the programme from Ottawa.
15. They transfused a pint of blood into him.
16. The cat purred because he was happy.
17. They mined for gold and silver.
18. We filmed the dance.
19. They published her language book.
20. They blasted a hole in the mountain.
21. I distilled the fermented berries.
22. She baked a cake.

APPENDIX B

INUKTITUT TRANSLATIONS

Two things must be borne in mind when consulting the appendix:

First, Schneider's Law of Alliteration must be applied to all SQ words. This rule operates in all and only Quebec/Labrador dialects (Dorais 1977b, p.51) and causes the deletion of the first consonant of a consonant cluster if that cluster follows another (Schneider 1968, p.146).

Example:	Eskimo Point Broughton	kiinaujaqtaaqpuq
	Sugluk	kiinaujaqtaapuq

Second, for each verb a line will be drawn after the figures for the Inuktitut translations which prove to be the most productive, and total responses for these will be calculated for each settlement. (These are the figures which are used in the text.)

The English verbs are listed in the same order as they appear in the results.

Inuktitut Translation	Number of Responses EP	SQ	BI	= total
'to paint (house)'				
a) minguaqpaa	22			= 22
minguaqpuq	6	1		= 7
minguarivuq		22		= 22
b) amiaqpaa			10	= 10
amiaqpuq			3	= 3
amiarivuq			3	= 3
	28	23	16	= 67
'to bake (a cake)'				
a) igavuq	14	8		= 22
b) uuttivuq			4	= 4
c) cake-liuqpuq	12			= 12
kaikiliuqpuq		13		= 13
kailiuqpuq			5	= 5
aggiksaliuqpuq	1			= 1
d) X-mik sanavuq	1	2	7	= 9
	28	23	16	= 67
'to telephone'				
a) uqalukpuq	22			= 22
b) telepho-qpuq	2	11	2	= 15
c) uqaalavuq		2	13	= 15
d) uqalimavuq		10		= 10
	24	25	15	= 62
e) sivaniqpuq	2			

Inuktitut Translation		Number of Responses EP	SQ	BI		total
'to film'						
a)	ajjiliuqpaa	2			=	2
	ajjiliurivuq	4	15	6	=	25
	ajjiliuqpuq	3		1	=	4
	ajjiliuqsivuq	1			=	1
b)	aulajuuliuqpuq		1		=	1
	aulasuuliuqpaa			1	=	1
	aulasuuliuqpuq			1	=	1
	aulasuuliurivuq			1	=	1
c)	tarrijausiuqpaa	3		1	=	4
	tarrijausiuqpuq	10		1	=	11
	tarrijautiliuqpuq	2	1		=	3
	tarralijaaliuqpuq		1		=	1
	tarralijaarutiliuqpuq		4		=	4
	tarrijaksaliuqpuq			1	=	1
		25	22	13	=	60
d)	aulasuuliri-?			1		
e)	uajuliuqpaa	1				
'to record'						
a)	nipiliuqpaa	3		2	=	5
	nipiliurivuq		15	8	=	23
	nipiliuqpuq	22	2		=	24
	nipiliuqsivuq	1		1	=	2
b)	nijjaarutiliuqpuq		5		=	5
	nijjautiliuqpuq			1	=	1
		26	22	12	=	60
c)	inngijuuliuqpuq		1			

Inuktitut Translation	Number of Responses EP	SQ	BI	=	total
'to operate' (med.)					
a) pilaktuqpaa	6			=	6
pilaktuivuq	9	13	6	=	28
pilaktuqpuq	6			=	6
pilaktuqsivuq	3			=	3
b) pilakpaa			2	=	2
pilaksivuq		1	3	=	4
pilaivuq		2		=	2
	24	16	11	=	51
c) iłuaqsaivuq	1				
aanniasiurivuq		3			
d) aaqqiksivuq	1		1		
aaqqiksuivuq		1			
aaqqikpuq		1			
e) matuiqsivuq			1		
'to blast'					
a) qaaqpaa	2			=	2
qaaqsivuq	9			=	9
qaaqtippuq	1		1	=	2
qaaqtitsivuq	4	15	10	=	29
b) siqquqpuq	1			=	1
siqquqsivuq	2			=	2
siqquqtippuq qaataqtumut	2			=	2
	21	15	11	=	47
c) killaliuqpuq	2	2			
ammajuliuqpuq	1		1		
putuliuqpuq	1				
d) killaivuq		1			
putusivuq			1		
e) ammaqtauvuq	1				
f) killataaqtitsivuq		2			

