CREE BABY TALK AND
UNIVERSAL BABY TALK

By

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ABSTRACT

The intent of this thesis is to identify the lexical, syntactic/inflectional and phonological features of East Cree Baby Talk (henceforth BT) as a way of understanding how children acquire the highly complex standard adult (SA) forms. I demonstrate that the early linguistic features are universal and that significant variation among languages occurs subsequent to the BT stage.

As a result of comparative analysis I am able to conclude:

1. East Cree BT exemplifies universal features of BT;

2. The acquisition of BT represents a level of generalized language learning;

3. Language learning is hierarchical;

4. As languages develop, they diverge and give rise to the greatly varied SA surface structures;

5. The occasional variation that occurs in BT registers can be explained in terms of the salient or difficult features of the target language;

6. BT universals are generally absolute, non-implicational and substantive;

7. Absolute, non-implicational and substantive universals precede statistical, implicational and formal universals;

8. The deep structure of SA speech is similar to BT and,

in a sense, develops out of it. Thus, deep structures are cognitively concrete while SA surface structures are cognitively abstract.

For three of the comparative languages used in this study I depend upon secondary data. Due to the problems encountered, I suggest steps to improve methodology in the recording, presentation and analysis of BT material

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Dr. Richard Preston was not a member of my committee due to other commitments but provided me with many insights into the Cree way of life and thought. Finally, I acknowledge the support and guidance of my committee members: Dr. David Counts for his diplomacy and advice; Dr. Harvey Feit for his gentle yet incisive intelligence; and, Dr. John Colarusso, my graduate supervisor, for his straightforwardness, keen intellect, and humanity.

"Virtue and cunning were endowments greater
Than nobleness and riches; careless heirs
May the two latter darken and expend,
But immortality attends the former,
Making a man a god." Cerimon in _Pericles_,
III, II,

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1.0 INTRODUCTION

The term Baby Talk refers to the language register used by adults when addressing small children. There is a wide range in the use of baby talk (henceforth BT) among cultures and among individuals within the same culture but it is used most intensively to toddlers (twelve months to three years). The age-range is necessarily arbitrary since BT forms part of a continuum. Although one does not baby-talk to a seven-year-old or a thirteen-year-old, the speech addressed to them is still different from the speech addressed to another adult.

BT is generally considered a tool to enhance comprehension by the child but it also connotes a nurturant role. This is most obvious in its extension to situations that are not linguistically defined: a variation of BT is spoken to pets, plants, lovers, elders and invalids. Not everyone uses BT in all of these situations, and, in certain cultures BT would be quite inappropriate, but everyone uses some form of BT in addressing small children. The extreme use as in "itsy-bitsy" and "diddums go walkie?" might be rare, but in order to be understood certain features of speech are changed or emphasized. I examine these features throughout the thesis.

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Beyond refining the definition of BT, the intent of this thesis is to:

1. Examine the specific characteristics of East Cree BT;

2. Compare East Cree BT to the BT of five disparate languages;

3. Draw universals from this comparison and comment on non-universal features;

4. Relate the universals to previous work in the area of BT;

5. State conclusions concerning

    a. the relationship of BT to standard adult (henceforth SA) speech and culture;

    b. the fundamental nature of language and language learning.

I now provide background material for each subject area listed above.

1.1 East Cree

East Cree is a dialect of the Cree language complex which is a member of the Algonquian family. Wolfart disputes the validity of the Cree-Montagnais-Naskapi continuum, suggesting that there is a language boundary co-terminous with the Ontario-Quebec border (Wolfart 1973:37). Ellis (1971) however, uses the term East Cree with reference to Lake Mistassini and the south-eastern coastal region of James Bay and McKenzie and Clarke (1981) have set forth a convincing argument in favour of the Cree-Montagnais-Naskapi continuum.

I have further noted mutual intelligibility between people from the east and west coasts of James Bay as well as a striking similarity between the BT of my informant (from Waswanipi near Mistassini) and residents of Red Earth, Saskatchewan. Consequently, I choose to call the Cree-Montagnais-Naskapi complex (including East Cree) a single language though this decision in no way affects the outcome of the present work and is mentioned only for the purpose of clarification.

I collected information largely from Alice Channer (nee Suzanne Kitchen) who spent her first seven years in a traditional Cree way: wintering with a small group in the bush and passing summers in a larger permanent settlement near water (Waswanipi Post). At the age of eight she went to a residential school but continued to return to Waswanipi during the summer. At twelve, she moved to Matagami with her family and no longer attended a residential school. The family maintained their ties with Waswanipi and although she now lives in the 'south', Alice continues to spend time in her home community during the summer.

Alice is now completely bilingual and apparently bicultural and in many ways has been the ideal informant: with fluent English and an adaptation to southern city life, she was able to understand and express a full range of topics necessary in the elicitation of BT material; with strong roots in the north and continuing contact with Waswanipi, as

well as pride in her heritage, she has a wealth of knowledge upon which she likes to reflect.

An earlier visit to Rupert House and a stay in Red Earth, Saskatchewan provided information that illustrated the similarity of the BT register throughout the whole Cree area.

SA East Cree is a highly inflected language with a corresponding flexible word order. It has a relatively small phonemic inventory whose only distinguishing feature is an allophonic variation between voiced and voiceless stops. On the phonological level, there is a devoicing of vowels in adult speech as well as the somewhat unusual clusters involving preaspirated stops. In the thesis, I demonstrate how the distinguishing features of SA East Cree affect the patterns of East Cree BT.

1.2 Comparative Languages

Five languages were selected for comparison on the basis of the availability of data, and, geographic and linguistic disparity. Both primary and secondary sources were used and the difficulties resulting from the latter are discussed below.

<u>English</u> English is a member of the Germanic Branch of Indo-European.   It is spoken in a wide range of countries featuring a number of dialects. I have limited the BT forms in this thesis to those that have a fairly general use although

there is a bias towards forms that are acceptable in Southern Ontario.

Data were taken from my own recollections, observations of people interacting with their own and others' children and formal, or informal questionning of a wide range of people.

As work continued on the thesis, more information became available and it is my belief that the relatively limited data taken from the other languages would expand in a similar manner under like conditions.

SA English has a rigid subject-verb-object (henceforth SVO) word order and inflections are used sparingly. Although its phonemic inventory is greater than in East Cree, the only noteworthy features are the use of certain sounds that are not widespread, /r/, /č/ and /š/ and a large number of word-final consonant clusters.

Iranian Iranian (Farsi) is spoken with dialectal variation in Iran. It is a member of the Indo-Iranian branch of the Indo-European family. The dialect recorded in this thesis is the northern dialect spoken around Tehran although the majority of the data were collected in the town of Shahsavar on the southern coast of the Caspian Sea. The BT data is from primary sources while adult terms were checked in a dictionary and grammar (Lambton 1966; Ewell-Sutton n.d.).

SA Iranian has limited flexibility from SOV word order and moderate use of inflections, particularly verbal ones. Phonemically there is nothing outstanding beyond the use of

a few 'difficult' sounds: /q/, /G/ and /x/.

<u>Brazilian-Portuguese</u> Brazilian Portuguese is also a member
of the Indo-European family but it belongs in the Romance
branch. Portuguese has a range of dialects, not only
in Portugal but in the many countries across Africa and Asia
where colonization took place. The dialect of this study
is Brazilian Portuguese.

Only secondary sources were available for Brazilian
Portuguese. The information on BT came from Stoel-Gammon
(1976) but since it did not include phonetic transcriptions,
translations for all the words included in the body of the
text or complete grammatical explanations, other sources
were consulted (Richardson et al:1973; Dunn 1930). A further
problem in Stoel-Gammon's work is what I believe to be in-
complete data collection and a very sketchy analysis of the
data. Individual problems are given greater attention as
they are encountered in the body of this work.

Brazilian Portuguese has SVO word order with some
flexibility, particularly stylistic. Inflections are used
to a moderate extent, as in Iranian, primarily in verbal
inflection. Phonemically, Brazilian Portuguese is similar
to English, and has no unusual features.

<u>Gilyak</u> Gilyak (or Nivkh) is a language isolate spoken in
south-eastern Siberia in the vicinity of the mouth of the
Amur River. The material used in this thesis is from the

Eastern Sakhalin dialect.

Secondary material (Austerlitz 1956) is used for the Gilyak sections but it is more complete than most similar studies including SA glosses, phonetic transcriptions, in-depth phonological, morphophonemic and grammatical analysis, and an extensive lexicon.

Gilyak exhibits flexible word order though in embedded clauses word order is quite rigidly SOV and most simple sentences are verb-final. The Eastern Sakhalin dialect is characterized by word-final consonant clusters when compared to the less archaic Amur dialect. This is especially interesting when we note the emphasis on word-final clusters in Eastern Sakhalin BT which goes against the universal grain (see chapter 4 below) (Comrie 1981a:266). Other interesting phonological features include: a phonemic distinction between pre- and unaspirated stops in initial position only; alternation between initial stops and fricatives; a choice of four nasals /m/, /n/, /ñ/, /ŋ/; a voiced and voiceless trill /r/, /ř/; and, the not very common fricatives /x/, /ɣ/, /X/, /h/ and stops /q/ /G/.

Syrian Arabic Arabic is a member of the southern branch of the Semitic language family. Varying dialects of Arabic are spoken across North Africa and the Middle East while the material included here is of Syrian Arabic origin. Since there are dialectal variations in Syria, I focus on features and words that are apparently common to the whole Syrian area.

Data were taken from Ferguson (1956) but since almost no SA forms are included and the grammatical sketch is incomplete, other sources were consulted (Al-Ani 1970; Shaikh 1983; Abdel-Massik 1975). This presents a problem in understanding derivations since SA forms of the informants' dialect might differ from the standard Arabic I have used. This underlines the importance of comprehensive data collection that includes the SA words and patterns of the BT informant. I felt however that the BT data were adequate for comparative purposes and that since Ferguson has carried out the most theoretical work on BT at the universal level, and is frequently cited throughout this work, it would be useful to examine some of his primary data.

Arabic is a predominately SVO language with moderate inflection. Nouns are inflected for gender and number and the adjective normally agrees with the noun. Verbs are inflected for gender, person, number, the moods indicative and imperative, and the tenses past and present. The phonology of Arabic is complicated by velarization (/t̲, d̲, s̲, z̲, ɂ̲, l̲, r̲/) and the use of back stops and fricatives (/q, ?, h, G, H, ʕ/). These sounds combine to give Arabic its unique sound and it will be noted that they are retained, if incompletely, in the BT register.

Table 1. Significant Points Regarding the Six Comparative
          Languages Used in this Study

Language, Family and Branch	Location	Distinctive Lingusitic Features
East Cree Algonquian	Eastern Sub-Arctic N.America	Highly inflected Allophonic variation of ±Vd stops. Flexible word order
English Indo-European Germanic	Great Britain North America Australia	Rigid word order Limited use of inflection Word-final consonant clusters Certain difficult sounds
Iranian Indo-European Indo-Iranian Iranian Branch	Iran	Limited flexibility of word order Moderate use of inflections Certain difficult sounds
Brazilian Portuguese Indo-European Italic (Romance)	Brazil	Limited flexibility of word order Moderate use of inflections
Gilyak Language isolate	S.E. Siberia	Flexible word order except in embeddings Word-final clusters A number of distinctive phonological features
Syrian Arabic Semitic Southern Branch	Syria	Limited flexibility of word order Moderate use of inflections Velarization of stops Back stops and fricatives

1.3 BT Universals

The universals concluded in this dissertation are stated in accordance with Greenberg (Greenberg ed. 1963), in particular Greenberg et al (ibid:xv-xxvii) and Greenberg (ibid:73-113). Their work has been refined and clarified by Comrie (1981b) and the following description of universals is based largely on his work (ibid:1-29).

There are two major approaches to the study of language universals: the first involves examining the surface features of a wide range of languages (e.g. Greenberg 1961) while the other promotes the in-depth study of a single language involving abstract structures and offers explanations based on innateness (e.g. Chomsky 1965). Since BT is a specialized register, not recognized as mandatory in human communication, a comparative study is most suited to proving its universality and describing the associated features. However, a certain degree of abstractness is necessary in describing the derivation of BT forms and patterns from SA speech.

The classification of language universals exhibits three basic dichotomies: formal and substantive, implicational and non-implicational, and, absolute and statistical. I define and discuss the place of each in this work in the following paragraphs.

Substantive universals refer to the categories of language while formal universals involve the stating of rules

of grammar. The nature of BT is such that substantive universals are more appropriate in describing universal features. In fact, BT may set up a core of substantive universals upon which individual languages develop formal constraints. This idea is discussed in greater detail below in terms of the nature of language acqusition.

Implicational universals are those that depend upon another feature of language whereas non-implicational universals can stand alone. An example of the former is "If a language has gender categories in the noun, it has gender categories in the pronoun" (Greenberg 1963:96). An instance of a non-implicational universal is "All languages have pronominal categories involving at least three persons and two numbers" (ibid:96). Baby Talk lends itself to the stating of non-implicational universals. Once again it seems logical that one must precede the other: that is a set of independent universals, easily understood, must be established before more complex, interdependent ones are presented.

Universals may be absolute or statistical: one hundred per cent or a very high percentage. In this work. I demonstrate that although the majority of universals are absolute, tendencies and even possibilities exist. The possibilities frequently arise when a language does not follow the statistical universal (tendency) but exhibits an alternative. Often, these alternatives reflect a feature of the SA target language and offer clues to the non-universality that can occur in BT.

1.4 Previous Work in BT

The majority of work in BT concentrates on a single language with limited theoretical implications of a general nature. Ferguson (1964; 1975) pioneered comparative studies in BT and though his work has not been developed, he is still most frequently cited as the authority. Although his work touches on most areas of BT -- phonetic, syntactic and semantic -- it is somewhat superficial. Because of the unscientific recording and analysis of much data on baby talk and because of Ferguson's own tendency to gloss over data that did not fit the tidy patterns, many important questions are left unasked. I take him to task on several specific points of this nature in the thesis and attempt to find the meaning behind the irregularities.

In regard to the acquisition of phonology, Jakobson(1972) is generally regarded as providing the basic information. Although his work centres on child language and although child language and baby talk are not equivalent -- the former being a register of children and the latter of adults -- I discuss his phonological hierarchy and its universal validity. In general, I find his initial ideas sound but his hierarchy is overly rigid and his notion of synchrony too extreme.

Despite this paucity of theoretical work in the area of universal features of BT, there is a very wide range

of study in the area of language learning. Since these studies focus on the efforts of the child rather than the specialized speech of adults, they are not incorporated into the present work.

1.5 Baby Talk, Standard Speech and the Nature of Language and Language Learning

This thesis examines the universal features of BT. Since BT is of course related to SA speech and since the universals of BT and SA speech do not necessarily coincide, some explanation of the relationship between the two speech registers is required. I suggest that the BT registers, with surprising similarity cross-linguistically, provide an introduction to language. As language develops, the child begins to learn a particular language, the target language. Language learning, then, is a process of diversification (on the universal level) as well as development (on the individual level). The fact that the development is different from one language to the next accounts for the variability in the adult registers. Thus, BT is a register made up of largely universal features that provide the child with a general introduction to language. As stated above, these universals are generally substantive, non-implicational and absolute: they are straightforward. As language develops and more features of the target adult language are incorporated, the learning of the particular combination of universal and nonuniversal features takes place. Naturally this includes

the acquisition of features that are formal, implicational
and tendencies or possibilitiies.

The data presented in chapters 2 - 4 illustrate
the above theoretical claims. I take up these claims again
in the Conlusions (chapter 5) to summarize my findings.

2.0 LEXICON

In this chapter, I list and classify East Cree BT words and relate their categorization to a possible universal classification. I also investigate the content and function of specific words in BT lexicons and examine universals of BT kinship terminologies.

2.1 Classification

Ferguson suggests the categories: kin terms and nicknames, body parts and bodily functions, basic qualities, and, animals and nursery games (1964:109,113). In a later work (Ferguson 1975:11) the classification is revised to include separate food and animal categories. The initial classification has been adopted by other scholars (e.g., Meegaskumbura 1980:296; Stoel-Gammon 1976:23) and in this section, I determine its applicability to the Cree data and its merit as a universal classification for BT lexicons.

2.1.1 East Cree BT Lexicon and its Classification

The following table (Table 2) lists the East Cree BT words according to the classification suggested by Ferguson (1964). I found it necessary to include a 'Miscellaneous' category since nearly half of the nursery forms cannot be assigned to one of the other categories.

Table 2. East Cree BT Lexicon

English Gloss	BT form (broad phonetic transcription)	SA form (standard transcription)	(phonetics-my informant)
A. Kin Terms and Nicknames			
father	baba	o˙htawe	u˙htawi
mother	mama	ohkawe	uhgawi
grandmother	gugu	o˙hkom	u˙hkum
grandfather	jumšum	omošom	ušum
B. Body Parts and Bodily Functions			
sleep	mɛmɛ, bɛbɛ	nipa˙	nɛba˙
bottle, breastfeed	juju	no˙ša˙nhi	nu˙ša˙nhi
drink from a cup	gogo	minehkwe	m̃ĩhkwe
eat, food	nænæ	mi˙čiso	mi˙čso
eat with a spoon	bæbu	*see note 1 at end of table	
urinate, urine	šiši	šiši/šič*2	šiši/šič
defecate, feces	miši	miši	miši
penis	dulu	mištik*3	mštəgum
		odo˙hom	udu˙hum
female genitalia	baji	oba˙čio	uba˙jíu
C. Basic Qualities			
tasty	nʌmnʌm	wi˙hkan	wi˙hkʌn
sick, hurt	gigi	a˙hkosiw	a˙hksu
dirty	bubu, ja	mačso	mʌčsu
pretty	dæji	mi˙ošo	mi˙ušu
hot	hʌhʌ, guhu	isiga˙su	sga˙su
(a) little	-š	-š/apiši˙š	-š/ʌpši˙š
D. Animals and Nursery Games			
cat	pušiš, minuš	po˙šeš, mino˙š	pu˙šiš minu˙š
dog	æjumš	atim	ædum
frightening creature	gikš	---	---
exclamation to scare	bu˙	bo˙	bu˙
patting head			
E. Miscellaneous			
baby, doll	jiji	awa˙šiš	ʌwa˙š˙
shoes	gægun	ma˙sčon	ma˙sčun
watch out	yogo	ya˙kwa˙	yogo
boogeyman	æduš	ato˙š	ædu˙š

Table 2. continued

E. Miscellaneous continued

come here	æjʉm	a˙štam	a˙štum
stranger	ælo	ma˙ndeo	ma˙ndeo
be quiet	-šśš	-šśš	-śśš
go away	æwʌs	a˙wasnede	a˙wʌsnede
well done	o dæjyun	---	---
go out	wiwi	wiwi˙	wiwi˙
scary noise	u˙u˙	o˙o˙	u˙u˙
go ahead	mæǰi	ma˙či	ma˙ji
give	mi	pečime	bɛčmi
bring	bɛdæ	no˙ta peta˙	ndo˙pda˙
no	moy	ṅamoy	ṅʌmoy
noise of something falling into water	dumuk	---	---

Notes - 1. There is a SA root -æbu which seems to have the same meaning 'eat with a spoon' when it appears in words such as binsæbu (bean soup) and uмənæbu (porridge).

2. In SA East Cree, šiši is used for females and šič for males.

3. mištik = 'stick'

4. Roots that are unacceptable forms if they are not inflected are given third person singular inflections here in accordance with the data presented by my informant and the usual method in Cree dictionaries.

I use the phonetic form in Table 3 and throughout the thesis to remain as true as possible to the dialect of my informant and to ensure accurate derivations. The standard transcription is taken, wherever possible, from Ellis (1962) since the dialect he works with is quite close to my informant's. In cases that Ellis does not provide a translation for a particular word, I checked Anderson (1971) for a similar form and rewrote it according to the orthography

outlined by Ellis (ibid). I do not include a translation from either if one does not coincide with the adult form used by my informant. In such rare cases, I transcribe the phonetic form of my informant into standard orthography.

In using Ferguson's classification, a very large miscellaneous category is created indicating an inadequate analysis. On the basis of the East Cree data, as well as a range of cross-linguistic material (see following), I suggest the classes be comprised of: kin terms, body parts and bodily functions, modifiers, objects, creatures, actions, exclamations and sounds. Table 3 lists the East Cree nursery forms according to such an analysis (in the phonetic form of my informant only).

Table 3. East Cree BT Lexicon Revised

English Gloss	BT form (phonetic)	SA form (phonetic)
A. Kin Terms		
father	baba	u˙htawi
mother	mama	uhgawi
grandfather	jumšum	ušum
grandmother	gugu	u˙hkum
B. Body Parts and Bodily Functions		
sleep	mɛmɛ, bɛbɛ	nɛba˙
bottle, breastfeed	juju	nu˙ša˙nhi
drink from a cup	gogo	mɪ̄hkwe
eat with a spoon	bæbu	---
urinate, urine	šiši	sĭšĭ/šič
defecate, feces	miši	miši
penis	dulu	udu˙hum/m̥štəgum
female genitalia	baji	uba˙jiu
food, eat	nænæ	mi˙čso

Table 3. continued

C. Modifiers

tasty	nʌmnʌm	wiˑɦkʌn
sick, hurt	gigi	aˑhksu
dirty	bubu, ǰa	mʌčsu
pretty	dæǰi	miˑušu
hot	hʌhʌ, guhu	sgæˑsu
(a) little	-š	-š/ʌpšiˑš

D. Objects

shoes	gægun	maˑsčun

E. Creatures

cat	minuś/pušiš	minuˑš/puˑśiš
dog	æǰumś	ædum
baby, doll	ǰiǰi	ʌwaˑś
stranger	ælo	maˑndeo
boggeyman	æduś	æduˑś
frightening creature	gikš	---

F. Actions

come here	æǰum	aˑštum
bring	bɛdæ	ndoˑpdaˑ
give	mi	bɛčmi
go away	æwʌs	aˑwʌsnede
go out	wiwi	wiwiˑ
go ahead	mæǰi	maˑǰi

G. Exclamations

watch out	yogo	yogo
well done	o dæǰyun	---
be quiet	ššš	ššš
no, don't	moy	nʌmoy
noise to scare	buˑ	buˑ

H. Sounds

something scary	uˑuˑ	uˑuˑ
something falling into water	dumuk	---

        With the application of the revised classification
to East Cree BT terms, there is no longer a miscellaneous

class. The suggested classification, like earlier classifications, is not made on strictly semantic or syntactic grounds. Rather, the categories intuitively seem appropriate and, when tested heuristically, hold up to scrutiny. At this early stage of language, there is not such an obvious distinction between semantics and syntax which suggests a common base. That is, 'modifier', 'action' and 'exclamation' have both semantic and syntactic qualities and the classification of BT words is somewhat arbitrary. The following analysis explains the choice of categories in Table 3 and justifies any departure from Ferguson (1964:1975).

A. Kin Terms

This category is for the most part self-explanatory, consisting of BT kin terms. I do not include nicknames (Ferguson 1964:109) since they are either idiosyncratic and therefore limitless, or, they follow a productive strategy that can be applied to the majority of names and other words as well (e.g., in Cree juǰæn ⟶ juǰænš, mɛliæn ⟶ mɛliænš; in English Robert ⟶ Bobby, Eleanor ⟶ Nellie). The derivation of such nicknames follows the same patterns used in deriving BT forms from standard words outlined in chapter four.

Unlike Ferguson (ibid), I exclude the nursery word for 'baby' from this category and assign it to the 'Creatures' class since it does not seem to be used as a name but as a

designation for a small child, or, by extension, for a
young animal or a doll.

B. Body Parts and Bodily Functions

Words are placed in this category if they refer to
parts of the body or creature comforts. Certain words, such
as nænæ (food, eat) might be considered objects or actions.
Here they are assigned to their most fundamental meaning:
the object 'food' and the action 'to eat' follow the basic
bodily need to satisfy one's hunger. Furthermore, since
there are not a large number of terms related to food in BT
lexicons, I do not include a separate food category as
Ferguson suggests (1975:10) but place specific food items
in the 'Objects' class.

C. Modifiers

The rudiments of the grammatical classes of adjec-
tives and adverbs are represented by this group of nursery
words. They describe the condition of a particular person,
object or action. I do not limit the class to "adjectival
predicates" (ibid:11) since the words antecede modifiers in
general. Thus, the adjectives 'nice' and 'bad' are used
to describe a child's actions and take on the quality of an
adverb as well as that of an adjective.

D. Objects

This class is comprised of inanimate (according to

an English definition) things such as household utensils, articles of clothing, specific foods and naturally occurring objects. There is only one East Cree nursery form, gægun (shoes), included in this category but I include the class because of its more extensive use in other languages (see 2.1.2). The fact that Ferguson (1964;1975) does not incorporate such a category into his analysis is partly responsible for the creation of a miscellaneous class as in Table 2. In a language with many more BT 'Objects' words, it is a greater problem than it is for East Cree.

E.   Creatures

I do not confine this category to animals (Ferguson 1975:11). Certain creatures do not fit the conventional interpretation of 'animal' -- for example, in East Cree BT gikš (frightening creature), ælo (stranger), æduš (boogeyman) -- even though the term is technically accurate. A revision from an 'Animals' to a 'Creatures' category further reduces the need for a 'Miscellaneous' class.

F.   Actions

This category represents the beginning of a verb class. Ferguson (1975:11) found that a large number of infant actions named in the BT lexicon are linked to games (e.g., piggyback, pat-a-cake, peek-a-boo) and so he specified a category 'Nursery Games' Furthermore, he states "more generalized verbal predicates 'go up' or 'fall down' which

may not be tied to a game could also be included in this category" (ibid:11). However, Cree has a number of action words used in the BT register and no nursery games per se. Based on this finding as well as the cross-linguistic data (below 2.1.2), I prefer to specify an 'Actions' category with infant action games as the subgroup.

G. Exclamations

The words in this category tend to be affective, expressing a warning, reprimand, praise or other feeling. The introduction of this category further reduces the need for a 'Miscellaneous' class.

H. Sounds

The sounds listed in this group are not onomatopoeic words (ones that represent an object through sound associa-tion such as 'choo-choo' for 'train' in English BT) but rather are forms that draw attention to the sound itself. For example, the East Cree BT dumuk (the noise something makes when it falls into the water) is repeated by the caregiver to the child when an object is dropped into the water. It does not matter what the particular object is but only that such a noise is heard. Similarly, in English, 'meow' represents the sound made by a cat and is not normally used onomatopoeically to denote the animal ('kitty' is the standard BT word for 'cat'). The 'Sounds' category is also new and eliminates the remainder of the 'Miscellaneous' class.

The revised classification suggested in this section
is well-suited to the East Cree data. I now turn to the
cross-linguistic material in order to demonstrate the utility
of such an analysis.

2.1.2 Cross-linguistic BT Lexicons and their Classification

An investigation of the primary sources used by
Ferguson in determining his classification (1964), reveals
a large number of available BT words not included in his
analysis (Ferguson 1964:107-108; primary sources - Austerlitz
1956; Casagrande 1948; Ferguson 1956; Kelkar 1964; Voegelin
and Robinett 1954). If all the data had been classified, a
large 'Miscellaneous' category would have been necessary
as in the case of East Cree. The revised classification
presented in Table 3, on the other hand, utilizes all the
data from my sources and does not require a 'Miscellaneous'
class. Although it seems likely that a few odd words will
appear in BT lexicons and necessitate a small miscellaneous
category, as many words as possible must be included in the
analysis.

English

Table 4. English BT Lexicon

Adult Form	BT form (broad phonetic transcription in brackets)
mother	mommy, mama (mʌmi, mʌmʌ)
father	daddy, dada (dædi, dædæ)
grandmother/ female caregiver	nanny, nana (næni, nænæ)

Table 4. continued ...

B. Body Parts and Bodily Functions

sleep	bye-bye (bay-bay)
food, eat	nummy-nums (nʌmi-nʌmz)
urinate, urine	peepee, weewee (pipi, wiwi)
defecate, feces	poo(-poo), poop, doodoo (pu(-pu), pup, dudu)
penis	peepee (pipi)
stomach	tummy, tum-tum (tʌmi, tʌm-tʌm)
buttocks	bum (bʌm)
foot	footsie, feeties (fʊtsi, fitiz)
toes	piggies (pɪgiz)
hands	patties (pætiz)

C. Modifiers

hurt	booboo (bubu)
dirty	yuckie (yʌki)
pretty, nice	pretty (prɪˑti - emphatic)
(a) little	teeny, weeny, teeny-tiny, itsy-bitsy, itty-bitty etc. (tini, wini, tini-tayni, ɪtsi-bɪtsi, ɪdi-bɪdi)
nothing	all gone (algɔn)
bad, naughty	bad, ohoh (bæd, ʔoʔo, ʔohʔo)

D. Objects

biscuit, cookie	bickie (bɪki)
treat	goodie (gʊdi)
banana	nana (nænæ)
milk	milks, milkie(s) (mɪlks, mɪlkiz)
blanket	blankie (blænki)
pyjamas	p.j.'s, jammies, jam-jams (pijez, jæmiz, jæm-jæmz)
underwear	undies (ʌndiz)
toilet	potty (pɔti)
train	choo-choo (ču-ču)
stuffed bear	teddy (tɛdi)
diaper	nappie (næpi)
pacifier	dummy, soosoo, seesee (dʌmi, susu, sisi)

E. Creatures

cat	kitty(-cat), pussy(-cat) (kɪti-kæt, pʊsi-kæt)
dog	doggy, puppy (dɔgi, pʌpi)

Table 4. continued ...

E. Creatures continued ...

baby, doll	baby (bebi)
bird	birdie (bIrdi)
chicken	chickie (čɪki)
pig	piggie (pɪgi)
horse	horsie (horsi)
frog	froggie (frɔgi)
rabbit	bunny (bʌni)

F. Actions

go out	go bye-bye (go bay-bay)
wave	do bye-bye (du bay-bay)
clap	(do) pat-a-cake(s) ((du) pæt-ə-kek(s))
shake head	no no (no no)
carry on back	piggy back (pɪgibæk)
hide face	peek-a-boo (pikəbu)
give, thankyou	tata (tata)

G. Exclamations

watch out	heh (heh)
well done	good girl, boy (gʊd gɪrl, boy)
be quiet	shsh (ššš)
no, don't	no, eheh (no, ʔehʔeh)
tastes good	hmm, nummy (hmm, nʌmi)
during ride	wee (wiˑ)

H. Sounds

noise to scare	booh (buh)
ghost	oohooh (ʔuhʔuh)
clock – tick	tick-tock (tɪk-tɔk)
sheep – bleat	baabaa (bæˑbæˑ)
cow – low	moomoo (muˑmuˑ)
dog – bark	bow-wow, ruff-ruff (bow-wow, rʌf-rʌf)
cat – mew	meow (miow)
bird – sing, chirp	tweet-tweet, cheep-cheep (twit-twit, čip-čip)
pig – squeal, grunt	weewee, oink-oink (wiwi, oynk-oynk)
car horn – honk	beep-beep (bi-bip)
riding horse – giddy up	jee-up jee-up (ǰi-ʌp ǰi-ʌp)
train engine	chugga-chugga (čʌgᵊ-čʌgə)
train whistle	choo-choo (čuču)

The English BT data conform to the revised classi-
fication suggested in Table 3 although a few comments are
appropriate. I have attempted to include only widely used
BT forms according to their generally accepted meaning and
use. Baby words are excluded if they are: idiosyncratic --
e.g., 'baps' for 'bath' is an idiosyncratic form although
it follows productive strategies outlined in chapter four;
familial -- e.g., 'lala' for 'sleep' and 'jeez' for 'hot'
are used in my family but have been borrowed from Iranian;
dialectal -- e.g., 'try' and 'stream' are used for 'defecate'
and 'urinate' in Dorset, England; marginal -- e.g., some
people use the sounds of animals, as 'ruff-ruff' for 'dog'
but it is not the preferred BT form.

I have categorized words according to their common
form and even though there may be variation, the variation
is largely determined by rules. The specific processes
involved in forming nursery words is discussed below (chap-
ter 4) so for now it is sufficient to state that nursery
forms may be: the same as an adult form with greater stress
and different intonation (pretty, bad); a variation on the
adult form (horsie, blankie); a suppletive form that is
not derived from the adult word (peepee, nummy); a word
that began as a baby form and has been extended to more
general use (baby, nanny).

The phonetic forms have been included in Table 3
for clarification but throughout the thesis I use the   )

standard transcription of BT words so that they can be easily
recognized.

Iranian (Farsi)

Table 5. Iranian BT Lexicon

English Gloss   BT Form   SA Word
                            (both BT and SA forms are in a
                             broad phonetic transcription)

A. Kin Terms

mother   mama(n)   madær(-ĵan)
father   baba   pɛdær(-ĵan)
brother   dadaš   bæradær(-ĵan)
father's brother   æmu   aemu(-ĵan)
father's sister   æme   æme(-ĵan)
mother's brother   dayi   dayi(-ĵan)
mother's sister   xale   xale(-ĵan)

B. Body Parts and Bodily Functions

sleep   lala   xab, xabidæn
breast   meme   sine
eat, food   hæm   xorak, xordæn
urinate, urine   ĵiš   šaš (kardæn)
defecate, feces   ?æ ?æ   šaš bozorg(kardæn)
penis   dudul   ?

C. Modifiers

hurt   ?uf   dærd
pretty, nice   naz, bæbæbæ   xošgel
dirty   ?æxe   kæsif
nothing, all gone   nist   hič
bad   bæd   bæd
hot, sharp   ĵiz   daG, tiz
cold   særd-e-særd   særd
small   kucəlu   kučək

E. Objects

sweets   bæbæbæ   širini

Table 5. continued ...

E. Creatures

cat	pisika	gorbe
baby, doll	nini	bʌčče, æ rusak
sheep	bæ bæi	gusfænd

F. Actions

come here	biya	amæ dæn /biya
give	bɛde	dadæn/bɛde
go away	boro	ræft æn /boro
go out	bɛre dædær	ræftæn birun
wave	bay-bay kon	?
kiss	bus kon (bɛde)	busidæn
tickle	Gɛl-Gɛl-Gɛl	GɛlGɛlæk dadæn
run	bodo	dæ vidæn /bodo
blow	fut (kon)	fut kardæn
sroke, pet	naz kon	næ vazeš kardæn

G. Exclamations

spit out	tɪxe, æxers, xəč	tof kardæn
watch out	?ə?ə?ə	---
well done	?ó˙?o˙?o˙, bæbæ	afærim, baykəla
be quiet	s?	sakɛt
no, don't	næʕ,dɛ?	næxeyr, nækon
I'm surprised	repeated alveolar	---
(how nice)	click	

H. Sounds

noise made into ear	buzzing like mosquitoe	---
syllable sung for	n n n ñ n	---
clapping or dancing		
to make child sleep	ps-ps-ps	---
gun shot	tuf tuf	---

The Iranian words conform to the revised classification. The only new points to be made are that the Iranian BT action word derives from the familiar command which is marked, and, all forms are written phonetically as the standard transliterations from the Arabic script do not give a fair representation of how the words are pronounced.

Brazilian Portuguese

The Brazilian Portuguese data is taken from Stoel-Gammon (1976). Although she includes both BT and SA terms, the author does not indicate the correct phonetic transcription and this had to be deduced from a Brazilian Portuguese dictionary (Richardson et al:1973). There may be a problem with my transcription of the vowels but since they are not a focus of this thesis, any errors in that area do not effect the universals drawn herein. In the following table, I include both standard orthography and phonetic transcription but throughout the text I use the original form (standard orthography).

Table 6. Brazilian Portuguese BT Lexicon

English Gloss	BT form standard orthography	(phonetic)	SA form standard orthography	(phonetic)
A. Kin terms				
mother	mamãe	(mamẽ)	mãe	(mẽ)
	mami	(mami)		
father	papai	(papay)	pai	(pai)
	papi	(papi)		
grandmother	vovó	(vɑvɔ)	avó	(a vɔ)
grandfather	vovô	(vɑvo)	avô	(a vo)
uncle	titio	(titiu)	tio	(tiu)
aunt	titia	(titiɛ)	tia	(tiæ)
B. Body parts and bodily functions				
sleep	nana	(nana)	dormir	(dormir)
	mimi	(mimi)		
breast(feed)	o mama	(ᵒ mamá)	a mama	(a mama)
	o tete	(o tete)	o peito	(c peytu)
eat, food	papá	(papa)	comer	(komer)
	o papá	(ᵒ papa)	comida	(komidæ)
urinate	fazer pipí	(fɛzer pipi)	urinar	(uriɐr)
	" chichi	(" śiśi)		

Table 6. continued

B. Body parts and bodily function continued

defecate	fazer coco	(fæzer koko)	defecar	(defekar)
penis	o pipi	(o pipi)	peniš	(peniš)
	o bim-bim	(o bim-bim)		
vagina	a chochota	(a šusôtæ)	vagina	(væžinæ)
buttocks	o bum-bum	(o bum-bum)	as nadega	(aš nædegæš)
bath	bainho	(baynu)	banho	(bænu)
	baninho	(bæninu)		

C. Modifiers

hurt	o dodoi	(o dodoy)	o machucado	(o mæsukadu)
dirty	caca(ca)	(kaka(ka))	sujo	(suzu)
nice	bonitinho	(bunitinu)	bonito	(bunitu)
little	pequenininho	(pekenininu)	pequeno	(pekenu)
	pequetitico	(peketitiku)		
nothing	cabo, babo	(kabo, babo)	acabou	(ækabo)
	abo, bo	(abo, bo)		
hot	fff! tente	(fff, tente)	quente	(kente)
cold	fio	(fiu)	frio	(friu)

D. Objects

shoe	papato	(pæpætu)	sapato	(sæpætu)
clock	tic-tac	(tik-tak)	relogio	(relôžiu)
car	bibi, fomfom	(bibi, fumfum)	carro	(caro)
tricycle	tico	(tiku)	velccipede	(velosipede)

E. Creatures

baby	nene	(nene)	bebe, nene	(bebe, nene)
dog	uauau	(owow)	cachorro	(kæšoru)
cat	miau	(miow)		
	chaninho	(šæninu)	gato	(gatu)
bird	piu-piu	(piupiu)	passaro	(pasaru)
	pipiu	(pipiu)		
chicken	coco	(kokɔ)	galinha	(gælinæ)
	titi	(titi)		
goat	me-me	(me-me)	cabra	(kabræ)
horse	tom-tom	(tom-tom)		
	pikau-pikau	(pikow-pikow)	cavalo	(kævalu)
boogeyman	bicho-papa	bišu-papow)	----	

F. Actions

walk	danda	(danda)	andar	(andar)
good-bye	tau-tau	(tow-tow)	tchau	(čow)
	tchau-tchau	(čow-čow)		

Table 6.   continued...

F. Actions continued

carry on back	upa	(upæ)	montar (montar)
	dar uma upa	(dar	
		umæ upæ)	
hide and seek	u-u; cade	(u-u, kade)	esconde-esconde
	que de	(ke de)	(eskone-eskonde)
smile	bilu-bilu	(bilu-bilu)	---

G. Exclamations

bad	repeated alveolar click		feio	(feyu)
hot	fff!	(fff!)	quente	(kente)
be quiet	ššš! pšiu!	(pšyu, ššš)	pšiu	(pšyu)

The Brazilian Portuguese data (Stoel-Gammon 1976) fit the new classification except for gaps that are most likely attributable to oversights in data collection: exclamations and sounds can be easily disregarded if one does not consider them actual words.

Gilyak The Gilyak data is all recorded phonetically in Austerlitz (1956) and only a few changes were necessary to make it conform to the phonetic transcription used elsewhere (ʒ— ǰ, j ⟶ y, y ⟶ ɨ, s,z,c ⟶ š,ž,č).

Table 7. Gilyak BT Lexicon

English Gloss	BT Form	SA Word
A. Kin Terms		
mother	ɨma	ɨmk
father	dɨy,day,da	ɨik
elder brother	aka	akan
elder sister	nana	nanq
younger sibling	ačk,aćik	aśq

Table 7. continued

B. Body parts and bodily functions

sleep	qoq-nt,qoxa-nt	qo-nt
food	mama,ñaña	iń-nt
breast milk	mɨńk,mɨñɨ,mɨńmɨñ	mɨzx
urinate	hiša-,čiša-,čišk-nt	čɨ-nt
defecate	a?a-nt	o-,aq-nt
wash	ɨpɨp(ɨ)-nt	p-šu-nt
head	joŋ	joŋqř
face	ŋɨñk,ŋɨñŋiñ,ŋɨñɨ	ñetf
eyes	ŋaŋ,ŋaŋaŋ	ñŋaX
ears	ema	mla
mouth	ama	amx
hands	ñamk,ñamñam,ñama	damk
abdomen	gomk	ŋawř
penis	ćoč,čoćk	ŋoy
scrotum	eqi	ešqi
vulva	bew,pelŋa	malX
feces	otɋ	otX
buttocks	oŋqi	oŋqt.i
legs and feet	ŋon,ŋonŋon,ŋono,ŋonk	ŋaćx

C. Modifiers

hurt (it hurts)	ɨkɨk-ɨykɨyk-nt	ɨyka-nt
dirty	alqalq, arharX	alqa,arha
none	apka,apa	uyɣi-nt
good, all right	ulak	ur-la-nt

D. Objects

rice	daq	raq
berry	alq	alś
shirt	lalq	laɣq
bib, pinafore	defa	defq
footwear	gik	gi
tree, wood	Gaq	čXař
bowl, cup	ŋiřk	ŋiřŋ
chamber-pot	kiřĸ	kiř
toy	bapk,bapa	leqr-nt
doll	nena	nenq
arrow	kuk	ku
canoe, boat	mumk	mu
house	dafk	daf

E. Creatures

fish	ćošq,čoćoq,ćoćaq	ćo
bird	bič-ŋaq,bič-aq	buy-ŋa
another man	apap	enan

Table 7. continued

crow	Gawaq	weš
dog	gičk,giči	Gaŋŋ
puppy	maŋmaŋ,maŋa	maŋgičk
bear	moq	čxif,moqř
ghost, goblin	humk,kuk(-milk),kak(-milk)	milk

F. Actions

carry on back	ači-,apu-,bapu-nt	vap-nt
come	bičk(i)-nt	pry-nt
walk	amqamq-nt	amam-nt
run	tloka-nt,tloyka-nt	tloy-nt
swing legs	Goŋthoŋt-nt	p-ŋačx čikuśiku-nt
cannot swallow	qaXqañ-nt	mar-nt
sleep together	xačk-u-,xalk-u-,xačkačk-nt	wayXo-nt
smile	ŋulki-nt	ŋuli-nt
tell lies	dalqa-nt	ɟalřa-nt

G. Exclamations

H. Sounds

I. Miscellaneous

here	dušk	duš
there	hušk	huš
where	tašk	taš
outside	gik	gučla

In the case of the Gilyak material, it is necessary
to add a miscellaneous category to accomodate the words 'here,
there, where, outside'. Since, however, the words form an
obvious group describing location, the category 'Location'
might be requisite in the analysis of some BT lexicons.
The gap formed by the categories 'Exclamations' and 'Sounds'
may once again be due to oversights of the scholar. Although
it is possible that there are no BT forms to fill in these
categories, it is unlikely that there is no way of expressing
approval, disapproval or danger to the child. Another possi-

bility is that BT forms which appear in other categories
are used with different intonation to form exclamations:
for example, ikik (modifier 'it hurts') could be used as
a warning, ulak (modifier 'good') as praise, and, alqalq
(modifier 'dirty') as an exclamation for the child not_to
touch or eat something unclean. In general, the classifica-
tion is appropriate for the Gilyak data and further inves-
tigation would be likely to eliminate the stated concerns.

Syrian Arabic

Table 8. Syrian Arabic BT Lexicon

English Gloss	BT Form	SA Word
A. Kin Terms		
mother	maama	?umm
father	baaba	ab
grandmother	teete, teeta	ǰaddah
sibling, nursemaid	daada	ax, uxt, murdiah
B. Body Parts and Bodily Functions		
defecate	?iʕʕ, kaʕʕ	qašir
food	mamm	taʕaam, ya?kulu
drink	mbuu	maa?
sleep	ninii	yanaamu, nawm
C. Modifiers		
dirty	kixx	xabeʼe
hot	?uHH	saax
hurt, sick	waawa	ǰurh, marid
all gone	baHH	haayah
little	nuunu	saqeer
pretty	daHH	tayyib
D. Objects		

Table 8. continued ...

E. Creatures

baby	bubbu	t̲ifl
bird	kuuku	t̲ayr
sheep	maaʕ	x̲aroof

F. Actions

walk	daade	yansee
smile, speak	kiġġ	
go bye-bye	tišš	widaaʕan

G. Exclamations

don't, I'll slap you	didde	yad̲ribu (hit)
dirty, naughty	kixx	xab̲eeθ

H. Sounds

noise made into ear	kurr	---
dog - bark	ʕawʕaw	yanb̲ahu

Ferguson (1956) presents Syrian Arabic BT from a number of sources and the above list represents the words he found to be common to the whole Syrian area (ibid:125). Other words are excluded because they are only used by particular individuals, families or districts. Thus the lack of such common forms as 'urinate', 'breast or bottle' and 'watch out' suggest a more localized version and not a complete absence of the word. Despite this, the basic list (Table 8) provides words for all categories except 'Objects' and there are no words that do not conform to the classification.