Inuktitut Translation	Number of Responses EP	SQ	BI	=	total
'to farm'					
a) piruqsiivuq	7	6	4	=	17
b) nunalirivuq	1		1	=	2
piruqsiivilirivuq	1	1		=	2
nunami piruqsiivingmi } pilirivuq	10			=	10
c) nunami piruqsiivingmi } pinasukpuq		4		=	4
pinasuaqpuq		2		=	2
d) iqqanaijaqpuq			3	=	3
	19	13	8	=	40
e) piruqtuliuqpuq		1			
f) nunaminniaqpuq		1			
g) karngaqsuivuq		1			
h) piruqsaqpaa } piruqsaivuq }	2				
i) piruqsiiviqaqpuq	1	2			
j) nunamik piruqsiivingmik } kamavuq		2			
k) nunami piruqsiivingmi } sanavuq	2				
l) piruqsialiuqpuq		2			
m) farm-puq	1	1			

Inuktitut Translation	Number of Responses EP	SQ	BI	=	total
'to earn money'					
a) kiinaujaliuqpuq	18	8	1	=	27
b) kiinaujaqtaaqpuq	4	2	2	=	8
kiinaujjaaqpuq	1	10	5	=	16
	23	20	8	=	51
c) kiinaujanik pigunnaqpuq		1			
d) kiinaujanik pivuq			1		
'to pilot'					
a) timmisuuqtiuvuq	15			=	15
qangattajuuqtiuvuq		16		=	16
aquttiuvuq	1		8	=	9
b) aquppuq		1	4	=	5
	16	17	12	=	45
c) pilot-puq		1			
d) timmisuuqtuqpuq	3				
e) timmisuulirijiuvuq	1				
qangattasuulirijiuvuq			1		
f) qangattajuqpuq aulausiriługu		1			

Inuktitut Translation	Number of Responses EP	SQ	BI	= total
'to transfuse blood'				
a) auliqtuqpaa	3			= 11
auliqtuivuq	5			= 5
auliqtuqtauvuq auliqtugauvuq	8			= 1
b) auktaaqtitsivuq		1	6	= 7
auktaaqtippaa			2	= 2
c) aungmik illirivuq	4			= 4
" immiqtuivuq } " immiqtuqpaa }		3		= 3
" tuqquivuq		2		= 2
" tunisivuq	2		2	= 4
" aittuivuq		1		= 1
	22	8	10	= 40
d) auliqsiqpuq (?)	1			
e) auliqtuummik kapisimavuq	1			
f) aungmik timinganuuqsivuq			1	
g) auliurivuq		1		
h) aunganuurivuq (?)		1		

Inuktitut Translation	Number of Responses EP	SQ	BI	=	total
'to electrocute oneself' (get a shock)					
a) uuppuq uuvuq	20			=	20
b) sukakpuq	3		9	=	12
sukaktippuq			2	=	2
c) qutsalakpuq		5		=	5
	23	5	11	=	39
d) shock-ippuq		1			
e) sukkutauvuq ikumautimut		1			
f) ikumautimut aktuqpuq		1			
g) ikumautiktauvuq		1			
h) ikuallaqqajavuq	1				