A phonetic transcription of both the SA and the BT Syrian Arabic are used.

<u>General</u> Although the six BT lexicons derive from widely
varying languages and cultures, the classification suggested
in this chapter is applicable to them all. It is therefore
predictable that the analysis will have a universal appli-
cation with only minor modifications (such as inclusion
of optional classes like the 'Locations' category in the
case of the Gilyak material) making it possible to state
the following.

> Lexical Universal I: BT lexicons have a
> common set of categories including kin
> terms, body parts and bodily functions,
> modifiers, objects, creatures, actions
> and probably exclamations and sounds.

> Lexical Universal II: Further language-
> specific categories occur in BT registers
> and belong to an optional but still
> limited class.

Lexical Universal I is derived from the evidence of
section 2.1. All the languages studied here attest to the
categories kin terms, body parts and bodily functions, modifiers,
creatures and actions. The categories exclamations and
sounds remain statistical universals for the time being but
it seems likely that when further research is done, it will
be possible to state an absolute universal. Exclamations
and sounds might easily be overlooked by researchers since
the forms that fall into these categories are not necessarily
'words' -- <u>e</u>.<u>g</u>., 'ohoh!' or 'meow'. I include 'Objects' as

an absolute universal for although there are no object words in the basic Syrian Arabic list (table 8), the individual dialects include some (Ferguson 1956).

Lexical Universal II describes categories of words that are optional; not missing elsewhere due to poor data collection. For examaple, location words occur only in Gilyak BT and must be considered a language possibility_in nursery lexicons. More data must be gathered and analyzed before the delineation of the optional categories and an explanation of their occurrence in a language can take place. It is probable that the lexicon of the target language influences the formation of the optional classes although the cognitive and linguistic abilities of the child are also a factor: in this way, while location words are a possibility, for example, algebraic terms are not.

East Cree BT conforms to the stated universals with words in all universal categories (both absolute and statistical) and no optional class. And, the universals are substantive and non-implicational.

2.2   Content and Function of BT Lexicons

So far, I have examined the categories or kinds of words that are found in BT registers. However, it is important to look at individual words across categories (content) in terms of the roles they play in the upbringing of children (function) to understand the semantic nature of the BT

lexicon.

Previous work in the area has tended to describe the general functions of the BT register: a tool for communication and self-expression (Ferguson 1975:21); a teaching instrument (Ferguson 1975:21; Stoel-Gammon 1976:26); and a means to express a nuturant role (Kelkar 1964:41). The function of specific words or groups of words has only been mentioned in passing (Blount 1972:244; Casagrande 1964:247; Ferguson 1975:22) and no attempt has been made to describe universal features of specific content and function. Since BT lexicons represent a basic level of language, an analysis of their content and function helps illuminate the fundamentals of semantics. Through an analysis of the data in this section I demonstrate that physical well-being, socialization and the identification of salient items determine the content of East Cree and other BT lexicons.

Words related to physical well-being allow the child to express his basic needs and to ensure his safety. Although the target culture and language exercise some influence in this area, physical needs and dangers to children are largely universal so we can expect to see general similarities across languages.

The term 'socialization' is used here in the narrow sense of the "incorporation of a child into society in terms of the child's ability to participate in social interaction"

(Blount 1972:235). In general, language socialization is a
part of such socialization since it enables a child to parti-
cipate socially. More specifically, though, there are words
in BT that carry information about social interaction that
is in itself nonlinguistic. These words comprise kin terms,
modifiers, commands, terms of etiquette and some miscellaneous
items such as 'stranger'. Needless to say, the target adult
cultures are bound to cause a fair amount of variation in
specific words among the different BT lexicons.

The identification of things that do not have immediate
social or physical consequence in the life of a child is
dependent upon perceptual salience. That is, the identified
object must be visually, acoustically or tangibly salient,
an easily identified part of the body (e.g. foot versus thigh),
or, in frequent use. Visual salience is determined by movement
and well-defined boundaries: a train is more salient than
a house due, in part, to movement, and, a shoe is more salient
than a shirt because of its distinctive, compact and well-
defined shape. Sounds that are acoustically salient are
generally loud and intermittent or unpredictable rather than
quiet and continuous: a train whistle is acoustically salient
while the humming of a fridge is not. Objects are tangibly
salient if they can be held and examined easily or if they
are marked by a strong sensory cue such as heat: a ball is
tangibly salient in contrast to air which cannot be held, and,
'hot' is more salient than 'warm'. One part of the body is

more easily identified than another because it has more well-defined boundaries (visually salient) and can be touched by the child (tangibly salient). Thus, feet and toes are attached to the leg whereas the thigh or calf are part of the continous appendage. Finally, items that are used frequently are more salient than those that are not, other features of salience being equal, since the child has an opportuntiy to become familiar with them.

Often, objects are distinguished by more than one salient factor: for example, animals are frequently both visually and acoustically salient as well as being common-place.

The salience of something depends upon both the adult's and child's perceptions and must therefore be external to both. A child may spend a long time exploring the concepts 'permanent object' and 'gravity' but these are not easily defined or even noticed by the adult and are not given a name in BT. Conversely, certain emotions that are perceived strongly by an adult -- humiliation, despair, hope, pride -- are not generally considered to be felt by a child and are not included in BT lexicons either.

As a child begins to recognize, identify and label his world, finer distinctions can be stated (e.g. shoe vs boot, hand vs finger), less salient items identified (floor, back), and more abstract notions named (dark, light, happy, sad). The early identification of salient objects provides

a base for the child's communication about his surroundings. Furthermore, a study of this early stage and the development of language toward children can help us understand to what extent language and knowledge shape each other or are shaped by the environment. Although such a study is unfortunately beyond the scope of this thesis, the content of the BT lexicons provide invaluable data.

2.2.1 Content and Function of the East Cree BT Lexicon

East Cree BT words function to ensure physical well-being, assist in the socialization process and name salient items.

Words related to physical well-being include those linked to the creature comforts as well as warnings and intimidations. The use of creature comfort words require little explanation. The caregiver utters these baby words to identify and encourage an action that concerns basic health and hygiene. The child learns the forms and then uses them to express his physical wants. To a certain extent these words teach cultural values but their primary function bears on the child's well-being.

Warnings and intimidations are used to discourage actions that could lead the child to danger. The East Cree warnings yogo (watch out), gigi (hurt), yogo gigi (watch out or you'll hurt yourself) and moy (no, don't) are direct signals to the child that danger is present. They replace complex

adult statements such as "Don't touch the kettle because it is hot and you could burn yourself" or "Don't pull that or it will fall and hit you on the head". The longer statements can be used with an older language-proficient child but the short, emphatic and easily recognizable forms are necessary with the language learner. Intimidations -- æduš (boggeyman), gikš (noxious or frightening creature), bu' (a noise to scare in play), u'u' (the noise that something scary makes in a story) -- are used to teach and reinforce feelings of fear. æduš and gikš are used to warn of frightening creatures that will appear down by the river or out in the bush thereby frightening a child and preventing their getting hurt. bu' and u'u' are used in play and narrative to frighten the child and at the same time to help him cope with his fears. The intimidations prevent the child from acting in a potentially hazardous manner and also set up a lifelong and necessary wariness of being alone in the bush (Preston 1975:252).

East Cree BT includes a number of words that function in the socialization of the child: kin terms -- mother, father, grandmother, grandfather; qualities -- pretty, dirty, well done; simple commands -- come here, bring, give, go away, go out, go ahead, be quiet; and the miscellaneous word ælo (stranger) which is explained below.

Kinship terminology is examined more closely in the following section (2.3). Here it is sufficient to point out that the early acquisition of kin terms emphasizes the rela-

tionships they name.

The quality words -- ǰa or bubu (dirty), dæǰi (pretty), o dæǰyuṅ (well done) -- teach the child cultural values. By the tone of voice, facial expression, context and actions, the adult is able to convey what is to be considered dirty or nice. East Cree does not have nursery forms for 'good' or 'bad' and the child is not labelled as such. Rather, positive actions are encouraged by praising the action -- o dæǰyun -- and negative actions are laughed at or ignored. This is a good example of the adult culture (i.e., Cree respect for autonomy and little interference except indirectly (Preston 1979:89)) determining the content of the BT lexicon and making it different from the other BT lexicons.

The simple commands of the East Cree BT lexicon -- æjum (come here), bɛdæ (bring), mi (give), æwʌs (go away), wiwi (go out), mæǰi (go ahead) and ššš (be quiet) -- teach a child to name common interactions as well as involving him in some form of social interaction. Words such as 'trip', 'bend' or 'reach' could just as easily be the first action words taught if language were the only consideration. The action words reinforce the child's existence as a social being and emphasize the importance of interaction.

Finally, the miscellaneous word ælo (stranger) identifies an important social concept. In a culture where people have traditionally lived in small groups 'stranger' is easily identified and named.

In East Cree BT, the words that relate to salience are: gægun (shoes), puši or minuš (cat), ǽjumš (dog), dulu (penis) and dumuk (the noise of something falling into the water). These items are not named because of their direct relevance to the well-being or socialization of the child but because they stand out in the child's world.

2.2.2 Content and Function of Cross-linguistic BT Lexicons

The role of physical well-being is evident in all the BT lexicons listed in this chapter (Table 3-8). Since human survival depends upon the ability to perceive, act upon and express certain situations, it is not surprising to find a core group of words in all the lexicons: 'sleep', 'drink' or 'breastfeed', 'defecate', 'urinate', 'hurt' and some form of warning or reprimand. Some of the languages include other words in this category: Brazilian Portuguese -- fff, tente (hot), fio (cold) and bainho or banhinho (bath); Iranian -- jiz (hot or sharp), sard-e-sard (cold) and tɪx or xač (spit out); Syrian Arabic -- ?uHH (hot); Gilyak -- ɨpɨp(ɨ)-nt (wash), qaXqáh-nt (cannot swallow) and gakaj-nt (is healthy). Despite the limited variation, the core group of words remains the same and functions to ensure physical well-being.

Nursery words that pertain to socialization are predictably more varied. The general categories of kin terms, qualities (modifiers that express an opinion) and simple actions are applicable cross-linguistically. There

are words in some languages that also function to teach
etiquette and nursery games. The former group is limited to
words for 'thank you' (English ta(ta) and Iranian mersi),
and '(wave) good-bye' (English bye-bye, Iranian bay-bay,
Brazilian Portuguese tau-tau and Syrian Arabic tišš). The
latter group, nursery games, includes actions that involve
playful/interaction with adults although the action itself
is not necessarily interactive: for example, the English
'pat-a-cake' and 'peek-a-boo', the Iranian fut kon (blow),
and the Syrian Arabic kigg (smile or speak). While the
helping the child learn about himself, these words involve
interplay that reinforces the roles of the parent-child
relationship.

Within the other (universal) groups of words that
involve socialization there is variation of specific content:
East Cree does not include words for 'bad' or 'good' while
the others generally do, for example. It is possible to
look at the target language and culture to understand such
variations. East Cree does not include etiquette words
in the BT lexicon since they are not a part of adult speech
either.

Words that are included in the BT lexicons because
of the salience of the object they name are also quite varied
due to differences in environment and material culture.
Nevertheless, the factors that determine salience, as
described above, remain unchanged. Good examples of cross-

linguistic variation include the naming of animals and mechanical objects. English-speaking children learn BT words for a wide range of domesticated animals and mechanical objects. East Cree children, for obvious reasons of cultural history, do not.

From the discussion of East Cree and the comparative BT, the following universals can be concluded:

> Lexical Universal III: Physical well-being, socialization and salience determine the inclusion of words in the BT lexicons.

> Lexical Universal IV: A common core group of words relating to physical survival exists in all BT lexicons.

> Lexical Universal V: All BT lexicons include some kin terms, quality words and simple commands that pertain to the function of socialization.

> Lexical Universal VI: Salience is determined by universal features such as sound and movement that are perceived by both adult and child.

> Lexical Universal VII: Variation in the content of actual words can be explained in terms of the adult language and/or culture.

These universals summarize the findings of the preceding section. Lexical Universal VII once again underlines the importance of the SA language and culture in shaping the variations among the BT registers of the world's languages. It further serves to remind us that language does not exist

in a vacuum and that to understand the nature of the BT register, information regarding culture must be taken into consideration.

These universals are in accordance with the East Cree data and, for the most part, are substantive, non-implicational and absolute.

2.3 Kinship Terminology

In this section, I analyze the use of hypocoristic (nursery) kin terms in three cultures and arrive at a hypothesis explaining the variation among cultures. I then examine East Cree BT kinship terminology to test the hypothesis and draw conclusions. Since Hindi and Inuktitut are extremes in the use of hypocoristic kin terms and since cultural data is available on each of these peoples, I have decided to use them rather than the other comparative languages used in the bulk of this thesis.

Kin terms are considered hypocoristic if they are phonologically simple -- following the preferred patterns outlined in chapter four. If a phonologically simple term is used into adulthood, it is not excluded from this study. I suggest that the extent to which kin terms are hypocoristic and therefore easily learned by the child is socially relevant. In order to support this claim, I now briefly examine some background material.

2.3.1 Background

The possibility of extrapolating forms of social structure from kinship terminology has long been a point for debate. Morgan, in his examination of classifactory and descriptive systems (1877), postulated that kin terms are indicators of social organization. Kroeber counterargued that kin terms are merely linguistic "only occasionally, and then indirectly, affected by social circumstances" (1909:82).

Both Morgan and Kroeber overlooked the distinction between reference and address terminologies, and, although kinship systems remained a central concern in anthropology, terms of address were either ignored or dismissed (e.g. Rivers 1906:403; Lowie 1917:106; Murdoch 1949). More recently, kinship studies have focussed on individual cases that demonstrate the significance of terms of address: Casson and Ozertung found that address terms may be used to denote the degree of deference or respect felt by the speaker for the one addressed (1976); Hokkein kin terms express the degree of intimacy or social distance (Weller 1981); address terms are also used to manipulate social situations (Weller 1981); Japanese zero-address (avoidance of addressing particular relatives) demonstrates feelings of ambiguity (Fischer 1964); solidarity can be conveyed by the choice of terms of address (Casson and Ozertung 1976).

These studies indicate the possiblity of choice in address terminologies: under some circumstances they can

vary to indicate the feelings of the speaker. Since reference terms in general denote a relationship, the same variation is not possible: in English, one usually refers to one's 'sister' but forms of address may vary from the shortened kin term 'sis' to a first name, a nickname or even zero address. 'Sister' describes the biological relationship whereas the address form includes other information. In some cases, there is no choice in address either (e.g., Casson and Ozertung 1976:237). I suggest that greater freedom in choice of address terms reveals greater freedom in defining the social relationship: an address term that must be rigidly followed denotes the biological or consanguineal relationship and the concomitant behaviour and expectations; an address term that is selected from a range of terms demonstrates greater freedom in the relationship. Conversely, in societies with ascribed statuses, address terminology will be more rigid while in societies with greater choice in social interaction, terms of address will be more flexible.

So, although the kind of social information that is conveyed by kinship terminology is not the type suggested by Morgan (1877), the kin terms are more than linguistic tags (Kroeber 1909).

Hypocoristic kin terms can help elucidate what it is that choice in address terminology indicates. Hypocoristic kin terms are used in both reference and address initially but evolve into address terminology, often into SA address

terminology. By examining this introduction to kinship (the first kinship system learned by the child) some interesting factors come to light.

2.3.2 Comparative Data and Analysis

In English, there are two or three phonologically simple kin terms: mommy, daddy and possibly nanny (or one of their variations as dadda, dad, papa etc.). Idiosyncratic hypocoristic forms may occur for other relatives but there are no standardized forms.

Jean Briggs lived intimately with an Inuit family for over a year (Briggs 1970) and only heard two standard hypocoristic terms: anana for 'mother' and atata for 'father (personal communication 1982). As in English, idiosyncratic forms may develop and 'stick' to a particular individual (ibid).

In Hindi there is an abundance of phonologically simple kin terms that are used into adulthood (my own obser-vations and personal communication from Ravi Lal 1982):

English Gloss	Hindi Term
mother	mʌmʌ
father	pʌpʌ
mother's mother	nani
mother's father	nana
father's mother	dadi
father's father	dada
mother's brother	mama
mother's brother's wife	mami
father's older brother	tao
father's older brother's wife	tai

father's younger brother	ćaća
father's younger brother's wife	ćaći
mother's sister	mosi
mother's sister's husband	mosa
father's sister	bua
father's sister's husband	pupa
older sister or female cousin	jiji
older sister's or cousin's husband	jiju
older brother or male cousin	bhai
older brother's or cousin's wife	bhabi
younger sister	kuki
younger brother	kuku

The most obvious contrast between English, Inuktitut and Hindi terms is the number: English, three; Inuktitut, two; Hindi, twenty-two. According to my hypothesis, one can predict that Hindi-speaking people tend to have rigidly ascribed statuses among a large number of relatives while English and Inuit do not. This is supported by the cultural evidence.

MacFarlane (1978) has established the importance of individualism in medieval England, long before its development on the continent. Since the middle of the thirteenth century, at least, there has been "a highly developed and individualistic market society" with "very considerable social mobility based on wealth rather than blood"(ibid:165) and emphasis on the nuclear family form, private ownership and flexibility in inheritance. The small number of hypocoristic kin terms in English reflects a society that is egalitarian and flexible within the family and exhibits a general lack of emphasis on specific kin relationships.

Although kinship is the most important bond among the Utku Inuit with whom Jean Briggs lived (1970), nuclear

families remain fairly autonomous (ibid:40) and independance
is a cherished ideal (ibid:42). Kinship provides a unifying
bond-in general but there are no rigid rules of behaviour
between specific relatives. And, although older children
and adults use a complex system of reference (ibid:36), names
are generally used in address throughout the Arctic (person-
al communication David Damas:1981). The Inuktitut BT kin
terms reflect the egalitarian nature and flexibility of Inuit
social relationships.

During the year I lived in Uttar Pradesh, India (1973-
74), I repeatedly observed the importance of kinship ties,
the hierarchical nature of kin relationships, the various
ascribed duties of different kin and the prevalence of the
patrilocal extended family. My observations are supported
by Sachchidananda (1978:232) who discusses the importance of
the extended family, the autocratic powers of the head of
the household and lack of tangible property of junior family
members. The extensive hypocoristic kinship terminology in
Hindi-speaking India reflects the societal form: a large
number of differentiated kin relationships emphasizing
birth order and line of descent.

The above data do not rule out the importance of
kinship bonds in general in certain societies but suggest that
where there are rigidly ascribed statuses there will be an
indication of such even at the earliest stage of socialization.

Beyond the general notion that limited hypocoristic kinship
terminologies suggest flexibility in forming relationships,
the Hindi data lead one to more specific claims: the differ-
entiation between father's older brother and younger brother
indicate the hierarchical nature of the family; the lack of
differentiation between mother's brothers and sisters and
father's sisters reflect the importance of the male line;
the general tendency to adopt the term of one's spouse when
marrying into family, with appropriate gender marker, demon-
strates the strength of marriage in uniting a person with a
particular family, especially a woman to her husband's family;
the fact that mother's sister's husband does not share her
term indicates the distance of this relationship (and he is
outside the family hierarchy); the linguistically more 'infan-
tile' form čača for father's younger brother versus tao for
father's older brother, reflects the closer, less authori-
tarian role of the younger uncle. Other conclusions might
be possible and their general validity unfounded but further
research in this area might well reveal an interesting link
in early linguistic, social and psycho-social development.

2.3.3 Cree Hypocoristic Kin Terminology and Kin Relationships
        In East Cree BT there are four hypocoristic kin terms:
mama, mommy; baba, daddy; gugu, grandmother; jumšum, grand-
father. For all other kin as well as non-kin, a child uses
a first name, a nickname or an idiosyncratic form. According

to my claim, among Cree there must be few ascribed roles
resulting in choice in interpersonal relationships which
are indicators of an egalitarian and flexible society.

My main informant described Cree relationships to
me and the information is best conveyed in terms of the
annual cycle. During winter months, hunting families often
stay in the bush with one or two other families. The choice
of family is quite loose and may vary from one year to the
next depending on how the group works and feels together.
Being comfortable and well-matched is more important than
kin ties. Often brothers and sisters do provide kin links
in these groupings but this is a result of growing up together
and feeling close, not because it is socially prescribed.
Older parents will generally accompany a son or daughter
but again the choice is variable depending upon a number of
factors.

During the summer months, in the larger community
(or year-round among a sedentary group), a good deal of
visiting takes place. Visiting often occurs between close
relatives because one knows them best but again there is
choice. And, certainly, there is no obligation to visit a
particular relative at a particular time and so on. A
woman may tend to visit a certain sister or cousin and as
a result her children visit there too and form a stronger
bond with that set of cousins. As adults the children
therefore feel closer to their siblings and one set of

cousins but there is no obligation and no breech is committed
if relationships are formed otherwise.

Personal autonomy and independence are respected
and preserved among the Cree (Preston 1979:89). They are
normally noninterfering and traditionally there is no hier-
archical control of power. While elders are respected for
their knowledge and behaviour is modified by indirect methods,
socially ascribed statuses are not determining factors. All
elders are respected by the general population and not just
because they are a senior member of one's own family.

The Cree kinship data and cultural norms fit the
hypothesized pattern and so the following universals are
suggested:

> BT Kin Term Universal I: A special set of
> hypocoristic kin terms is available to each
> language-learning child.

> BT Kin Term Universal II: The extent and
> variation of these simplified forms is de-
> pendent upon social rather than linguistic
> factors.

Although Kroeber's statement about the purely linguis-
tic nature of kin terms may have greater application to terms
of reference, in the case of terms of address, social factors
are of primary importance. And, although Morgan was correct
in postulating that kin terms are indicators of social organ-
ization, terms of address are more significant than the

reference systems that he and his followers examined. BT
kin terms are formed in accordance with the target adult
culture: the rigidly ascribed statuses of a hierarchical
society are given hypocoristic kin terms whereas societies
that are egalitarian, at least within the family, have fewer
hypocoristic terms.

This study of hypocoristic kin terms is merely
preliminary and I believe that other, more precise, universals
might be drawn from a wider range of BT kinship terminologies.

3.0 INFLECTION AND SYNTAX

3.1 Simplification

As Ferguson points out "most of the descriptions of BT focus on phonology and lexicon and less information is available on grammatical simplification" (Ferguson 1975:9). Nevertheless, there is enough evidence to posit the following phenomena in the simplification from standard speech to a BT register: pronoun replacement, inflection reduction, all-purpose verbalizers, multi-functional words and monoremes. I examine each of these in relation to East Cree and the comparative languages to ascertain their universality.

3.1.1 Pronoun Replacement

Pronoun replacement, refers to the substitution of pronouns (first, second and third person) by nouns. This clarifies who is being designated, eliminates the need for pronoun conjugation and reduces the complexity of verb declensions since first and second person inflections are not required.