Inuktitut Translation	Number of Responses EP	SQ	BI	= total
'to mine /X/'				
a) ujaranniaqpuq	1	13		= 14
b) ujaraksiuqpuq / ujaraqsiuqpuq	2	1	1	= 4
c) ujaraktariaqpuq / ujaraqtariaqpuq	9			= 9
d) X-mik qiniqpuq	8	2	7	= 17
e) X-mik pinasuaqpuq		4	2	= 6
	20	20	10	= 50
f) X-mik qiniqtiuvuq	1			
g) ujaraktaqpuq / ujaraqtaqpuq	2			
h) ujaralirivuq	1			
i) X-lirivuq			1	
j) X-siuqpuq			1	

Inuktitut Translation	Number of Responses EP	SQ	BI	=	total
'to weave X' (on a loom)					
a) X-liuqpuq	6	5	4	=	15
X-liuqpuq nuviqsaqłuni	2	2	1	=	5
X-liuqpuq X-liurummut			1	=	1
b) X-mik nuviqsaqpuq	4	3	3	=	10
c) X-mik sanavuq	4		2	=	6
	16	10	11	=	37
d) X-mik miqsuqpuq	1		1		
e) X-mik niksiitaqpuq			1		
f) X-mik igujjaqpuq	1				
" igujjaliuqpuq	1				
'to purr'					
a) nijjaavuq	4	7		=	11
nijjaqpuq	3	1		=	4
b) nilliavuq	3	1	5	=	9
nilliqpuq	1	3		=	4
c) piqpalukpuq	4			=	4
	15	12	5	=	32
d) miuqtuq (miatuq?)	1				
e) nipilialuk			1		
f) nipiqaqpuq			1		

Inuktitut Translation	Number of Responses EP	SQ	BI	= total
'to televise'				
a) takuksautitsivuq	5		3	= 8
b) talavisaliuqpuq		4	2	= 6
c) talavisakkuuqtitsivuq TV-kkuuqtitsivuq		2	1	= 3
d) talavisakkut TV-kkut nuitatitsivuq	1	2		= 3
	6	8	6	= 20
e) ajjiliuqsivuq	1			
f) ajjiliurivuq talavisakkuuqtuksamik " TV-kkuuqtuksamik			2	
g) aulajuliuqpuq		1		
h) tarrijausiuqpuq CBC-kkut	2			
i) tarrijausiqpuq talavisa-kkut	1			
j) tarrijaqtitsivuq	1			
k) tarrijauti X-mingaaqpuq CBC-kkut " X-mit pivuq	2			
l) tarrijautautaqpuq (?)	1			
m) takunnatautitsivuq		1		
takunnaraskanik sanavuq		1		
takunnaraksait (?)		1		

APPENDIX C

BACKGROUND OF INFORMANTS

Eskimo Point			Sugluk			Broughton		
age	grade level equiv.	years south	age	grade level equiv.	years south	age	grade level equiv.	years south
25	13	4	20	9	–	24	5	1
30	4	–	16	6	2	22	6	–
18	8	–	35	–	–	14	7	–
16	9	–	17	7	–	20	8	–
18	8	–	24	?	3	28	15	–
25	9	–	21	11	–	15	6	–
21	8	–	25	9	2	19	7	–
27	13	6	16	7	–	17	9	–
18	8	–	15	7	–	13	6	–
20	7	–	15	7	–	32	5	?*
16	9	1	15	7	–	26	11	1
17	9	1	14	6	–	17	8	–
16	9	–	20	9	–	20	12	2
33	–	–	22	10	–	16	8	–
28	11	6	25	13	–	23	?	?
21	10	3	30	1	–	16	8	–
35	3	–	25	9	–			
25	7	1	23	?	–			
16	9	–	30	6	–			
16	9	–	24	8	–			
33	–	4	19	10	1			
23	5	–	27	4	3			
14	8	4	30	3	7			
16	9	–						
14	8	–						
19	8	3						
20	12	3						
22	11	2						

*A question mark in the "years south" column indicates that the informant did spend at least one year in the south but the exact length of time is not known.