East Cree In East Cree BT, first, second and third person pronouns are all replaced by the third person noun:

East Cree (phonetic transcription)   English Gloss

         BT   SA

baba mɛmɛ-o   neba-o   Daddy (he)is slee-
(daddy sleep - 3rd per sg)(sleep- 3rd per sg)   ping.

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mi mama (give mommy)	beč-mi (to me give)	Give to mommy (i.e., to me).
meli-š gogo? (Mary little drink?)	č-wi-mĩhkwe-n (you want drink you sg)	Does little Mary want a drink (i.e., do you)?

English Similar examples to the East Cree are available in
English BT:

	BT	SA
	daddy's sleeping	he's sleeping
	give mommy	give it to me
	Becky do it!	You do it!
	Aunt Gloria help?	Should I help?

Iranian In Iranian, pronouns are replaced with nouns but
the pattern is different. In some cases there are utterances
comparable to the above from East Cree and English.

Iranian (phonetic)		English Gloss of Iranian BT
BT	SA	
baba nist (daddy isn't)	u nist (he isn't)	daddy isn't here (i.e., he)
bɛde maman (give mommy)	bɛde-m-eš (give me it)	give mommy (i.e., to me)
kave biya (Kaveh come)	biya (come - familiar command)	Kaveh come (i.e. you)

In certain cases, however, the adult addresses the child with

the term that is appropriate for the child to use in addressing the adult. This unusual practice is exemplified below with the phrases spoken <u>to the child</u> by the person named in the utterance:

BT	English Gloss
sælam baba (greetings daddy)	hello daddy
nækon maman-ǰan (not do mommy dear)	don't dear mommy
mɛrsi æmu ('thanks uncle)	thank you uncle

This is generally used as a form of endearment and in cases where confusion would arise the name of the child is used as well:

BT	English Gloss
kave! nækon maman! (kaveh not do mommy)	Kaveh! Don't mommy! (name)

In the above example, both <u>kave</u> (name) and <u>maman</u> (mommy) are used in addressing the child for the purpose of clarification. In the following examples, though, the correct name must be used (an asterisk marks an unacceptable utterance for the meaning that is to be conveyed).

BT	English Gloss
nini uf (šod)· (baby hurt became)	baby (i.e., you) got hurt
*maman uf (šod) (mommy hurt became)	mommy (i.e., you - child) got hurt
tup-e-babæk) (ballBobak)	Bobak's ball
*tup-e-maman (ball mommy)	mommy's (i.e., your - the child's) ball

From these examples it is evident that the switching of terms
or names is only correct in address (vocative) and is not
acceptable in reference or possesion situations.

In general, the Iranian data compares to the East
Cree and English material since third person nouns replace
all pronouns.

Brazilian Portuguese Stoel-Gammon discusses the use of third
person nouns rather than first and second person pronouns and
offers the following examples (1976:25) (translations and
grammatical information arrived at through reference to
Richardson et al 1973; Dunn 1930).

Brazilian Portuguese BT	English Gloss
papai vai embora (daddy goes fortunately)	Daddy is fortunately going (i.e. I).
nenê quer bolo (baby wants cake)	Baby wants cake (i.e. you).

Although the author makes no mention, it is quite likely that third person pronouns are also replaced by nouns. Such an instance could be easily overlooked since is acceptable in adult speech though more frequent in BT.

Gilyak Austerlitz (1956) does not discuss the use of nouns instead of pronouns in Gilyak BT but one example suggests a systematic simplification of the pronouns (as well as the nominal phonology) (ibid:278):

Gilyak BT	SA Gilyak	English
nĩ	nĩ	I
tu	tu	sled
ñini tu	n-řu	my sled

Unfortunately, Austerlitz does not give examples of strings of BT so it is not possible to state if the simplification of pronouns extends to pronoun replacement.

Syrian Arabic In the case of Syrian Arabic BT, Ferguson remarks "the almost complete lack of inflectional prefixes or suffixes" (1956:126). In standard adult speech, personal pronouns are often affixed to the verb or noun (ibid:127). Verbal inflection may be missing in Syrian Arabic BT since pronouns are not there to trigger inflection. Also, Ferguson notes a similar use as in Iranian, of the term of the adult being used to address the child (baaba - daddy "used by father in addressing child" ibid:123). Although it is not

conclusive, these points suggest the replacement of pronouns by nouns.

General Due to the incomplete nature of the Gilyak and Syrian Arabic material it is only possible to state a statistical universal at present. It seems quite possible that this can be changed to an absolute universal when more data is made available.

> Inflectional-Syntactic Universal I: In BT, pronouns are usually replaced by nouns.

Once again, this universal is substantive and non-implicational. It provides a base form for the pronoun replacement transformation used in generative grammar and in constructing adult syntax.

3.1.2 Reduction of Inflections

Grammatical inflections include the affixes on parts of speech, particularly verbs and nouns, that specify number, person, gender, case, tense, aspect, animacy, duration and sometimes more obscure items such as obviation, direction, shape and dimension (Denny 1971). BT exhibits few inflections and the level of inflectional complexity in the adult language creates only minor differences among the BT registers.

East Cree SA Cree is a highly inflected language. There are four different classes of nouns that are marked for number, obviation, person, possession, animacy, and the cases

locative and vocative. SA verbs and pronouns are equally complex (see Wolfart 1973 for greater detail) but in BT appear first in uninflected forms:

wiwi	go out
næ næ	eat
baba	daddy.

Words can change their part of speech: gogo may be the verb 'drink' or the noun "a drink'; gigi could be the verb 'hurt', the noun 'a sore' or the adjective 'sick'. These uninflected forms can be strung together and the resulting utterances are sometimes ambiguous:

mi baba gægun - give daddy shoes

could be derived from either of the following SA forms (all transcribed phonetically according to the speech of my main informant)

ndumi č-u˙htawi   u-mæ's̆č- un
(give your-father   his-shoes-sg poss)

= Give your father his (own) shoes.

ndumi č-u˙htawi   č-mæ's̆ŏ- un
(give your-father your-shoes-sg poss)

= Give your father your shoes.

When inflection begins, it is the baby words that are inflected. For example, gogo 'drink' passes through three different

stages of inflection before the adult form is used although
each utterance is used for 'do you want a drink?':

    1. uninflected <u>gogo</u>?
               (drink)

    2. simply inflected <u>gogon</u>?
                     (drink- sg subj non-third pers)

    3. BT word fully inflected <u>č-wi-gogo-n</u>?
                       (you-want-drink- sg subj
                       non-third person).

Finally, the correct adult form is used

    č-wi-mīhkwe-n
    (you-want-drink-sg subj non-third pers).

The replacement of pronouns by nouns also simplifies
verbal inflection by confining it to the third person:

East Cree BT	East Cree SA	English Gloss for Cree BT
mama naenae-o (mommy eat-3rd pers sg subj)	n-mič̆s-un (I-eat-non-third pers subj sg)	mommy (<u>i.e.</u>,I) is eating
jŭjæn-š nænae-o (Suzanne-little eat-3rd pers sg subj)	č-mič̆s-un (you-eat-you)	Suzie (<u>i.e.</u>, you) are eating.

If a word does not have a simplified form, the adult root
can be used with simplified inflection. For example, the SA

    č-wapam-aw   č-u˙htawi
    (you subj - see - him obj your-father)

becomes the simplified

```
        wapam-aw            baba     = You see daddy.
        (see - him obj      daddy)
```

and the SA

```
        č-u·htawi      č-wapam-uk
        (your-father   you obj - see - he subj)
```

changes to the BT

```
        baba   wapam-uk              = Daddy sees you.
        (daddy see-he subj)
```

At this level the inflections are greatly reduced
but they are still quite complex. Even in the BT forms,
direct and inverse pronominal inflections are used so that
in the utterances <u>wapamaw baba</u> and <u>baba wapamuk</u>, the suffixes
<u>-aw</u> and <u>-uk</u> mark third person object and third person subject
respectively. The second person subject and object are deleted
completely. It is clear that word order is functioning at this
level to give the child clues which help him understand and learn
the inflections: SV or VO are the orders used with the verbal
inflection agreeing with the noun (<u>baba</u> as subject or object).
Although I do not have enough data to discuss it here, and
the comparative languages offer even less insight, word order
seems to be used in the BT of a flexible word order language,
that normally relies on inflectional clues, when the inflections
are reduced. Furthermore, the absence of any marker for second
person suggests an ordering in the learning of inflections.
For now, I examine only the reduction of inflections per se.

For the East Cree it is possible to state five distinct but
overlapping levels in the general acquisition of inflections:
1) uninflected BT words; 2) simply inflected BT forms 3) sim-
ply inflected SA forms; 4) fully inflected BT words; 5) the
fully inflected and SA word. This exemplifies the influence
of a highly inflected SA language on a BT register and the
succeeding development to adult competency (Jones 1986).

English English uses few inflections in SA speech: nouns
are marked for number and possession, verbs for some tenses
and third person singular in present tense, and, pronouns
for a limited number of cases (subject, object, possession),
number, person and gender in third person singular. Inflec-
tions are further reduced in English BT.

Pronominal inflection is avoided by replacing pronouns
with nouns as in the following examples involving the first
person singular:

BT	SA
give to mummy	give to me
mummy help?	should I help?
mummy's shoes	my shoes
that's mummy's	that's mine

Verbs are made less complex by the use of intonation
for forming questions, a preference for the imperative (un-
marked) form of the verb, and, in some cases, deletion of
affixes:

Baby help daddy? (intonation marks question)

Eat! (imperative rather than polite request etc.)

Baby go pee-pee ('s' of third person singular dropped).

Noun inflection is already quite simple, only marking for number and possession, but further simplification some-times takes place:

BT	SA
Jeremy shoes	Jeremy's shoes
one book, two book	one book, two books.

There is considerable individual variation in the amount of inflection reduction in English BT and the above examples are not acceptable to everyone. However, if one listens to the speech of one who does not delete inflections in BT, stress and intonation emphasize the key words or parts of words and reduce the significance of the items that someone else deletes completely. This also applies to verbal auxilaries and functor words that are not affixes in English:

BT	SA
give mummy!	give it to me!
Rebecca go bye-bye?	Is Rebecca going out?

Iranian   In SA Iranian, nouns are pluralized if not preceded by a number and are optionally marked by the direct object

suffix -ra (colloquial -o and -a). Pronouns are more complicated as they may appear in full form or be suffixed to a noun (possession), to a verb (direct or indirect object) or to a preposition (object of preposition). Nominal and pronominal inflectional complexity is reduced in Iranian BT by the deletion of -ra, the preference of nouns over pronouns and full pronouns over pronominal affixes. For example, in BT, column I is preferable to column II which is more acceptable than column III even though both are correct in SA speech:

I	II	III
baba-(ra)did-æm (daddy-dir obj saw- 1st pers sg subj)	u-ra did-æm (3rd pers- dir obj saw-1st pers sg)	did-æm -eš (saw-1sr pers sg subj 3rd pers sg obj)
= I saw daddy.	= I saw him.	= I saw him.
be baba goft-æm (to daddy said-1st pers sg subj)	be u (beš) goft-æm (to 3rd pers sg said-1st pers sg subj)	goft-æm -eš (said-1st pers sg subj-3rd pers sg obj)
= I said to daddy.	= I said to him.	= I said to him.
pesar-e-baba (boy-daddy)	pesar-e-mæn (boy-my)	pesar-æm (boy-my)
= daddy's boy	= my boy	= my boy

The above examples show how the avoidance of pronouns

generally simplifies grammar, and, more specifically, how
verbal inflection is less complex by not using pronominal
inflections.

In SA Iranian, verbs are inflected for number and
person of subject and have a combination of affixes and
auxilaries to mark tense. Verbal inflection is simplified
by the use of third person nouns instead of first and second
person pronouns and by the use of subjunctive and imperative
moods rather than the indicative. The first set of examples
illustrates the simplification following the use of a noun
instead of a pronoun.

Iranian (phonetic)		English Gloss of Iranian BT
BT	SA	
baba bɛ-r-e? (daddy subjunc-go- 3rd pers sg subj)	mæn bɛ-r-æm? (I subjunc-go- 1st pers sg subj)	Should daddy (i.e., I) go?
sirus uf šod-∅ (Cyrus hurt became- past-3rd pers sg)	*to uf šod-i (you familiar hurt became-past 2nd pers sg subj)	Cyrus (i.e., you) got hurt.

The example *to uf sodi is asterisked since the phrase uf
šod is unlikely to appear in standard speech.

The subjunctive and imperative have the same root
and same prefix in Iranian. They are used similarily in
BT and SA Iranian but are more frequent in BT thereby reducing
the number and complexity of verbal inflections. For example,

Iranian (phonetic)		English Gloss of Iranian BT
BT	SA	
æli bɛ-xor-e (Ali subjunc-eat-3rd pers sg subj)	æli mi-xor-e (Ali fut-eat-3rd pers sg subj)	Should Ali eat it? (as a warning that Ali will eat the food.)
æli bɛ-xor-ø (Ali imper-eat-familiar).	the same as BT if familiar but many alternatives.	Eat it Ali!

<u>Brazilian Portuguese</u> Stoel—Gammon does not specifically mention the elimination of inflections in Brazilian Portuguese (1976) but data she presents strongly suggest it. First, the third person noun replaces the first and second person pronouns greatly reducing verbal inflection:

BT	SA	English
papai vai	eu vou	daddy goes/I go
nené quer	você quer	baby wants/you want.

Although the 2nd and 3rd person endings on the verb are the same in the latter example, in other instances this would not be so (Dunn 1930).

Stoel-Gammon also notes the elimnation of the irregular verb <u>estar</u> 'to be' (<u>ibid</u>:25) which further reduces the load of verbal conjugation.

<u>Gilyak</u> Austerlitz states that in the case of Gilyak there is "a lack of morphophonemic analysis" (1956:278) in BT

that is reflected in a simplification of inflections. In
standard speech, one must choose the appropriate inflection
for a vocalic or consonantal stem whereas in BT oscillation
is possible:

BT Stem	BT Present	SA Present	English Gloss
bičkɨ-/	bičkɨ-y/-nt	prɨ-y-nt	come
bičk	bičkɨ-i-nt	*prɨ-i-nt	
ɨpɨpɨ-/	ɨpɨpɨ-y/-nt	p-su-y-nt	wash oneself
ɨpɨp-	ɨpɨp-i-nt	*p-su-i-nt	

"Such oscillations are also, though rarely, found in the
standard language" (ibid:278) where it is more common to find
verbs with similar stems but "when the morpheme for present
is added there is no room for such confusion"(ibid:277):

SA Stem	SA Present	English
tɨrɨ	tɨrɨ-y-nt	"many insects gushing out"
*tɨr	*tɨr-i-nt	

And conversely,

SA Stem	SA Present	English
tɨr	tɨr-i-nt	look
*tɨrɨ	tɨrɨ-y-nt	

In relation to morphology in general, Austerlitz
states that "the important processes of the standard language
seem to be underdeveloped in the nursery language" (1956:278).

The example of ñini tu (BT 'my sled') versus n-řu (SA 'my sled'), noted above, demonstrate inflectional simplification.

Syrian Arabic   It was pointed out in section 3.1.1 that there are almost no inflections in Syrian Arabic BT. Words may belong to noun, verb or adjective class; there are few feminines, no plurals and no verbal inflection; the only inflectional affix is the optional definite article (Ferguson 1956:126). This is quite "unlike most words of normal Arabic" (ibid).

General In conclusion, it is possible to draw the following universals:

> Inflectional-Syntactic Universal II: all BT registers exhibit simplification of the adult inflectional system to a minimal level.

> Inflectional-Syntactic Universal III: Beyond the simple elimination of inflections, simplification is carried out by using third person nouns and by resorting to unmarked forms of the verb (often the imperative).

Although the data from Brazilian Portuguese and Gilyak is incomplete, it seems probable that the earliest stage of BT is characterized by the complete lack of inflections or their negation by the use of prosodic features. That is, key words are enunciated, lengthened and stressed in order to make them acoustically salient at the expense of the

functional words, auxilaries and inflections. Further
research may well reveal that the apparently hierarchical
teaching of inflections in East Cree is not an isolated
phenomenon but that caregivers cross-linguistically operate
at a level of inflectional complexity that they know the
child can handle.

3.1.3 Nulti-Functional Words and Monoremes

Ferguson states that

"in all studies of BT in which syntactic
features are mentioned, the point is
made that BT words may be used as
sentence-words with a wide range of
grammatico-semantic function or may be
embedded in AS sentences in the position
of nouns, adjectives, or interjections"
(1975:9).

This statement draws our attention to closely related but
distinct features of the BT register: individual words are
multi-functional whether they are embedded or used alone,
and, one-word sentences are common. Needless to say, words
are only multi-functional if it is semantically appropriate:
'doggy' is not used as an adverb nor 'potty' as an adjective.
Words that have a semantic correlate in another part of speech
in the adult language, whether or not they are phonetically
similar (e.g the noun 'food' and the verb 'eat), are likely
to be multi-functional in BT. All words, though, can be
used as monoremes and therefore become multi-functional on
a more global level. Thus, the Cree gogo translates into

English as either the noun or verb 'drink'. However, when used alone it can take on an adjectival quality: <u>gogo</u>? 'do you want a drink', 'do you want to drink' and 'are you thirsty'.

<u>Cree</u> In the initial stages of East Cree, words are used multi-functionally, without designative inflections, and as monoremes. For example, <u>nænæ</u> 'food, eat' could be used to express 'come and eat', 'that is food' or 'are you hungry?' when it is used as a monoreme. On the other hand, when <u>nænæ</u> is embedded in a sentence it can be used as a verb or noun (<u>baba nænæ</u> 'daddy is eating' or <u>guhu næ næ</u> 'the food is hot').

<u>English and Iranian</u> In the case of English and Iranian, there are similar examples for monoremes:

        English - booboo - 'hurt'
                        - you'll hurt yourself (verb)
                        - that's a scrape (noun)
                        - you are hurt (adjective)

        Iranian - lala - 'sleep'
                        - go to sleep (verb)
                        - it's bedtime (noun)
                        - baby is asleep (adjective)

   When English and Iranian BT words are embedded in

sentences they are multi-functional as it is semantically appropriate.

<u>Brazilian Portuguese and Gilyak</u>   The data available on Brazilian Portuguese (Stoel-Gammon 1976) and Gilyak (Auster- litz 1956) are incomplete and therefore conclusions about multi-functional words and monoremes are somewhat conjectural. A number of words are identified in each language as either a noun or verb:

Brazilian Portuguese

dandá   - to walk (verb)

o mamá - breast (noun)

naná   - to sleep (verb)

bainho - bath (noun)

Gilyak

miñmiñ - mother's ñilk-(noun)

ikik-nt - it hurts (verb)

bapk   - toy (noun)

amqamq- - walk (verb)
nt

Since all of these words have a semantic correlate in the other class (either verb or noun), and no corresponding BT form, one must wonder if the scholars have recorded all uses of the BT forms that they list.

Austerlitz' analysis is rendered more suspect by the
examples:

BT	SA	English Gloss
bapa	leqr-nt	toy
mama	iñ-nt	food

Although the BT forms and the English glosses are written
as nouns, the SA equivalents are given as verbs. This sug-
gests that Austerlitz' informant did not identify bapa and
mama as strict nouns, even though they do not exhibit verbal
inflection. This supports the idea that, in BT, words have
a multi-functional nature.

Similarly, the following examples suggest an early
multi-functional form in Brazilian Portuguese:

BT	English Gloss
o papá	food
papá	eat
dodói	hurt (noun)
fazer dodói	to get hurt.

At the eariest stage of BT when o and fazer are not emphasized
the forms papá and dodói are probably multi-functional.

Syrian Arabic Ferguson describes the nursery words of Syrian
Arabic as having "membership in several word classes" and
being used as "sentence-words" (1956:126): for example,

       didde - monoreme - 'I'll slap you'

       <u>mamm</u>   - multi-functional - food, eat.

<u>General</u> Ferguson describes the words of BT as multi-functional
but it seems that they are not so much functioning in different
ways as having an indeterminate function. To the Cree child
<u>gogo</u>, to the English child 'booboo', to the Iranian child
<u>lala</u> are designations for certain feelings and situations of
which there can be no clarification of the different aspects
at such an early stage. A hazy world is beginning to take
form and the child is learning to communicate about the
most obvious features of his world: as the finer distinctions
are made between substance and action (noun and verb), only
then will he be ready to include this information in his
utterances. And as suggested in 3.1.2, the caregiver responds
by gearing his speech to the level of the comprehension of
the child.

Despite the incomplete and conjectural nature of
the Brazilian Portuguese and Gilyak analysis, it is possible
to state

> Inlfectional-Syntactic Universal IV: BT
> words are frequently used as one-word
> sentences (monoremes).

> Inflectional-Syntactic Universal V: the
> words of BT registers have indeterminate
> function and, when semantically appropriate,
> can be used as nouns, verbs or adjectives.

It is important to remember that a BT word, when used as a monoreme, has more variable function than when it is embedded in a sentence.

3.1.4 All-Purpose Verbalizers

Ferguson suggests that an all-purpose auxilary verb is used with BT nouns "to limit the verb inflection to one stem and thus avoid the complication of conjugation with each verb" (1975:9). Although the identification of an 'all-purpose' auxilary' leads us to an important feature of BT, I have three disputes with Ferguson's analysis.

First of all, as Ferguson himself notes, BT words are used in "different grammatical functions" (1964:110) and we cannot identify the words in this auxilary + noun construction as nouns per se. Secondly, in SA speech, auxilaries are used with verbs, not nouns, so his terminology is incorrect. Combining these two problems, it seems appropriate to suggest that a verbalizer is used with an indeterminate form to create a verb. The verbalizer may look like an auxilary as in English or may be a few simple inflections as in East Cree. Finally, although only a few isolated forms must be learned, in the case of English at least, their conjugation is irregular and more difficult than the verbs they replace.

Although Ferguson identifies an important process of BT -- the differentiation between verbs and indeterminate

forms -- it is more accurate to state that an all-purpose
verbalizer is introduced and leads to a reduction in the
number of new words that must be added to the lexicon
while making the register more grammatical. If the language
is highly inflected in standard speech, verbalization will
begin with simple inflections; if the language makes moderate
use of inflections, the all-purpose verbalizer will look like
an auxilary.

<u>East Cree</u>   The multi-functional or indeterminate forms of
East Cree BT take on verbal inflection and do not use a
separate auxilary. For example, <u>nænæ</u> 'eat, food' becomes

    nænæ-ó   - he is eating
    (eat-3rd pers sg subj)

    nænæ-daw   - let's eat
    (eat-let's)

    nænæ-n?   - do you want to eat?
    (eat-1st or 2nd pers sg subj)

When verbal inflections are begun in East Cree, corresponding
nominal inflections are also introduced:

    mama u-nænæ-o-n   - mommy's food
    (mommy 3rd pers-food-3rd pers-sg poss)

    ni-nænæ-n   - my food
    (1st pers-food-sg poss)

    ni-nænae-næn   - our food
    (1st pers-food-pl poss)

These sets of examples demonstrate the indeterminate nature of the original BT form ṇǣn ae and how verbalization and nominalization begin in Cree: a few simple inflections are affixed to the indeterminate form.

English In English BT, verbalizers are distinct words that tend to be all-purpose verbs in SA English. There is a choice of three verbalizers that in some instances are interchangeable and in others change the meaning:

SA	BT
urinate	do pee-pee
	go pee-pee
	make pee-pee
wave	do bye-bye
	*go bye-bye
leave	go bye-bye
	*do bye-bye.

There is no corresponding nominalizer in English and the unmarked forms that are not verbalized become the nouns.

Iranian In Iranian BT, the SA verb kardæn is used to form the first verbs. kardæn is one of three verbs that are commonly employed in standard compound constructions that are frequently heard in adult speech:

Iranian - SA	English Gloss
dust dar-æm	I like
(like have-1st pers sg)	

yad-æmmiayæd   I recall
(memory-my comes)

xiči qom šod   Nothing is lost.
(nothing lost became)

kardæn is used extensively in BT, particularly in the imperative form:

Iranian BT	English Gloss
ǰiš kon (pee-pee do)	go pee urinate
lala kon (sleep do)	go beddy-byes go to sleep

SA Iranian uses both compound verbs involving kardæn and phrases with noun + kardæn. These two different constructions vary in the imperative form in SA Iranian: in a noun + verb situation the prefix b- is used while in the case of a compound it is dropped:

SA Iranian	English Gloss
kar-e-to bɛ-kon (work- your imper-do) (noun + verb)	do your work
nɛga-š kon (look-it do) (compound verb)	look at it

Iranian BT, as illustrated in the above examples, follows the

pattern of the SA compound and not the noun + verb. This supports my claim that Ferguson's analysis is incorrect and the verbalizer is not an auxilary used with a noun.

Brazilian Portuguese Stoel-Gammon (1975) does not mention the use of an all-purpose auxilary or verbalizer, but on examining her list of nursery words, we see the verb fazer 'make, do' in combination with chichí 'urinate', cocô 'defecate' and dodói 'hurt'. These examples suggest that fazer is a verbalizer in Brazilian Portuguese BT. Furthermore, fazer dodói is used alongside the noun o dodói which indicates the corresponding nominalization of indeterminate forms through the use of an article.

Gilyak The data presented by Austerlitz (1956) lead one to posit that indeterminate forms are verbalized through the addition of inflections and that no all-purpose verb is introduced.

Gilyak BT	English Gloss
mama	food
mamka-nt, mamači-nt (these words are not in the table but found on page 278 of the text).	eat

Furthermore, some words seem to occur as verbs only, with no indeterminate form, reducing the likelihood of an all-purpose SA verb construction.

Gilyak BT	English Gloss
ïikïik-nt	it hurts
apu-nt	carry on back

There appears to be no corresponding nominalization process in BT and the earlier example of n-řu 'my sled' (SA) versus ñini̱ tu 'my sled' (BT) supports this view.

Syrian Arabic Ferguson states that there is a complete lack of verbal inflection in Syrian Arabic BT and that BT words are not used in strings but embedded in normal sentences (1956:126). This suggests the use of a SA verb used with an indeterminate baby form and there is evidence of this in some of the notes he makes throughout the table that includes words not on his basic list:

Syrian Arabic BT	English Gloss
ruHH bəss	go urinate
ruHH ʕattiśś	go bye-bye
xood zezz	take milk
baʕmillak kurr fii daanak	I'll go kurr in your ear.

Ferguson does not offer a breakdown for each of these phrases but it seems that in each case a BT form (underlined) is used with an adult verb to give the indeterminate form a verbal quality.

Similarly, nouns make little use of inflection in BT

although a feminine or definite article is occasionally
affixed.

General   In BT, cross-linguistically, there is a process of
verbalization. Although the underlying process is universal,
the realization can take one of two forms: simplified
inflection or a SA all-purpose verb. Along with the verbali-
zation, nominalization sometimes occurs but it seems that
nominalization does not occur without verbalization.

In the area of verbalization (and nominalization) SA
grammar is being introduced to the simple BT patterns and
the straightforward absolute, non-implicational and
substantive universals are becoming less predominant. This
is illustrated in the following universals that pertain to
verbalizers:

Inflectional-Syntactic Universal VI: the
indeterminate forms of BT are verbalized
through the use of an all-purpose SA verb
or simplified inflection.

Inflectional-Syntactic Universal VII! the
choice between an all-purpose verb and
inflection depends upon the place of in-
flection in SA speech: a language that
relies heavily on inflection for gramma-
ticality will introduce them in BT.

Inflectional-Syntactic Universal VIII:
nominalization takes place along with or
after verbalization but does not precede
it (corollary: if one form is unmarked,
it will be nouns rather than verbs)

The subject of verbalizers leads to an important

elucidation of the development of language and its hierarchical nature and of the way that radically different adult languages develop from a similar base form.

3.2 Baby Talk and Deep Structure

BT grammar is not derived from SA syntax through a series of transformations. Although it would be possible to write such a grammar, it would be needlessly complex. I suggest, rather, that BT begins with the simplest building blocks of language that develop into the more complex SA forms. Transformations are applied to the universal and basic core and give the different languages their individual grammars. In a sense, then, BT is not simplified speech but simple speech out of which complex speech develops.

At the earliest stage, BT syntax can be represented by the Phrase Structure Rule:

$$S \longrightarrow W \text{ (one-word sentence)}$$

As simple phrases are uttered to the child -- or at least emphasized in speech -- nouns, verbs and modifiers make up the bulk of utterances. PS Rules can be written as

$$S \longrightarrow (NP)(VP)(NP)* \qquad *\text{chose at least one}$$
$$NP \longrightarrow (mod)N$$
$$VP \longrightarrow V.$$

As BT becomes more complex, the VP can either become a

verb compound or a verb with inflections giving such possi-
bilities, in English, as:

$$VP \longrightarrow (aux)(be+ing)(V)$$

At this stage, the following sentence types can exist in
English with parallels in the other languages:

Phrase Structure Rule	English example
S $\longrightarrow$ NP $\longrightarrow$ (mod)N	good girl
S $\longrightarrow$ NP VP	Bobby eat(s)
S $\longrightarrow$ VP NP	drink milk
S $\longrightarrow$ VP $\longrightarrow$ V compound	go bye-bye
S $\longrightarrow$ NP VP NP	Norman read(s) (a) book.
S $\longrightarrow$ NP NP	Jeremy supper

As stated above, some adults do not leave out all
inflections and other grammatical morphemes but negate them
by stressing the key words. One adult might say "Suzanne
bath?" while another says "(Does) Suzanne (want her) bath?"
(bracketed words are unemphasized). The salient words are the
same in either case and other features of BT are used by
both (name instead of second person pronoun, simple sentence
structure, intonation). The Phrase Structure Rules, as
stated, describe the salient words of BT sentences.

Verbalization is perhaps the first transformation

that occurs in the development of a grammar which includes both underlying and surface structures. Prior to this, in BT, surface and deep structures are equivalent. Language development, then, not only increases the complexity of language but widens the gap between surface and underlying forms. The surface forms of BT become the underlying forms of SA speech, and, as the language becomes more complex, these BT forms become further from the surface and appear more abstract. I believe, however, that although the surface features of adult speech can be treated as concrete phenomena, it is the surface structure that is an abstraction of the underlying structure and not the deep structure that is abstract. We take simple, concrete concepts that are essentially agrammatical and add in abstract notions of time, duration, possession et cetera to produce the complex forms of adult speech.

Rather than two levels of grammar, then, there are three: the traditional surface structure of transformational grammar; the deep structure that includes all the grammatical information that leads to the surface form; and, a still deeper level that has a minimum of grammatical features, such as word order and intonation, to convey an idea. Verbalization, nominalization and the introduction of other grammatical morphemes 'grammaticalize' the base form and make the other complex and abstract transformations possible.

Universals IX and X are put forth in the expectation that further research will substantiate them:

Inflectional-Syntactic Universal IX:
BT phrase structure provides a simplified base upon which more complex SA grammars are built.

Inflectional-Syntactic Universal X:
BT must be 'grammaticalized' before the more abstract transformations can be applied.

A study of the development of the register used by adults in speaking to growing children could lead to stronger statements concerning the acqusition of syntax and the nature of that acqusisition.

4.0 PHONOLOGY

The intent of this chapter is to characterize the phonology of BT registers in general, and East Cree in particular, and to describe the processes that derive such forms from standard adult (SA) words.

In this chapter, the problems associated with using secondary sources becomes more apparent. I comment on and deal with these problems as they arise and conclude with a few remarks concerning possible improvements in future data collection and reporting.

4.1 Characterizing BT Phonologies

In this section, I examine the words of East Cree BT and the comparative BT to formulate universal patterns in BT phonology. Here I am concerned with the forms of both suppletive and derived forms. Suppletive BT words are those that are not derived from standard speech but replace the SA form: for example, the English 'peepee' for 'urinate'. Words may appear to be suppletive and yet are derived from another standard word: the English BT form 'piggies' for 'toes' is derived from the standard word 'pig' which appears in the nursery rhyme "This Little Piggy" which is recited to children while counting out their toes. Since such derivations are not obvious, a linguist who is working with an informant must seek to uncover this type of information and not merely make

make a list.

When using secondary sources, a scholar must be aware of the possible shortcomings related to the identification of suppletive forms.

There are many words that are obviously derived from a correspongind adult form: e.g., 'potty' for '(chamber)pot' in English and papato for zapato in Brazilian Portuguese. This section, however, does not deal with derivation (see 4.2 below) and so does not distinguish between derived and suppletive forms.

4.1.1 Canonical Forms

Canonical form refers to the shape of syllables and words. It is necessary to analyze both syllable and word canons to get a true picture of the contrast between BT and SA speech. Heretofore, only word canons have been examined in BT and only in a superficial manner concentrating on the obvious CVCV pattern. The examination of syllable canons reveals the form of the individual syllables throughout the register: syllable length, the sequence of consonants and vowels, and if they are open or closed. The examination of word canons, on the other hand, sets forth the form of words in terms of the combinations of syllables.

East Cree Even a brief examination of the East Cree data set out in Table 3 (Chapter 2) reveals that the BT vocabulary has simpler syllable and word canons than the SA forms. In fact,

over half of the BT words are CVCV while only a few SA words exhibit this form. Furthermore, the adult words presented in the table are generally the least inflected (most neutral) form and much more complex canons of the same word occur quite commonly: e.g., BT mɛmɛ 'sleep' is compared to the SA form nɛba 'he sleeps' but may equally represent čəwinəbæn 'do you want to sleep?' or other inflected forms. The simplified word canons of East Cree BT are in even greater contrast, then, to actual spoken SA East Cree.

Besides the large number of words in East Cree BT of the form CVCV, there are about ten other word canons. Although these are quite varied, they can be characterized by a limited number of syllable canons (CV, CVC, V, CVV, CVCC), no more than two syllables and a preference for at least one syllble of the CV or CVC type. The word canons of SA speech, even in the simplest form, exhibit much greater variation in overall patterns, many words of more than two syllables and less emphaiss on CV or CVC within each word.

The individual syllables of East Cree BT and SA provide further contrast. In BT, consonant clusters are rare, syllables tend to be open (ending in a vowel) and there are only two instances of syllables with more than three phones and in each case the hypocoristic affix -š is involved. In the case of SA speech, syllables end in a variety of consonants, there is more frequent use of consonant clusters, and, with the addition of inflections, syllables of more than three

phones are not uncommon.

I now turn to the comparative data to determine if similar simplification in word and syllable canonical form occurs.

<u>English</u> In English BT, slightly less than half of all BT words follow the pattern CVCV while about half use this canon as one of the alternatives. Although this is not quite as high as in East Cree BT, it is a very large percentage when we consider that only one of the corresponding adult forms is CVCV ('baby' which is itself originally a pet-form for the ME 'babun' -- see the <u>Oxford English Dictionary Vol. II</u>). There is greater variation in the remaining BT word canons than in East Cree but there is still a predominance of two syllable words and a preference for CV to be one or more of those syllables (note usch words as 'itty-bitty' and 'peek-a-boo' that are not counted as CVCV but do repeat the same pattern).

The syllables of English BT generally do not exhibit consonant clusters, consist of two or three phones, tend to end in a vowel and, if ending in a consonant, draw from a limited group. In contrast, SA syllables often contain consonant clusters, use a larger number of phones and end in a variety of consonants.

<u>Iranian</u> BT words in Iranian are similar to English and East Cree in the predominance of CVCV as word canon (in about one

'third of the cases) but also exhibit a relatively high number of one syllable words with the form CVC (about a fifth of the total). Further similarities in word canons include: no more than two syllables per word, a limited number of syllable and word canons and a preference for CV or CVC to be at least one of the syllables. SA words have, on average, more syllables per word and greater variation in the combination of syllables.

The syllable canons of Iranian BT favour CV, are usually three phones or less and avoid consonant clusters. SA syllables are frequently longer, take the form CVC more than CV (which probably explains the frequency of CVC in BT) and make greater use of consonant clusters.

Brazilian Portuguese Word and syllable canons of Brazilian Portuguese BT follow similar patterns to those in the above languages: CVCV is the most frequent BT word canon (between one third and one half of the lexicon); words are generally two syllables in length; words are comprised of a limited number of syllable types; the syllables are generally formed of three of fewer phones; consonant clusters are rare; and, the open syllable CV is predominant. SA words and syllables, on the other hand: exhibit fewer words of the form CVCV; have a larger number of words of more than two syllables; show greater overall variation in word canons; tend to favour the CV pattern for syllables but to a lesser degree than in BT;

have a higher average length of syllable; and, include more consonant clusters.

Syrian Arabic An examination of Ferguson's basic list of Syrian Arabic BT reveals no words that fall into the CVCV or CVC class. Each word contains either a reduplicated vowel or a reduplicated consonant, creating the forms CVCC, CVVCV, CVCVV, CVCCV. These reduplicated forms represent geminates and if reduced to lengthened consonants and vowels rather than reduplicated ones (CVC·, CV·CV, CVCV·, CVC·V) we notice once again a predominant CVCV pattern with a secondary preference for the form CVC.

The BT of Syrian Arabic offers a variation on the universal pattern without becoming radically different: the basic patterns are retained but geminates, realized as lengthenings are superimposed. Geminates are common in SA Arabic and BT is setting up a crucial pattern of adult speech. It is interesting to note that $C_1C_1V_1V_1$ (a consonantal geminate followed by a vocalic geminate) and $V_1V_1C_1C_1$ (visa versa) are not acceptable patterns of SA speech and do not occur in BT either. Thus BT presents the correct SA usage of geminates but in a simplified form with no more than one geminate per word, and uncomplicated by other clusters or difficult canons.

Other than the use of geminates, Syrian Arabic BT conforms to the established patterns for word and syllable

canons with: a limited number of word canons; a majority
of words comprised of one or two syllables; syllables of three
phones or less; no consonant clusters other than geminates;
and a preference for the open syllable CV (C'V or CV').
These characteristics are opposed to the SA words which demon-
strate more variety in word and syllable canons, consonant
clusters other than geminates, longer syllables and words, and
no apparent preference for the open syllable.

<u>Gilyak</u> The Gilyak material allows a less straight forward
analysis since 75% of the words are complicated by the
suffixing or infixing of the hypocoristic -k/-q. An analysis
of the BT words with and without the nursery element produces
the following numbers (disregarding the -nt verbal morpheme):

pattern	no. out of 99 total	percentage
CVCV	15	15
CVC	13	13
CVCV + nursery element	3	3
CVC + nursery element	22	22

However, if the nursery element is considered irrelevant in
the analysis of word canons, the above numbers can be
combined to get:

pattern	no. out of 99 total	percentage
CVCV $\pm$ nursery element	18	18
CVC $\pm$ nursery element	35	35

The canonical forms CVC and CVCV account for about one third of the total words whereas CVC $\pm$ nursery element and CVCV $\pm$ nursery element represent over half of the words. It is possible that earlier BT forms existed and became altered from the general universal pattern by the addition of the nursery element.

Although the above figures are interesting on a theoretical level, it is necessary to consider what the child is hearing and learning. In practical terms, then, the nursery element -k/-q is very frequent and results in a high number of consonant clusters which cause the word and syllable canons to vary from those of the other languages examined herein. This variation can be explained in terms of the target adult language which is rich in clusters. A sort of BT cluster (BT in the sense that it always includes -k/-q as one of the consonants and occurs word or syllable finally as do most of the clusters that appear from time to time in the BT of other languages) is included in Gilyak BT phonology as an introduction to a more complicated system. Consonant clusters are discussed in more detail below but are mentioned here in so far as they affect BT canons.

Beyond this one complication, Gilyak is similar to the other languages in regard to BT word and syllable canons: words are generally one or two syllables in length; syllables tend to be comprised of three phones or fewer; there is a preference, though not overwhelming, for the syllable

types CV and CVC even when the nursery element is included; and, except for the nursery element, consonant clusters are rare.

General To say that word canons in BT generally follow the pattern CVCV is an oversimplification of the material (Ferguson 1975:7). Although it is very common in BT, the pattern CVC is a strong alternative. Other variations must be explained (and Ferguson does touch on this ibid:7) and the target adult language must be examined in such cases. To summarize, the phonological universals I-VI are stated.

> BT Phonological Universal I: CVCV and CVC word canons have a much greater frequency in BT than in SA speech.
>
> BT Phonological Universal II: The syllable canons CV and CVC are the preferred canons of BT, especially the open syllable CV.
>
> BT Phonological Universal III: for the most part, BT words are comprised of one or two syllables.
>
> BT Phonological Universal IV: generally, syllables are made up of three or fewer phones and consonant clusters are rare.
>
> BT Phonological Universal V: word and syllable canons that do not fall into the above description are much more limited than in SA speech.
>
> BT Phonological Universal VI: BT phonologies that deviate from the above patterns are introducting salient features of the SA target language but in a simplified form.

The stated universals are explained throughout the section but Universal VI may require further comment. Syrian Arabic and Gilyak canons present deviations from the normal pattern: Syrian Arabic utilizes geminates and Gilyak includes the hypocoristic suffix -k/-q which lead to clusters that are otherwise rare in BT. However, SA Syrian Arabic makes use of vowel and consonant geminate clusters while Gilyak SA speech exhibits a wide range of commonly occurring clusters. In the BT of the two languages, these clusters appear in a simplified form: Arabic BT only includes one geminate cluster per word and Gilyak BT only has clusters that involve -k/-q as one of the consonants. In each case the canons conform to the universal BT pattern in all other features. Including the one 'deviant' feature at the BT level promotes learnability by the avoidance of confusion with other complicating factors. Furthermore, the BT register might sound 'foreign', without them since they are salient and distinguishing features of the SA language.

4.1.2 Altered Phonological Inventory

Differences in phonological inventory between SA and BT speech involve any or all of the following: a reduction in phonemic inventory, a reduction of features on the subsegmental level, a preference for some sounds without the complete exclusion of others and a greater sensitivity to word-final position in consonant selection.

Through the examination of the above differences
between BT and SA speech, it is possible to test the appli-
cability of Jakobson's hierarchy (1972) to the BT register
and to examine his claims (ibid). Jakobson suggests that
children acquire sound hierarchically (ibid:46) reflecting
a synchrony that is pan-linguistic (ibid:51) and one would
expect any such pattern to be evident in the cross-linguistic
comparison of BT registers. I discuss this in greater detail
at the end of the section after individual phonological
inventories have been examined.

East Cree In SA Cree, voiceless stops become voiced after
a long vowel, or according to Wolfart (1981:9) between vowels.
In either case, a phonemic alternation between voiced and
voiceless stops is considered to be a feature of SA Cree.
In East Cree BT, all stops are voiced.

Wolfart also suggests (ibid) that stops may be pre-
aspirated in SA Cree and as such form a separate phoneme:
/p/, /t/, /k/, and /č/ in contrast to /^{h}p/, /^{h}t/, /^{h}k/ and
/^{h}č/. I prefer the interpretation of other Algonkianists
that identify such forms as consonant clusters -- /hp/, /ht/,
/hk/ and /hč/(Ellis 1971:77) -- which is supported by
morphological analysis (Colarusso n.d.). In East Cree BT,
no preaspiration occurs. According to Wolfart's analysis
this indicates a change on the subsegmental level (as in
voiced/voiceless contrast) while according to the other, it

Table 9: Cree Consonant Sounds Classified by Place and
Manner of Articulation

	labial	alveo-lar	alveo-palatal	palatal	velar	glottal
stops - Vl/Vd	(p)/b	(t)/d	(č)/ǰ		(k)/g	
fricatives - Vl		(s) ←/ š̌/***				h⁺**
nasals - Vd	m	n				
liquids - Vd		l⁺				
Glides - Vd	w⁺			y⁺		

* - () indicate sounds that are not used in BT.

** - ⁺ indicates sounds that are marginal in BT.

***- Ellis notes that in most dialects of Cree /s/ and /š/
have fallen together into /s/. However, some dialects
"seem to have undergone a secondary development of contrasting
/s/ and /š/."(Ellis 1971:77). In the dialect of my informant
the /s/ and /š/ were   used   contrastively but only /š/
is present in the BT register. Thus, in Cree examples, the
adult words are written with both and   the BT ones with an
/š/. Similarly, the adult forms include the voiceless stops'
-- which are voiced intervocalicly -- while the BT register
is written with voiced stops.

can be explained in terms of cluster deletion.

Standard Cree has a relatively small consonantal inventory: ten consonants and two glides on the phonemic level. In BT, the weak phonemic distinction between /s/ and /š/ leads to the single phoneme /š/. Otherwise, all consonants and glides occur in BT with the stops only in the voiced form. The voicing of all stops does not change the total number of consonants in the BT register since it occurs on the subsegmental level (phonetic and not phonemic).

Despite the inclusion of all but one sound in the BT inventory, certain phonemes are given preference: the stops /b/, /d/, /g/ and /ǰ/, the fricative /š/ and the nasals /n/ and /m/. Present but more rare in the BT phonology are the glides /y/ and /w/, and the fricative /h/. /l/ requires special mention since it is not present in all dialects of Cree (for a description of Cree dialects see Wolfart 1981: xv-xx). Although my informant speaks the 'n' dialect of Cree, /l/ occurs in those words that are borrowed from French or English and include an /l/ or /r/: e.g., labɛt for Robert, šalɛt for Charlotte. /l/ also occurs in the East Cree word for stranger ælo but this is probably derived from the English 'hello' or the French allo. Finally, the BT word dulu 'penis' appears to be an anomaly but it too may be borrowed (possibly from another Cree dialect) since there is some suggestion that borrowing is quite common in the BT register (Meegaskumbura 1980; I have also noted people in

my family spontaneously using Iranian BT that they have become
accustomed to hearing me utter).