APPENDIX D

TREATMENTS SIMILAR IN ALL THREE SETTLEMENTS

(a) Grammatical Interference

Direct borrowing can result in grammatical interference during the period of integration into the language. There were two examples of this phenomenon in the study, besides the one mentioned in 2.5.3, both involving interference in the grammatical expression of number.

The first occurred in the translation of "in two minutes." The precise measurement of time has traditionally been low on the list of priorities in Inuit culture; consequently, words related to the telling of time by the clock are usually directly borrowed from European languages.

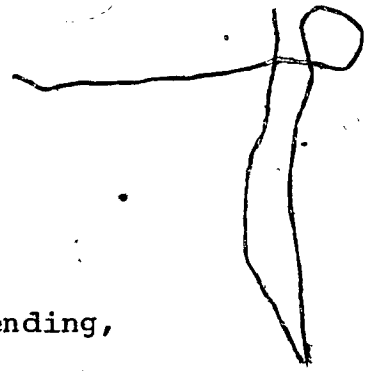
Duration of time, e.g. "in five years' or "for three hours," is expressed in Inuktitut by using the accusative case, i.e. stem plus -mik (sing.), -nnik (dual), or -nik (plur). The phrase "in two minutes" was translated nine different ways in the sentence "She bicycled home in two minutes." (The word for "two" in Inuktutut is marruuk.):

(1) two-minutes
(2) marruuk two-minutes-nik
(3) two-minutes-nik
(4) two-minutes-mik
(5) two-minutes-inik
(6) two-minutes-imik
(7) marruunnik minutes-nik
(8) two-minute-mik
(9) two-minute-nik

Sometimes "two" was perceived as being a separate word; other times, when marruuk was said, it was treated as the first syllable of an indivisible word. This confusion is also reflected in the fact that although marruuk or two (if two is considered separate) should take the accusative ending, this happened only once. There was confusion as well in the interpretation of number. In (1), the English plural -s was sufficient indication of number. This was the response in EP. In BI, most people used the singular ending, while in SQ, people were equally divided between the singular and the plural. Some people left out the English -s; some added a "vowel of liaison", -i-.

The same thing happened in the case of "a pint" in the sentence, "They transfused a pint of blood." English measures are also directly borrowed and give rise to the same kind of confusion as a result of partial integration. The translations for this phrase were

(1) one-pint
(2) one-pint-mik
(3) pint-mik
(4) two-pints-mik



Here the word was sometimes given the Inuktitut ending, sometimes not; sometimes borrowed as two words, sometimes one; but always, curiously enough, considered as singular, even when borrowed as two-pints.

(b) -MIK vs. -MIT vs. -MI

It appears that the case distinctions among -mik, -mit, and -mi are slowly being lost. Normally these should represent the accusative, the ablative, and the locative, respectively (terms taken from Harper 1974). In the transcriptions furnished by the Eskimo-to-English translators, and on the tapes, there were many instances of such constructions as cake-mit igavuq 'she bakes a cake' for cake-mik igavuq, or marruunni ukiunni 'for two years' instead of marruunnik ukiunnik. Examples of this were found in all three settlements. When I asked other Inuit about this, I was told that both versions were the same or meant the same thing or were both right. This was especially true of the younger persons asked.

There are only four word-final consonants in Inuktitut: /p/, /t/, /k/ and /q/. Unless the words containing them are pronounced in isolation, these consonants can be nasalized or silent depending on the following phoneme (Gagné n.d.). When the consonant is deleted the Inuit speaker must rely on context if that consonant was the only clue to syntactic relationship. This problem does not arise with the dative -mut where the vowel distinguishes it.

It is hard to explain why this case mixing did not

happen earlier, i.e. is not common among the older generation. It may be that final consonant neutralization is a fairly recent phenomenon. On the other hand, since the data here was obtained from bilingual individuals, it may simply be a result of some kind of interference from English which does not have this case marker system.

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