With regards to sensitivity to word-final position,
most syllables are of the open type, CV, but where consonants
do occur word-finally, certain sounds are preferred. /š/ and
/m/, and in one case /k/, are the only consonants to occur
at the end of a word. This is despite equal use of /ǰ/, /n/
/b/ and /d/ in initial position. The factor of word-final
positioning is not taken into account in Jakobson's hierarchy
(1970) and is discussed below.

East Cree thus exhibits reduced features on the
subsegmental level, phoneme reduction, phoneme preference.
and sensitivity to word-final position.

English The fricatives /v/, /θ/, /ð/, /ž/, /h/ and the nasal
/n/ are the only sounds of standard English that are completely
absent from the BT repertoire. Of the remaining sounds, there
is a definite preference for the stops, nasals and the fri-
catives /s/ and /z/. Other sounds are only used marginally:
i.e., the fricatives /f/ and /š/, the affricated stops /č/ and
/ǰ/, the liquids /l/ and /r/, and the glides /y/ and /w/.

In the word-final position there is an emphasis on
the nasal /n/ and the fricative /z/. The /z/ frequently
occurs word finally as the realization of the hypocoristic
'-s'. Although /s/ and /z/ are generally separate phonemes in
English, (e.g. sip versus zip), there is an allophonic variation

Table 10: English Consonant Sounds Classified by Place and Manner or Articulation

	Labial	Labio-Dental	Dental	Alveolar	Alveo-Palatal	Palatal	Velar	Glottal
Stops								
-Vl	p			t	č⁺		k	
-Vd	b			d	ǰ⁺		g	
Fricatives								
-Vl		f⁺	(θ)	s	š⁺			(h)
-Vd		(v)	(ð)	z	(ž)			
Nasals								
-Vd	m			n			(ŋ)	
Liquids								
-Vd				l⁺, r⁺				
Glides								
-Vd	w⁺					y⁺		

( ) indicates sounds that are not used in BT

+ indicate sounds that are marginal in BT

between them in final position marking the plural, third person singular present and hypocoristic (similar to the variation between /t/ and /d/ in marking the past tense) which is dependent on the voicing of the preceding sound.

Thus, the BT phonology of English exhibits phoneme reduction, phoneme preference and sensitivity to word-final position.

Iranian In Iranian BT the fricatives /v/ and /ž/ and the stops /g/ and /q/ are absent. Further, the fricatives /f/, /š/, /x/ and /h/, the stops /p/ and /G/, the liquid /r/, and the glide /y/ have only marginal representation.

Of the remaining sounds, there are none that dominate as obviously as in English and East Cree. On a statistical basis, however, I consider those with at least seven occurrences as predominant. Six phonemes fall into this category: the voiced stops /b/ and /d/, the glottal stop /ʔ/, the nasals /n/ and /m/, and the liquid /l/. Of these six, three are particularly frequent, /d/, /b/ and /ʔ/. The frequency of the glottal stop seems strange in terms of learnability yet frequency in the SA target language is once again the overriding factor. As in the case of word and syllable canons, the nature of the target adult language must be considered a strong influence on shaping BT in directions that are not universal. In particular, difficult features may be introduced at an early stage to enhance learnability.

Table 11: Iranian Consonant Sounds Classified by Place and Manner of Articulation

	Labial	Labio-Dental	Alveolar	Alveo-Palatal	Velar	Uvular	Glottal
Stops – Vl	p⁺		t	č	k	(q)	ʔ
– Vd	b		d	ǰ	(g)	G⁺	
Fricatives – Vl		f⁺	s	š⁺	x⁺		h⁺
– Vd		(v)	z	(ž)			
Nasals – Vd	m		n				
Liquids – Vd			l,r⁺				
Glides – Vd					y⁺		

+ – ⁺ indicates sounds that are marginal in Iranian BT

() – () indicate sounds that are not used in Iranian BT

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Iranian BT has a reduction in the total number of phonemes and a statistical preference for certain sounds. There is no change on the subsegmental level and since the majority of words end in vowels there is no particular sensitivity to consonant selection in word-final position.

Brazilian Portuguese The Brazilian Portuguese material is recorded in standard orthography with no phonetic transcription (Stoel-Gammon 1976). Brazilian Portuguese spelling is phonetic so with the aid of a dictionary (Richardson et al 1973) a phonetic transcription was possible and Table 12 could be produced.

The phonemes of SA Brazilian Portuguese that do not occur in BT include: the velar stop /g/, the fricatives /s/, /z/ and /ž/, the palatalized liquid /ĺ/, and the liquid /r/. Of the remaining consonants, the fricatives /f/, /v/, the liquid /l/, and the glide /w/ are marginal. Brazilian Portuguese further emphasizes the stops and nasals so that they comprise the majority of consonantal sounds in the BT inventory.

The only sounds to occur word- or syllable-finally are the nasal /n/ and the stop /k/. The final /m/ results in the nasalization of the preceding vowel in SA speech (Richardson et al 1973:9) and without any indication to the contrary, we must assume the same is true in BT.

There appears to be no change on the subsegmental

Table 12: Brazilian Portuguese Consonant Sounds Classified by Place and Manner of Articulation

	Labial	Labio-Dental	Dental	Alveo-Palatal	Velar
Stops - Vl	p		t		k
- Vd	b		d		(g)*
Fricatives - Vl		f^{+}**	(s)	š	
- Vd		v^{+}	(z)	(ž)	
Nasals - Vd	m		n	ñ	
Liquids - Vd			l^{+}, (r)	(ĺ)	
Glides - Vd	w^{+}				

* - ( ) indicate sounds that are not used in BT.

** - + indicates sounds that are marginal in BT.

Note: the 'h' that appears in the standard orthography is silent.

level and so Brazilian Portuguese BT exhibits reduced pho-
nemes, phoneme preference and sensitivity to word-final
position.

Gilyak   In Gilyak, despite the relatively large consonantal
inventory (28 phones), few are completely absent from BT:
the voiced fricatives /v/, /z/ and /ɣ/. However, quite an
additional number are used only rarely in BT: the stops
/tʃ/, /ǰ/, /G/, the continuants /f/, /r/, /ř/, /X/, /h/, and
the glides /y/ and /w/. Of the remaining sixteen consonants,
in the BT repertoire, the non-anterior voiceless stops /č/,
/k/, /q/, and the nasals /m/ and /n/ are favoured. The hypo-
coristic affix -k/-q predominates word finally, usually as
the final consonant of a cluster.

Gilyak BT employs phoneme reduction, phoneme preference
and sensitivity to word-final position but does not exhibit
change on the subsegmental level.'

Syrian Arabic   Since Ferguson (1956) includes no standard
phonological inventory and no corresponding adult words, Table
14 (phonology) is taken approximately from Al-Ani (1970:29)
and adult words from Shaikh (1983). Some confusion arises
since Al-Ani and Ferguson each includes sounds not mentioned
by the other. In order to be comprehensive, I have included
all the sounds and believe that any minor discrepancies
should not have an effect on the conclusions.

A number of standard sounds are excluded from the BT

Table 13: Gilyak Consonant Sounds Classified by Place and
Manner of Articulation

	Labial	Alveolar	Palatal	Velar	Uvular	Glottal
Stops						
– Vl	p	t⁺	č	k	q	
– Vd	b	d	ǰ⁺	g	G⁺	
Fricatives						
– Vl	f⁺	řⁱ⁺	š	x	X⁺	h
– Vd	(v)	r⁺	(ž)	(ɣ)	ħ⁺	
Nasals						
– Vd	m	n	ñ	ŋ		
Liquids						
– Vd		l				
Glides						
– Vd	w⁺		y⁺			

* – ( ) indicate sounds that are not used in BT

** – + indicates sounds that are marginal in BT

Note 1: The voiced and voiceless stops are only phonemically
distinct in the initial-prevocalic position (Austerlitz 1956:
261).

Note 2: Initial stops alternate with the corresponding
fricative since there are hardly any nouns with initial fri-
catives (ibid:263).

phonemic inventory: the velarized dental stops /t̠/ and /d̠/, the voiced velar stop /g/ which is "rare in normal Syrian Arabic" (Ferguson 1956:125), the uvular stop /q/, the liquid /l/, the velarized liquids /l̠/, /r̠/ and, the fricatives /f/, /θ/, /š/, /s̠/, /s/, /z/, /s̠/, /z̠/, /ž/, /G/ and /h/.

The most frequently used consonants of Syrian Arabic BT are the stops /b/, /t/, /d/, /k/ and the nasals /n/, /m/. Though, with the exception of one nasal and one velar stop, all word-final consonants in Syrian Arabic BT are fricatives: /ġ/ /H/, /ʕ/, /x/, /š/. The comparative frequency of non-anterior fricatives can once again be explained in terms of the target language which uses them liberally. That these sounds do not occur in initial position leads to an interesting comment on the Jakobson hierarchy (see below) which does not take position of a sound within a word or syllable into consideration.

The velarized /m̠/ and /b̠/ occur in Syrian Arabic BT although they are rare in normal Arabic. In fact, the more common velarized consonants /t̠/, /d̠/, /l̠/, /r̠/, and /s̠/ do not occur in BT. This apparent anomaly can be explained as follows. Since velarization is an important feature of SA speech, it is introduced at the BT level. However, in order to make it easier to learn, it is used with two sounds that are very common in BT, /m/ and /b/. Furthermore, velarization on a labial is more easily heard and repeated than velarization on a dental, for example, due to greater contrast in place

Table 14: Syrian Arabic Consonant Sounds Classified by Place and Manner of Articulation

	Labial	Labio-Dental	Inter-Dental	Dental	Palatal	Velar	Uvular	Glottal	Pharyngeal
Stops – Vl				t (t)		k	(q)	?	
– Vd	b b	v		d (d)		(g)			
Fricatives – Vl		(f)	(θ)	(s) (s)	š+	x	·	(h)	H
– Vd			(ð) (ð)	(z) (z)	(ž)	ġ	(G)		ʕ
Nasals – Vd	m m			n					
Liquids – Vd				(l) (r)					
Glides – Vd	w+				(y)				

( ) = ( ) indicate sounds that are not used in BT

+ = + indicates sounds that are marginal in BT

of articulation. This presents another feature of the
target SA language, in a simplified form, being superimposed
upon the basic universal pattern. This is a particularly
interesting example since the sounds /b/ and /m/ are not
very common in SA speech but the feature, velarization, is.

Syrian Arabic attests phoneme reduction, phoneme
preference and sensitivity to word-final position.

General With reference to altered phonological inventory,
an examination of the six languages leads to the following
universals:

> BT Phonological Universal VII: there is
> phoneme preference in BT with a special
> emphasis on stops and nasals.

> BT Phonological Universal VIII: there is
> elimination of certain phonemes, commonly
> the /r/ and the voiced and/or anterior
> fricatives.

> BT Phonological Universal IX: there is
> a sensitivity in consonant selection to
> word-final position with an emphasis on
> fricatives and nasals.

> BT Phonological Universal X: sounds that
> are used in a specific BT lexicon, that
> seem unusual in the universal scheme, can
> be explained in terms of the SA language.

In reference to Universals VII-IX, more specific
claims can be made regarding particular phonemes or groups
of phonemes. Table 15 (see following page) facilitates

Table 15.   Preferred Consonant Sounds According to Word Position

	Cree	English	Iranian	Brazilian Portuguese	Gilyak	Syrian Arabic
Word Initial	b g ǰ (d) m (š)	b p d t m n (s)	b d (k) n	p b t k m	g d b n m k (t) (č) (G) (h)	k d (b) m
Syllable Initial (other than word initial)	ǰ g b š (m) (n)	b d t p k n m s (w)	d b m (l)	p t b k (d) n (m) h	m n ñ (ŋ) (d) č k q	(d)
Word Final	š m	z n	(f) (z) (d) (l)	∅	k q (p) (n) (n) (ŋ)	H, ʕ
Syllable Final	(m)	n (m)		n	k (q) l (n) (m)	∅

( ) - ( ) indicate a marginal use of the sound in the position indicated; in word and syllable-initial position three occurrences are considered marginal and one or two are not noted; in word- or syllable-final position two occurrences are considered marginal due to fewer instances of final consonants.

cross-linguistic analysis of preferred phonemes and their position within a word or syllable. Note that rather than word-initial, word-medial and word-final, I have designated word-initial, word-final, syllable-initial (other than word-initial) and syllable-final (other than word-final). Essentially, this does not remove the word-medial category but divides it into two more precise categories that are heuristically significant (see Table 15).

The examination of Table 15 leads to the following conclusions.

1. Two to four stops are favoured along with one or two nasals in word-initial position.

2. The stops in word-initial position are selected from /b/, /p/, /t/, /d/, /k/, /g/ and /ǰ/.

3. Of the nasals, /m/ is particularly frequent although /n/ and even /ñ/ can be predominant.

4. Syllable-initial consonants generally follow the pattern set by word-initial consonants.

5. Fricatives are most common word-finally although nasals also occur (the /k,q/ of Gilyak seems an exception for now).

6. Nasals predominate syllable-finally.

7. Nasals predominate in general, particularly /m/ and /n/.

The preference for nasals and stops is in accordance with the Jakobsonian hierarchy of the acquisition of sounds. More specifically, Jakobson states "the first consonantal opposition is that of nasal and oral stop (e.g., mama-papa)

which is followed by the opposition of labiabls and dentals (e.g., papa-tata and mama-nana)" (Jakobson 1972:47-48). The BT data presented in Table 15 support this claim. However, Jakobson goes on to stronger statements concerning the development of language in children and the phonological synchrony of all languages:

> "If we consider now those acquisitions of the child's consonantal or vocalic system which exceed the minimum already discussed, a fact of great importance comes to light -- `the amazingly exact agreement between the chronological succession of these acquisitions and the general laws of irreversible solidari ty ... which govern the synchrony of all languages of the world" (ibid:51).

His followings can be summarized in the following hierarchy.

1. The acquisition of fricatives presupposes the acquisition of the corresponding stop (ibid: 51);

2. The acquisition of back consonants presupposes the acquisition of front consonants, i.e., labials and dentals (ibid: 53).

3. A single series of back stops may occur but there is an obligatory two series of front stops (ibid:55).

4. If there is only one fricative, it is as a rule /s/ (ibid: 55).

5. The half-stop (affricate) is acquired only after the fricative of the same series (ibid:55).

6. A single liquid exists for a long time before the other, /l/ or /r/ (ibid:57).

His claims are made even stronger by his statement that
"the relative degree of utilization of particular phonemes
in language ... is also affected by these laws" (ibid:58)
-- i.e., stops are more frequent than the corresponding
fricatives which in turn are more common than the affricates
of the same series.

In very general terms, Jakobson's observations do
hold true for BT: that is, stops (both nasal and non-nasal)
that are anterior predominate in the BT lexicons. However,
his claims regarding the exact progression of consonantism
and its universality are not supported by the data. I
examine the summarized findings (1.-6. above) with reference
to Table 15.

1. Fricatives follow the corresponding stop -- the pharyngeal
fricatives of Syrian Arabic and to a lesser degree the glottal
fricative of Gilyak present counter examples. As noted above,
their presence in the BT register may enhance learnability
and give nursery language the distinctive sound of adult speech.

2. Front consonants precede back consonants -- the pharyngeal
fricatives of Syrian Arabic are a contradiction again since
the SA anterior fricatives do not appear in the basic BT
lexicon. Similarly, the palatal fricative /š/ of Cree is not
preceded by an anterior fricative, and, the velar stops /k,q/
of Gilyak in particular but also Syrian Arabic are more domi-
nant than anterior stops.

3. Two series of front stops -- all the BT registers exhibit
a nasal and oral series of front stops. However, earlier
in his discussion (ibid:47) Jakobson states that there is
a minimum of two oppositions, nasal and oral as well as
labial and dental. In this case, there are some difficulties
presented by the data: the front-back opposition of stops
(/k/ vs /d/) in Syrian Arabic is more significant than the
labio-dental opposition (/d/ vs /b/); similar discrepancies
occur in Cree and Gilyak consonantism.

4. /s/ as preferred fricative -- East Cree BT uses /š/ but
not /s/; Syrian Arabic BT employs both /H/ and /ʕ/ without
the /s/; Gilyak makes marginal use of the /h/ in BT and the
/s/ does not occur; Iranian BT marginally incorporates the
fricatives /f/ and /z/ while excluding the /s/.

5. The fricative precedes the half-stop (affricate) --
there is a predominance of the affricate /č/ in Gilyak BT
with only marginal use of the corresponding fricative /š/.

6. A single liquid -- the statement concerning the single
liquid seems to hold true in all the BT lexicons, however,
/l/ definitely predominates over /r/ unlike Jakobson's
"whether /l/ or /r/" (ibid:57)

These exceptions to Jakobson's hierarchy suggest that
his claims should be considered tendencies at best and not
absolute universals. It is not necessary to abandon his
hierarchy but to moderate his claims and make the hierarchy

generally more flexible. Thus , it seems likely that there is a category of universal possibilities and the flexibility has fairly definite limitations since no BT phonology differs radically from the stated hierarchy. In fact, while moderating Jakobson's claims, it is possible to state new restraints: deviations beyond the universal core depend upon variations among the target adult languages (which raises further doubts about Jakobson's "synchrony of all languages of the world" (ibid:51), and, deviations must be limited in any one language. While a universal core exists, there must also be a group of tendencies and another of possiblities. This can be diagrammed as follows:

1. universal core

2. universal tendencies

3. language possibilities

language A.   = = =

language B.   / / /
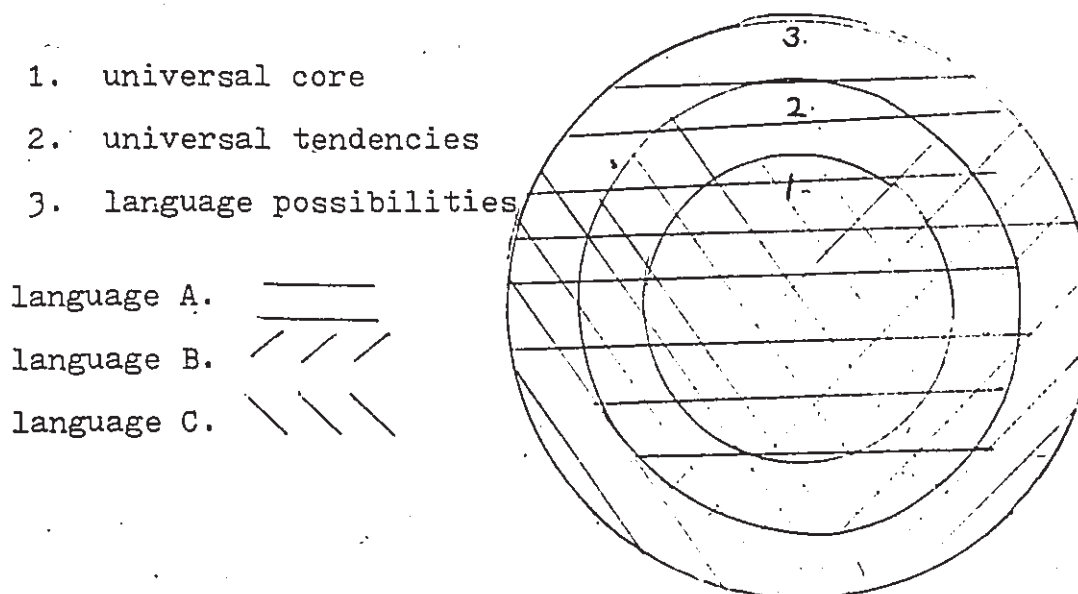
language C.   \ \ \

The phonology of some BT registers will correspond more closely to the universal core than others (e.g., English versus Syrian Arabic). Further, as suggested by the diagram, groups of tendencies and/or possibilities will go together. Thus, language D is unlikely to occur:

Language D.
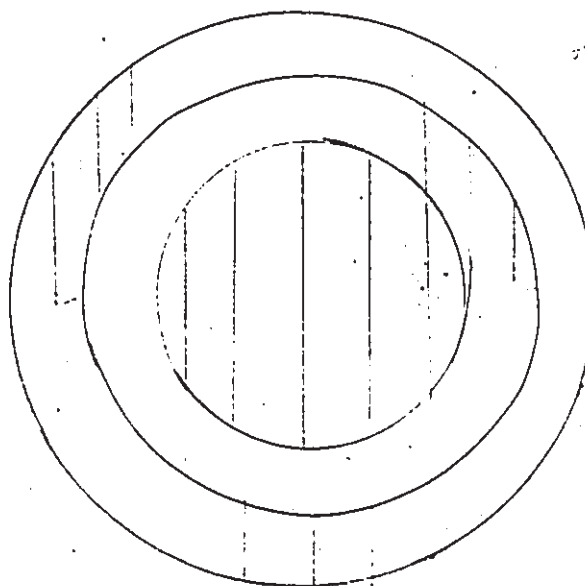
Furthermore, due to limitations on variations, no BT phonology is likely to exist that includes all tendencies and possibilities.

Additional data collection and statistical analysis are needed before more exact statements can be made about the variations among languages and the amount of possible deviance from the universal core. Although the evidence presented here comes only from the BT register and not child language or standard adult speech, it seems probable that similar

statements regarding variations in their phonology will be possible. And, although these statements only apply to BT phonology (thanks to the hierarchy of Jakobson and more extensive phonological data in BT studies) it also seems probable that variations in syntax, morphology and semantics could be described in a like manner.

Finally, in regard to Jakobson's claims, there is no mention of the position of a sound within a word and its corresponding acquisition. The BT data strongly suggest that for particular sounds, this is crucial. Thus, nasals and stops appear to precede fricatives in word-initial position but fricatives and nasals occur before stops word-finally. This consideration of position within a word helps explain some of the discrepancies between languages -- Arabic has more posterior fricatives because it has more words of the CVC pattern. Brazilian Portuguese normally uses CVCV and therefore is not as likely to use fricatives. In this case, Brazilian Portuguese follows Jakobson's hierarchy more exactly than Syrian Arabic BT. Although many languages favour the CVCV pattern in BT, there is enough use of the CVC canon to make final consonant selection significant and re-order the accepted hierarchy.

4.1.3 Consonant Clusters

The claim that consonant clusters are simplified in BT (Ferguson 1964:105) is not completely supported by the

available data. Exceptions must be analyzed and explained
so the place of clusters in BT is understood on more than
a superficial level.

First it is necessary to clarify the types of con-
sonant clusters: consonant clusters may be geminates as
in Syrian Arabic BT where a consonant is reduplicated --
C_1C_1; clusters may fall on syllable boundaries and the cluster
becomes divided -- foo_ts_ ___ foo_tsie_ ___ foo_t+sie_ -- and is
therefore acceptable in BT; the cluster is formed of two or
more different phonemes which are not divided by a syllable
boundary -- _street_. It is the latter form of cluster which
is not often found in BT (although it occurs in adult words)
and with which the section is concerned.

East Cree The East Cree data present only two instances of
consonant clusters in the BT lexicon -- _gikš_ 'noxious creature',
æ jumš 'dog' -- both of which occur word-finally and involve
the diminutive suffix _-š_. As made more evident in the discus-
sion of the Gilyak material below, the hypocoristic/diminutive
may provide an exception to the general lack of consonant
clusters in BT. If the hypocoristic/diminutive is a consonant
(unlike the English /i/ and the Syrian Arabic /o/) then
consonant clusters often result when the affix is added.
East Cree has no other tauto-syllabic (same syllable) clusters.
Words like _jumsum_ 'grandfather' do not contain a cluster due
to syllabification _jum+šum_.

English English BT forms only retain a cluster in a derived word if a word-initial cluster includes a liquid: e.g., 'grampa' and 'blankie'. The only suppletive forms to include consonant clusters are the onomatopoeic animal sounds 'oink-oink' and 'tweet-tweet'. In the latter examples, underlying psychological reasons related to accurate representation may override the need to conform to the phonological norm. Otherwise, words that might have a word-final cluster are changed through the addition of the hypocoristic /i/:
milk ⟶ mil+kies, horse ⟶ hor+sie, girl ⟶ gir+lie.

Iranian There are many consonant clusters in the standard Iranian words and only three in the BT lexicon -- the derived words sard-e-sard 'cold' and nist 'all gone', and the expression ps that is repeated to lull a child to sleep. No exceptions need to be made in the case of the hypocoristic since it is a vowel /i/.

Brazilian Portuguese The Brazilian Portuguese data present no instances of consonant clusters. The reduplicated adult form tchau-tchau is realized phonetically as /čow-čow/ and therefore contains no cluster.

Gilyak Gilyak creates clusters that do not occur in the corresponding adult forms through the introduction of the hypocoristic/diminutive affix -k/-q and includes clusters in apparently non-derived forms involving the same affix.

SA Gilyak includes many clusters and an introduction to a simplified cluster -- always involving -k/-q and usually word-finally -- enhances learnability of an important feature of language. Further, clusters differentiate the East Sakhalin dialect of Gilyak from neighbouring dialects and may be considered an essential part of the dialect, even in BT.

General The following universals are evident from the above analysis:

> Phonological Universal XI: Consonant clusters are generally absent in BT.

> Phonological Universal XII: The inclusion of clusters in a BT lexicon, other than the odd exception, can be explained in terms of the SA target language.

The data is not complete enough to draw a conclusion about the location of clusters in BT, but the data here suggest that word-final position is more likely to include a consonant cluster.

4.1.4 Syllable Reduplication

Syllable reduplication is the repetition of a syllable within a word. Frequently in BT a single syllable is reduplicated to form the nursery word as in the English 'choo-choo' and the Cree gogo 'drink'. Sometimes there is reduplication with the addition of another phone or

syllable, for example, the Syrian Arabic <u>daada</u> 'brother' or the Brazilian Portuguese <u>titio</u> 'uncle'. Ferguson (1964:109) and others (<u>e</u>.<u>g</u>., Schwartz et al 1980: Dil 1971:21) have noted the prevalence of syllable reduplication in BT and I will examine the data of the six languages used in this thesis to determine its universality and the place of East Cree.

Reduplication of a syllable to form a BT word is quite common in East Cree accounting for over one third of the words. The corresponding SA forms only attest two examples of reduplication. Similar figures result from the analysis of the other languages as outlined in Table 16 below.

Table 16: Syllable Reduplication

Language	BT Reduplication	SA Reduplication
Cree	35%	5%
English	38%	0%
Iranian	28%	4%
Brazilian Portuguese	48%	9%
Gilyak	19%	0%
Syrian Arabic	38%	0%

Syllable reduplication is obviously a much more productive process in BT than in SA speech and so the following universal can be stated.

> Phonological Universal XIII: syllable
> reduplication increased in BT and is a
> predictable feature of BT despite its
> status in SA speech.

4.1.5 Repetition

Repetition is different from reduplication in that
it refers to whole words and phrases rather than parts of
words.

East Cree Repetition is attested in East Cree. Words and
phrases are repeated to a child in order to clarify meaning,
emphasize a particular word or encourage a child to perform
a certain action. For example, the following utterances may
occur:

        bɛdæ gægun, bɛdæ   Bring the shoes, bring.
        (bring shoes bring)

        bɛdæ gægun, gægun)   Bring the shoes, the shoes.
        (bring shoes shoes

        bɛdæ gægun, bɛdæ gægun Bring the shoes, bring the
        (bring shoes bring shoes) shoes.

English In English, repetition is a common feature of
'normal' BT as well as playful BT. Although much of BT
might be considered playful in English, here I am referring
to nursery games and similar activities: 'pat-a-cake',
'peek-a-boo', 'jump, jump, jump'. In normal situations,
repetition is used as in East Cree to clarify, emphasize
and encourage:

        look at the doggy, doggy (clarifies dog)
        come and see, come (emphasizes action to be done first)

pee-pee, go pee-pee (encouraging action).

Iranian Repetition is used similarly in Iranian:

bɛde baba, bɛ baba bɛde (give dad, to dad give)	Give to daddy. Give to <u>daddy</u>. (clarifies)
biya hæm, hæm (come food, food)	Come for food, food. (emphasizes)
ǰiš kon, ǰiš (pee do, pee)	Pee-pee, go pee-pee. (encourages)

Sometimes the line between the different uses of repetition becomes unclear and, in fact, more than one function may be filled. Imagining the situation helps determine the most appropriate function.

<u>Other</u> For the remaining three languages, since only secondary material is available, the information is less complete. Ferguson states that repetition in Syrian Arabic BT is particularly frequent for monosyllabic words, <u>e.g.</u>, <u>daHH</u> <u>daHH</u> 'pretty, pretty' (Ferguson 1956:127). In the cases of Brazilian Portuguese and Gilyak, there is no attesting to repetition. However, each language exhibits morpheme reduplication. That is, a morpheme, derived from a standard adult word is repeated in BT to form a nursery word: <u>e.g.</u>, Brazilian Portuguese <u>tau-tau</u> from the SA <u>tchau</u> 'good-bye'; Gilyak BT <u>ŋaŋan</u> from the SA <u>ñŋaX</u> 'eyes'. These examples suggest that the BT reduplicated form originated in the repetition of a infantilized adult word. It seems likely

that repetition of nonreduplicative words still occurs as it does in many languages not included in the present study (e.g., Bengali - Dil 1971:24; Sinhalese - Meegaskumbura 1980: 303; Marathi - Kelkar 1964:47). Nevertheless, the following universal must be considered somewhat conjectural until further data are available.

> Phonological Universal XIV: Repetition is
> a general feature of BT used to fill a
> variety of functions such as clarification,
> emphasis and encouragement.

4.1.6 Nursery Element / Diminutive

The nursery element (hypocoristic affix) and diminutive are closely related phenomena. So much so, in fact, that I am unaware of any scholar having previously made a distinction between the two. Strictly speaking, I define the nursery element or hypocoristic affix as a segment that identifies a word as part of nursery language, that is, the BT register. The diminutive, on the other hand, is affixed to words to give the idea of smallness with one connotation or another. The diminutive is a part of standard speech but because it is frequently used in referring to small children and the items associated with them, it can take on characteristics of a hypocoristic. The hypocoristic is only extended to standard speech when it is used affectionately or derisively as in the nicknames 'Teddy Kennedy' and 'Bloodie Maggie'.

I include the examination of the hypocoristic/diminu-

in the phonology chapter since its use has a significant
impact on the phonological make-up of BT words.

East Cree SA Cree has a diminutive suffix -š 'little, a little'
that is used to refer to things that are either small in
size or quantity. The following examples illustrate this:

> jujæn - Suzanne
>
> jujænš - little Suzanne, Suzie
>
> puši - cat
>
> pušiš - kitten
>
> mĩhkwe - drink
>
> mĩhkweš - drink a little

In the above, the suffix is used as part of standard speech
to refer to things of small size or quantity. It can also
be used in BT and take on some features of a nursery element:

SA word	BT word
puši - cat	pušiš - cat
pušiš - kitten	pušiš - kitten
ætum - 'dog	æjumš - dog
ætumš - puppy	æjumš - puppy

In the case of the baby forms for 'cat' and 'dog', the suffix
is not used to connote small size but rather to identify the
words as belonging to the BT register.

Pet-names use the diminutive suffix and, although

commonly directed at the child, they are also used in addressing adults with whom one is close. The suffix no longer denotes size when addressing an adult but rather connotes the affection reminiscent of the adult-child relationship, thereby giving -š hypocoristic qualities. For example,

> meli - Mary
>
> meliš - little Mary or dear Mary
>
> ǰen - Jane
>
> ǰenš - little Jane or dear Jane.

The Cree diminuitive is suffixed to the standard or BT form of a word and no other phonological alterations occur to accomodate it.

English In English there are a number of suffixes involved in this area: the hypocoristic '-s' (sounding [s] or [z]) and '-i' (written 'ie', 'y', 'ey') and the diminutives 'et/ette' or 'let' (borrowed from French) and the near-obsolete '-(k)in'. Some examples of each are:

> hypocoristic '-s' - poops
>
> - go potties
>
> - Babs (for Barbara)
>
> hypocoristic '-i' - horsie
>
> - bickie
>
> - itty-bitty

		Jimmy
diminutive 'et'	-	piglet
	-	dinette
	-	Babette
diminutive '(k)in'	-	napkin
	-	munchkin
	-	Larkin (for Lawrence)
combination of the suffixes	-	bunnykins
	-	cutsie/cuties
	-	sweetiepies

(one may also argue for the hypocoristic 'poo', 'pie', 'bun' and 'er' as in, for example, 'huggy-poo', 'sweetiepie', 'honey-bun' and 'poopers'. Since their use is less widespread, I reserve their discussion for another place.)

The hypocoristic 's' and 'i' are used exclusively in BT unless a pet-name is carried into adulthood or affectionate or derisive language is being used:

pet-names - Teddy Roosevelt, Billy Graham

affectionate language - lover's talk, speech to pets, plants, elders etc.

derisive language - to belittle i.e. to treat someone as a child or without respect.

The hypocoristics take no diminutive quality (small size or number) in standard speech and identify words as part of the BT register. The 'i' is suffixed to words in the following

ways:

1. to a standard word, e.g. milkie, pottie
2. optionally to a BT form e.g. dad(dy), mom(my)
3. obligatoriy to a BT form e.g. bickie, blankie
4. after the hypocoristic 's' e.g. cutsie, itsie-bitsie

The 's' is suffixed:

1. occasionally to a standard word e.g. milks
2. optionally to a BT form e.g. dindins, beddi-byes
3. obligatorily to a BT form e.g. jæm-jæms (rare)
4. after the hypocoristic 'i' e.g. milkies, cuties
5. after the diminutive 'kin' e.g. lambkins

The diminutive 'et/ette' has no hypocoristic function referring only to reduced size and needs no discussion here. '(k)in', on the other hand, is more arbitrary. This suffix originally came from Flemish into English and is similar to the German 'chen' (Shorter Oxford English Dictionary 1933: 1085; Whitycombe 1945:xxxii). It is commonly found in surnames and likely arose as 'little' in the sense of 'junior' -- e.g. Hawkin 'Hal junior'. Now its use in English seems to have a largely hypocoristic use and thus identifies words as part of the BT register: lambkin, bootikin, bunnykin. I include it as a diminutive because of the historical information that is available and the words that maintain the original meaning: napkin 'a small towel', manikin 'a little man', jerkin 'a short coat' (definitions from the Shorter Oxford

English Dictionary). In BT, '-(k)in' may be suffixed:

1. to the standard word, e.g., lambkin

2. to the BT form, e.g., bunnykin

3. after the hypocoristic '-i', e.g., bootikin.

<u>Iranian</u> In Iranian, the diminutive '-i' is used only with pet-names and certain kin terms. Although it means 'little', the names can be extended into adulthood to connote closeness and affection:

behruz - Behrooz (male name)

behruzi - little Behrooz or dear Behrooz

maman - mom, mommy

mamani - mommy of little one or mommy dear.

The '-i' may be suffixed:

1. to the standard form of the name, e.g., Behroozi

2. optionally to a shortened name, e.g., Taraneh ⟶ Taran ⟶ Tarani

3. obligatorily to a shortened name, e.g., Katoyun ⟶ Kati.

The Iranian diminutive '-če' is not extended to BT and has no special nursery connotation:

dariče - window (from <u>dar</u> 'door')

kuče - lane

bʌčče - child

Brazilian Portuguese

Stoel-Gammon (1976) discusses the diminutive suffix -inho/- zinho stating that

> "This suffix which occurs with adjectives
> (e.g. bonitinho, quentinho, pequenininho)
> as well as with nouns (e.g. gatinho,
> livrinho, roupinho etc.) is used, in most
> cases, as an indication of affection rather
> than size. The diminutive suffix also
> occurs in adult speech, but with much less
> frequency " (Ibid:25).

Although -inho/-zinho occurs more frequently in BT and is there an expression of affection, the fact that it can be used in standard speech to refer to something that is small in size suggests that its primary function is as a diminutive. The hypocoristic aspects are an extension of its original meaning. This analysis is supported by other sources (Willis 1965:253-254; Dunn 1930:181-185) which, in discussing Portuguese grammar, focus on the diminutive function of the suffix with no reference to the hypocoristic use. Thus -zinho/-inho is recognized as a part of standard speech, denoting size; and its use as a nursery element must be considered a specialized extension. The Brazilian-Portuguese diminutive suffix can be:

1. added to the standard word after dropping the final vowel, e.g. gato→gatinho

2. affixed to a shortened form of the standard word, e.g. banho→bainho

3. an integral part of the suppletive BT form, e.g. gato→chaninho.

Syrian Arabic

Ferguson (1956) does not distinguish between a hypocoristic and a diminutive suffix in his discussion of the Syrian-Arabic -o (Ibid:127). He compares -o to the "English diminutive suffix" '-i' but states that its use is limited to personal names and some kin terms within the BT register and may be used outside BT between intimates. His only examples are:

SA	BT
Hamiid	Hamdo (man's name)
ʕamm (?)	ʕammo (uncle)
ax (?)	xayyo (brother)

Its use is definitely suggestive of a hypocoristic since it seems to have no function in adult language other than by extension and its connotation is not one of size but of intimacy. None of the dictionaries or grammars that I checked included it which further suggests that the -o is not recognized as part of standard speech. With so few examples and without being sure of the standard counterpart of uncle and brother in this particular dialect, it is difficult to analyze how it is affixed to words. If xayyo is taken from the standard Arabic ax and ʕammo from ʕamm then a few observations can be made:

1. -o can be suffixed to a standard form (ʕammo)

2. -o may involve other phonological alterations (Hamdo, xayyo) such as vowel-elision and root-alteration.

<u>Gilyak</u> The Gilyaki hypocoristic -k/-q has already been dis-
cussed in some detail. This is definitely a nursery element
with no allusion to size or quantity and appears in 75% of the
words listed in BT lexicon. Austerlitz outlines ten
ways in which it can occur (1956:270-272):

1. suffixed to a standard form, e.g.

    gi ⟶ gik - footwear

2. instead of a final consonant, e.g.

    als ⟶ alq - berry

3. suffixed to a reduplicated form, e.g.

    čo ⟶ čočoq - fish

4. after each syllable of a reduplicated form, e.g.

    amam ⟶ amqamq - walk

5. suffixed to a simplified form, e.g.

    ur=la=nt ⟶ ulak - good, all right

6. word-finally in suppletive forms, e.g.

    wes ⟶ Gawaq - crow

7. as an infix in derived forms, e.g.

    ŋuli=nt ⟶ ŋulki=nt - smile

8. word-medially in suppletive forms, e.g.

    ujɣi=nt ⟶ apa, apka - none

9. as in standard word if other changes occur, e.g.

    raq ⟶ daq - rice

10. not as in standard form if no other changes occur,

    nenq ⟶ nena - doll

Austerlitz makes no reference to a diminutive in the standard
speech of Gilyak. If there is one, it is different from
the hypocoristic since "none of these suffixes need be iden-
tified with this element which can be considered purely and
simply a nursery suffix" (ibid:273).

General From the above comparative data it is possible to
draw a few conclusions: all languages have some affix that
serves a special identifying function (however limited) in
BT; this suffix may occur as a diminutive in standard speech
or it may be a separate nursery element; the hypocoristic/
diminutive may be affixed in a variety of ways to standard
or BT form; all the affixes examined so far can be used as
suffixes. It is therefore possible to state Universals
XV-XVIII:

Phonological Universal XV: BT makes use of
the standard diminutive or a hypocoristic to
mark the nursery register.

Phonological Universal XVI: although the
standard diminutive can be used as a
hypocoristic, the hypocoristic cannot be
used as a diminutive.

Phonological Universal XVII: the hypocoristic
is usually (perhaps always) word-final.

Phonological Universal XVIII: the hypocoristic
can be affixed to standard words or BT forms,
or, it can be an integral part of a BT word.

Phonological Universal XVII points out that the hypocoristic/diminutive is usually suffixed. In the case of Gilyak, the -k/-q may be infixed but is more frequently used word-finally. What makes this universal significant is the fact that languages, where one would expect to find a prefix -- Cree, Arabic and Iranian all have grammatical prefixes --, exhibit a hypocoristic/diminutive suffix.

4.1.7 Vowels

I have not discussed the vowels of BT nor their change from SA speech to nursery language for a number of reasons. First, vowels have not been analyzed in the majority of BT studies. Second, the arbitrary classification of vowels. and the amount of variation among idiolects and dialects make analysis quite impossible in a general study of BT. Third, I do not have a clear enough understanding of the differences between BT and SA Cree vowels to make a worthwhile contribution in this area.

Despite the above problems, a few observations about East Cree vowels in particular and BT vowels in general are possible.

East Cree Although a devoicing of vowels occurs in SA speech, all vowels are voiced in East Cree BT. That is, a slower, clearer enunciation of BT words does not include more vowels than in normal speech.

In regard to the lengthening of vowels in East Cree, there seemed to be a sound change involved. Thus, in the SA as well as BT of my informant I heard o' ⟶ u, a' ⟶ æ and only a slight lengthening of the /i/. I have recorded the vowels of my informant as long according to conventional transcription but have only noted the sound of the BT vowel. I am not sure if the sound change alone occurs or if there is still a lengthening. A more sophisticated analysis than one conducted with the human ear would shed more light on this matter.

The vowel system of SA East Cree is fairly limited and there are no other deviations from it such as the exclusion of certain sounds altogether.

Comparative Data The vowel systems of the comparative languages do not exhibit any obvious changes from SA language to BT. However, in each case, the vowel system of the standard language is not very complex. English is perhaps the most extensive with the inclusion of /ʊ/, /ɪ/, and /ɔ/, and these are quite limited in the BT register. This suggests that in a language that makes use of a greater variety of vowels, more differences between SA and BT might be noticed. This would be in keeping with the general trend toward simplification in BT, but for now no conclusions can be stated.

4.2 Derivation

Section 4.1 outlines the phonological patterns of BT words: it is descriptive, detailing the patterns of nursery forms whether they are suppletive or derived. In this section, I am concerned with the processes of derivation that take a standard word and make it conform to an acceptable BT pattern. There are a limited number of processes involved and they occur, with some variation, across languages.

In this section, the importance of thorough research is underlined: if corresponding adult forms are not recorded and if informant intuitions are not sought regarding the origin of words, then much information concerning the dynamics of BT is lost. For example, in English it is possible to use the word 'patties' for hands. To a foreign researcher, who did not make inquiries of his informant, this word would would be analyzed as a suppletive form. Most English informants however could easily identify the word 'patties' as being derived from the nursery song 'pat-a-cake'. Even more crucial, if a researcher does not record _any_ corresponding standard forms, _no_ conclusions can be drawn about derivation. In some instances it is possible to compensate by using dictionaries and grammars but these do not often take into account regional variations.

4.2.1 Sound Changes

In order to arrive at the altered phonological

inventory described in section 4.1.2, derived forms undergo

phoneme subsitution, phoneme deletion or subsegmental feature

change. Phoneme substitution is not random: unacceptable

or less acceptable phonemes can be assimilated to another

phoneme in the word or replaced by a phoneme that is similar

in certain features (such as place or manner of articulation).

Examples of these processes will become more clear as I

examine the individual languages below.

East Cree   East Cree BT forms that are derived from SA words

may undergo subsegmental change or limited phoneme suppletion.

Feature change on the subsegmental level involves

voicing of the voiceless stops. For example,

u·hkum ⟶ gugu
(grandmother)(granny)

ætum ⟶ ædum ⟶ ae ǰumš
(dog)   (doggie)

The latter example also involves phoneme suppletion when

the coronal /d/ is replaced by the high /ǰ/. The substitu-

tion of the coronal by the high consonant occurs otherwise

in East Cree BT:

nu·šæ·nhi ⟶ šu·šæ·nhi ⟶ šušu ⟶ ǰuǰu.
(breastfeed)

A similar process occurs in borrowed forms:

suzæn ⟶ ǰuǰæn
(Suzanne)

These alterations demonstrate assimilation of the phoneme
to the following high /u/ and assimilation of the other
consonant to the resultant /ĭ/. Other examples of consonant
assimilation occur:

umənæbu ⟶ næbu ⟶ bæbu
(porridge)   (eat with a spoon)

nɛba' ⟶ bɛba ⟶ bɛbe
(sleep)

nu'hkum ⟶ nuku ⟶ kuku ⟶ gugu
(grandmother)   (granny)

sgæsu ⟶ gusu ⟶ guhu or huhu.
(hot)

In each case, a consonant assimilates to a another sound
within the same word. There is no evidence in East Cree
BT of phoneme suppletion without assimilation.

English English BT does not appear to employ phoneme supple-
tion as a productive strategy and there is no change on
the subsegmental level. There is one instance of phoneme
deletion involving the /l/ which is not used in BT:

little ⟶ itty(-bitty)

The /b/ of itty-bitty is not a case of phoneme suppletion
(*little-little ⟶ itty-bitty) but is more probably
derived from the phrase 'little bit'.

Despite its apparent absence in BT, phoneme suppletion
is a productive strategy in the formation of English pet-

names which in general parallel the derivation of BT words:

Robert ⟶ Bobby

Richard ⟶ Dickie

Margaret ⟶ Peggy

Sarah ⟶ Sadie, Sally

Mary ⟶ Molly

William ⟶ Billy

Elizabeth ⟶ Betty

Katherine ⟶ Katie

There is a clear emphasis on stops with the exception of the liquid /r/ changing to the lateral liquid /l/. Although there are no standardized forms in the BT lexicon that undergo a similar process, it is not unusual to hear children making such replacements and adults copying the resultant forms. For example,

bicycle ⟶ bikycle ⟶ bike

tricycle ⟶ trikycle ⟶ trike

hands ⟶ dands ⟶ dandies.

In fact, it seems likely that such "colloquial abbreviations" (Shorter Oxford English Dictionary Vol. I: 191) have origins in nursery language.

English BT tends to use strategies other than rule-governed sound changes to produce an acceptable BT lexicon.

<u>Iranian</u>   In Iranian BT, derived froms are few in comparison to suppletive forms. It seems that SA forms are used correctly and if they do not fit BT rules, suppletive forms are introduced. Possible exceptions are

> bæradær ⟶ radar ⟶ dadar ⟶ dadaš
> (brother)
>
> sine ⟶ nene ⟶ meme
> (breast)
>
> xordæn ⟶ xæn ⟶ hæm
> (eat)

In these examples, both assimilation and substitution are operating, and, in the xase of <u>xordæn</u> it is necessary to posit syncopation. Syncopation is marginal to other processes in BT and so I have not included it in this study. It involves the deletion of intermediate sounds and/or syllables and is evidenced in the derivation of a few pet-names in English and Spanish (e.g. Florence ⟶ Flossie, Francisco ⟶ Paco).

<u>Brazilian Portuguese</u>   The Brazilian Portuguese data attest to assimilation, particularly to a following front stop, but no substitution of one phoneme or feature for another, e.g.,

> quente ⟶ tente
> (hot)
>
> acabou ⟶ cabô ⟶ babô
> (nothing)

$$\text{sapato} \longrightarrow \text{papato}$$
(shoe)

If assimilation is not sufficient to produce an acceptable
BT form in Brazilian Portuguese, then whole-word suppletion
is used.

Gilyak The Gulyak material provides examples of assimilation
and phoneme substitution. There is assimilation to a
following or preceding nasal,

$$\text{ñetf} \longrightarrow \text{ŋyňk}$$
(face),

$$\text{ñŋaX} \longrightarrow \text{ŋaŋ}$$
(eyes)

$$\text{damk} \longrightarrow \text{ñamk}$$
(hands)

$$\text{ŋačx} \longrightarrow \text{ŋon}$$
(legs)

$$\text{mɨzx} \longrightarrow \text{miňk}$$
(mother's milk)

as well as assimilation to a preceding non-anterior stop,

$$\text{gučla} \longrightarrow \text{gɨk}.$$
(outside)

In both cases, a less acceptable or unacceptable consonant
assimilates in part or completely to a consonant in the word.

Phoneme substitution also occurs in the derivation
of Gilyak BT forms as exemplified by the following:

Group 1 .- olX ⟶ olq
(faeces)

als ⟶ alq
(berry)

ǰalřa ⟶ dalqa
(tell lies)

Group 2 - raq ⟶ daq
(rice)

tařq ⟶ talq
(shirt)

Group 3 - asq ⟶ ačk
(younger sibling)

ǰalřa ⟶ dalqa
(tell lies)

Group 4 - či ⟶ čisa ⟶ hisa
(urinate)

Group 1 involves the changing of a consonant to the hypo-
coristic -k/-q or alternation between these (dependant on a
preceding change in a consonant). Group 2 represents the
substitution of the unacceptable /r/ or /ř/ for a more
acceptable phoneme. Group 3 includes examples that alter to
a more acceptable stop. Group 4 involves the change from an
affricate to a non-anterior fricative but it seems likely
that this change is not based on stirctly phonological fac-
tors but is related to onomatopoeia(see section 4.3).

Phoneme substitution is to a certain extent morpho-
logically conditioned and does not follow a one to one pattern
for substitution. Thus,

ŋɔy ⟶ čoč *ŋoŋ
(penis)

ŋačx ⟶ ŋon *čač.
(legs)

Syrian Arabic Keeping in mind the limitations of the Syrian
Arabic data, there appear to be almost no derived forms in
the BT lexicon (Ferguson's basic list). It may be that
words of the specific dialects of the informants correspond
more closely to the BT forms, but since Ferguson does not
include this information (1956), a general dictionary had
to be consulted (Shaikh 1983). One example suggests assimi-
lation to a following nasal stop:

taʕaam ⟶ mamm
(food)

There are no examples of phoneme substitution.

General In the derivation of BT forms from SA words, general
principles of phonological change are followed but exact
patterns are not predictable. Partial or complete assimilation
occurs as does phoneme substitution by a similar sound. In
every case there is change from a less acceptable phoneme to
a more acceptable phoneme.   Not all languages use the
processes equally, and assimilation is more common than
phoneme substitution. Other processes used in SA phonology,
such as dissimilation, do not appear to operate in BT.
In conclusion, it is possible to state the universals:

Phonological Universal XIX: Phoneme
change occurs in the derivation of BT
words from SA words in order to fit an
acceptable BT inventory.

Phonological Universal XX: Change may
occur according to the processes assimi-
lation and substitution with the former
being more common.

Two further points are necessary in reference to these
universals. First, assimilation may in fact precede substi-
tution since languages that exhibit only one process make
use of the latter. Second, the use of a consonantal hypo-
coristic/diminutive as the -k/-q of Gilyak presents a special
type of substitution that may override assimilation as the
primary process of phoneme change in certain languages.

4.2.2 Consonant Cluster Simplification

Since consonant clusters are generally avoided in BT,
it is not surprising that standard words, adjusted to be
used in the BT lexicon, frequently undergo cluster simpli-
fication.

<u>East Cree</u> East Cree BT includes the following examples of
consonant cluster simplification:

   æštum ⟶ ǽjum (come)

   u·hkum ⟶ gugu (grandmother)

   mĩhkwe ⟶ gogo (drink).

The most acceptable sound, vis à vis the BT phonological
inventory, is maintained and the other is deleted. Further
changes then may occur as in the case of æšt um ⟶ æǰum.

<u>English</u> In English, consonant cluster simplification is
very productive particularly in the area of pet-names:

     biscuit ⟶ bickie /bɪki/

     stomach ⟶ tummy /tʌmi/

     Hester ⟶ Hettie /hɛti/

     James ⟶ Jamie /jemi/

    When a liquid is involved in initial position in the
standard form, consonant cluster simplification is less
likely to occur:

     grandmother ⟶ granny (*ganny)

     Margaret ⟶ Greta (*Geta)(but Marg may change to
                          Mag since it is not initial).

    If the cluster is retained in final position, the
hypocoristic '-y' may be added, creating a syllable boundary
and eliminating the tauto-syllabic cluster:

     girl ⟶ girlie (gir+lie)

     Bert ⟶ Bertie (Ber+tie).

<u>Iranian</u> Iranian BT consists mainly of suppletive forms and
only two derived words are taken from SA forms that contain
clusters. The clusters can be retained but are often

simplified:

      sard —— sard-e-sard (sar+de+sard)
      (cold)

      nist —— nistes (nis+tes)
      (isn't)   (isn't it)

There is more evidence of cluster simplification in the formation of pet-names in Iranian:

      εbrahim ⟶ εbi

      mitra ⟶ miti

Even though its use is limited, there is a process to simplify clusters in Iranian.

Brazilian Portuguese Clusters are not common in the corresponding Brazilian Portuguese SA words but of the two that have clusters, simplification takes place in the derivation of the BT form:

      frio ⟶ fio
      (cold)

      esconde-esconde ⟶ cadê or que dê
      (hide and seek)

These limited but all-inclusive examples represent a productive use of the process in Brazilian Portuguese.

Gilyak Despite the complication of the hypocoristic -k/-q in Gilyak BT, clusters involving other phonemes are not

tolerated:

> jɔŋqř ⟶ jɔŋ
> (head)
>
> amx ⟶ ama
> (mouth)
>
> oŋgti ⟶ oŋgi
> (buttocks)
>
> maŋgick ⟶ maŋmaŋ.
> (puppy)

The preferred sound (nasal or stop) is retained and the other is deleted.

In other cases, the final consonant of a cluster appearing at the end of a word is replaced by the hypocoristic, forming an acceptable cluster:

> ŋirŋ ⟶ ŋiřk
> (bowl, cup)
>
> otX ⟶ otq.
> (faeces)

Syrian Arabic Ferguson (1956) does not discuss consonant cluster simplification and in a later article states that "simplification of consonant clusters is attested for all except Arabic and may well occur there too" (1964:105). (Not only did Ferguson not present the standard data, he apparently did not collect it nor have a dictionary at his disposal).

There is only one case of a non-geminate cluster in Syrian Arabic BT and no words that involve cluster simpli-

fication in derivation. Most of the words are suppletive although dialect-specific information might indicate the use of this process and others.

General Despite the incomplete evidence from Syrian Arabic, the data lends itself to the stating of the universal,

> Phonological Universal XXI: where consonant clusters occur in standard words, simplification of the cluster occurs in the process of derivation to a BT form.

Exceptions may be dependant upon the environment as in the case of the English syllable-initial cluster with a liquid and the Gilyak word-final cluster using the hypocoristic. The exceptions appear to be very limited and, in general, if a cluster appears in the standard form, it is reduced in producing the corresponding BT word.

4.2.3 Syllable Reduction

Words that are taken from standard speech and transformed into BT often undergo syllable reduction. This may be in the form of extracting only the stressed syllable or a combination of syllables with primary and secondary stress and/or syllables that are word-final or word-initial. Lanugages demonstrate preferences for which syllable(s) is (are) used in the derivation of BT forms and these preferences are usually determined by the physical features of sound and acoustic salience.

Acoustic salience refers to the perceptual prominence of a certain sound. In dealing with syllables (although occasionally partial syllables are involved), the position of the syllable in the word and the stress placed on the syllable affect its acoustic salience. In an experiment conducted by Blasdell and Jensen (1970), we see that children attend to final position and syllables with primary stress most. After this, come intermediate stress or second last position and then the strongest of the weakly stressed syllables and initial position. Since primary stress does not necessarily coincide with the most prominent syllable position, certain combinations may override single factors. For example, the pet forms for the English names Alexandra and Alexander can be either Sandy or Alex. The former is salient due to primary stress and penultimate position of the syllable 'zan'. The latter depends upon the prominence of the initial position and secondary stress. The final syllable, with only tertiary stress, is not more prominent than the other two.

Although acoustic salience is important in understanding syllable reduction two other factors must be taken into consideration: BT is a register of adults and therefore other factors may influence syllable reduction and, the child may hear the whole word and try to repeat it but get 'lost' after the first syllable. In the latter case, the first syllable could become more important regardless of

stress.

__East Cree__   In East Cree BT there are five words that seem
to be formed through syllable reduction as well as other
processes:

> u·hkum ⟶ gugu
> (grandmother)
>
> binsæbu
> um næbu ⟶ bæbu
> (bean soup   (eat with spoon)
> porridge)
>
> udu·hum ⟶ dulu
> (penis)
>
> uba·jiu ⟶ baji
> (vagina)
>
> bɛjmi ⟶ mi
> (give)

In all examples except the second, inflections have been
dropped and the root word, which cannot stand alone in SA
East Cree, remains. The second example is similar in that,
although inflections are not dropped leaving a root, a
morpheme is taken from a bound morpheme whose meaning is
very like the one given for the BT form.

In each case the first syllable of the BT form is
the stressed syllable of the SA adult word. In East Cree,
acoustic salience coincides nicely with the root and there-
fore with semantic salience.

__English__   Derived English BT forms also give preference to

primary stress:

biscuit ——→ bickie

stomach ——→ tummy

pyjámas ——→ jammies

Patricia ——→ Tish.

In the formation of pet names, final position and secondary stress are combined in the selected syllable although no BT words per se attest to this pattern:

Elizabeth ——→ Beth, Betty, Betsy

Hubert ——→ Bert, Bertie.

More rarely, a first syllable with secondary or tertiary stress may be chosen and this may be due to ease of pronunciation rather than acoustic salience:

Patricia ——→ Pat, Patty

Cassandra ——→ Cassie, Cass.

Also not very common, and for similar reasons, syncopation might be used in the creation of pet names. Syncopation involves the deletion of syllable boundaries often selecting first and last syllable:

Harriet ——→ Hatty

Henrietta ——→ Hetty.

Although English exhibits other patterns, in BT proper the

preferred syllable is the one with primary stress regardless of position.

<u>Iranian</u>   Iranian BT has a limited number of derived forms unless they are exact copies of the adult word. Pet-names, however, provide information about syllable reduction:

> Ebrahím ⟶ Ebi
>
> Mitrá ⟶ Miti
>
> Katoyún ⟶ Kati.

In each case the first syllable, with secondary stress, is selected over the final syllable with primary stress. Obviously, factors other than acoustic salience are coming into play such as pronunciation and standard patterns.

<u>Brazilian Portuguese</u>   Three words of Brazilian Portuguese BT appear to be derived from the elimination of syllables:

> o muchucado ⟶ o dodói
> (hurt)
>
> acabou ⟶ cabô, bô, babô, abô
> (nothing)
>
> esconde-esconde ⟶ cadê, que dê.
> (hide and seek)

The SA words of Brazilian Portugues are stressed on the penultimate syllable if they end in a vowel. Therefore, the derived BT forms cited above select the stressed and/or final syllable which are the two most salient syllables.

The written accents of BT (included in normal Brazi-
lian Portuguese transcription) indicate that the stress is
changed to the last syllable. A quick scan of the nursery
lexicon reveals that final syllable stress is quite common
in BT and may in fact be another marker of the BT register
-- a sort of suprasegmental hypocoristic.

Syrian Arabic Once again it is difficult to draw conclusions
about the Syrian Arabic material. However, in Ferguson's
discussion of the hypocoristic (1956:127), it is possible
to glean some information regarding syllable deletion.
He cites the examples,

> Hamiid ⟶ Hamdo
> fu?aad ⟶ fuufu.

These two names have undergone different transformations
to become pet-names: the affixing of the hypocoristic -o
and reduplication. In each case the initial syllable is
given preference. Stress in Arabic occurs on the last
closed syllable so the formation of pet-names and syllable
deletion is not dependant upon features of acoustic salience.
However, since pet-names do not belong to BT proper, no
conclusions about syllable reduction in Syrian Arabic BT
can be drawn.

Gilyak Austerlitz dos not include stress in his transcrip-
tion of the Gilyak vocabulary but states that "it tends to

fall on the first syllable of a word" (1956:263). Then,
in his section on selection (ibid:274-275), Austerlitz
suggests that if a preferred phoneme is found in the stan-
dard form, it is selected regardless of position or stress:

p-su ⟶ ɨpɨp
(wash oneself)

ňetf ⟶ ŋiňk
(face)

nacx ⟶ ŋon.
(legs)

There may be validity in his theory with regard to single
syllable words and individual phonemes, but in multi-syllable
words, preference is given to the first-syllable(s), confor-
ming to the suggested role of acoustic salience (primary
stress and initial position):

ɨka ⟶ ɨkɨk
(it hurts)

maŋɨck ⟶ maŋmaŋ.
(puppy)

General The comparative data demonstrate that although
acoustic slience does not determine the shape of BT words with
regards to syllable deletion, it has a strong influence over
it. Furthermore, though certain features (stress and posi-
tion) are important in the role of acoustic salience there
is no rigid hierarchy in the selection of syllables from
SA words for BT forms.

Hence,

> Phonological Universal XXII: syllable
> reduction is used to derive BT words from
> SA forms.

> Phonological Universal XXIII: features of
> acoustic salience exert a strong influence
> over which syllable will be retained or
> deleted.

4.2.4 Syllable Reduplication

Syllable reduplication as a feature of BT words was discussed in 4.1.4 above. Here, it is not necessary to repeat the same information but to make the point that reduplication is also a derivational process. I cite examples from each language that demonstrate the process of reduplicating part of a SA word to create a BT form:

East Cree   u'hkum ⟶ gugu

English   pyjamas ⟶ jam-jams

Iranian   sard ⟶ sard-e-sard

Brazilian Portuguese tchau ⟶ tau-tau

Gilyak   maŋgick — maŋmaŋ

Syrian Arabic   fu?aad ⟶ fuufu.

Reduplication, as a derivational process, occurs in all the languages in varying degrees making it possible to state,

> Phonological Universal XXIV: reduplication
> is a universally productive process in deri-
> ving BT words from SA forms.

4.2.5 Nursery Element / Diminutive

Not only the use of the diminutive and nursery element were discussed in section 4.1.7, but also the manner in which they are affixed to a word. The examples that show . how they are affixed to a standard form (to be marked as part of the BT register) provide the information relevant to this section concerning derivation. I repeat a few examples here for easy reference:

the Cree diminutive -š,

$$æ\, tu.m \longrightarrow æ\, \check{j}umš$$

$$minu \longrightarrow minuš;$$

the English hypocoristics -s and -i,

$$cute \longrightarrow cutie, cuties, cutsie$$

$$dinner \longrightarrow dindins;$$

the English diminutive -kin,

$$lamb \longrightarrow lambkin(s)$$

$$boot \longrightarrow bootie \longrightarrow bootikin;$$

the Iranian hypocoristic -i,

$$Behrooz \longrightarrow Behroozi$$

$$maman \longrightarrow mamani;$$

the Brazilian-Portuguese diminutive -inho/-zinho,

$$banho \longrightarrow banhinho$$

$$pequeno \longrightarrow pequenininho;$$

the Syrian-Arabic hypocoristic -o,

> Hamid ⟶ Hamdo
>
> ç amm ⟶ ʕammo;

the Gilyak hypocristic -k/-q,

> gi ⟶ gik
>
> amam ⟶ amqamq.

Each language makes use of either the diminutive or hypocoristic in deriving some of the BT words. Although generally a suffix, in Gilyak the hypocoristic is occasionally infixed. The affixing either takes place alone or occurs after other processes are applied. In summary then,

> Phonological Universal XXV: each language may affix the hypocoristic or diminutive or both in the derivation of BT words.

> Phonological Universal XXVI: suffixing is the most common method of addding the hypo-coristic/diminutive although infixing also occurs.

More data needs to be collected in order to discover if hypo-coristic/diminutive prefixes are possible. Although this seems likely, it was noted above that Iranian, Cree and Arabic all exhibit grammatical prefixes yet have a hypo-coristic suffix.

4.2.6 Combining the Processes

In many instances more than one of the above processes may be applied in the derivation of a nursery form. In this section I present examples of varying combinations from the different languages involved in this study.

East Cree

Standard form: u˙hkum

syllable deletion: hkum

cluster simplification: kum

phoneme deletion: ku

feature change: gu

reduplication: gugu

Standard form: æš tum

cluster simplification: ætum

feature change: ædum

phoneme substitution: æǰum

English

Standard form: stomach

syllable reduction: stoʍ

cluster simplification: tum (tom)

hypocoristic suffixation: tummy

or

reduplication: tum-tum

Standard form: Margaret

syllable reduction: Marg

cluster simplification: Mag

vowel shortening: Meg

phoneme suppletion: Peg

hypocoristic suffixation: Peggy.

I have not previously discussed vowel changes in derivation due to the difficulties in working with vowels outlined in 4.1.7 above. In the area of English pet-names, and possibly elsewhere, shorter vowels are preferred (i.e., at the phonetic level, non-advanced tongue root):

James ⟶ Jimmy or Jemmy

Margaret ⟶ Maisie or Meg

Dorothy ⟶ Doll or Dot

Vowel change and the underlying features -- such as length and position -- are open to future research, particularly when methods of data collection are improved.

Iranian

Standard form: bæradær

syllable reduction: dær

phoneme suppletion: dæš

vowel change: daš

reduplication: dadaš.

Standard form: Ebrahim

cluster simplification: Ebahim

syllable reduction: Eb

hypocoristic suffixation: Ebi.

Brazilian Portuguese

Standard form: acabou

syllable reduction: cabou

assimilation: babou

dipthong changes to vowel: babô

In the case of the latter change, a dipthong becoming
a vowel, a new area of study is suggested that parallels
the process of vowel shortening. Other examples of this
are attested to in Brazilian Portuguese:

    pai —— papai or papi

    mãe —— mamãe or mami.

Gilyak

Standard form: maŋgick

syllable reduction: maŋ

reduplication: maŋmaŋ

Standard form: damk

cluster simplification: dam

assimilation: ñam

reduplication: ñamñam

Syrian Arabic

Standard form: fu?aad

syllable reduction: fu

reduplication: fuufu.

Standard form: Hamiid

syncopation: Hamd

hypocoristic suffixation: Hamdo.

General   The combination of the derivational processes lead to a variety of baby forms.. Note, that although the rules seem to follow in a particular order, they are generally optiorfal and not rigid as in adult speech.   In fact, in many instances, one can chose from a number of baby words that have used different combinations.   As an extreme example, notice all the possible pet-forms for the English name Elizabeth: Beth, Bet, Betty, Betsie, Bets, Liza, Liz, Lizzie, Eliza, Eli.

Phonological Universal XXVII can be stated concerning the combination of the different derivational processes.

> Phonological Universal XXVII: the various
> processes of BT derivation can be combined
> to create a range of forms.

4.3   Onomatopoeia

Onomatopoeic forms are found throughout BT registers. There is a wide range in the amount of use but only slight variation in function.   In some languages the onomatopoeic

form represents the sound itself while in others it comes to stand for the object that makes the sound and, in still others, the two are combined.

<u>East Cree</u> In East Cree BT there are only two onomatopoeic forms: <u>sĭsĭ</u> 'urinate' is taken directly from the adult form and <u>dumuk</u> 'the sound of something falling into the water'. The latter denotes the sound only, regardless of the object that is involved. The general lack of onomatopoeic forms in East Cree BT is surprising when one considers the obviously onomatopoeic nature of many standard words: <u>e.g.</u>, <u>pipičow</u> 'robin', <u>šišikun</u> 'rattle'. Furthermore, sound metaphors are quite important in narrative (Preston:personal communication),and, in a sense, the simple <u>dumuk</u> is an elegant and eloquent introduction to the use of sound metaphors. Nevertheless, the closeness that Cree people feel to nature would lead one to expect a greater use of onomatopoeic forms in Cree BT.

<u>English</u> In English, both a wide range of animals and mechanical items are represented by onomatopoeic forms. Normally, these words represent the actual sound but some people extend them to represent the object they mimic:

        bow-wow - bark or dog
        tick-tock - the ticking of a clock or a clock
        beep-beep. - a car's horn or the car.

The general concensus is that it is somehow less correct

and more infantile to use the sound to name the object.
On the other hand, the use of the onomatopoeic name for the
sound is used quite late and often extended into adulthood
-- e.g., mooing of cow rather than lowing.

Iranian   Iranian uses onomatopoeic forms to name animals,
mechanical things and even actions:

> bætæi - sheep
>
> tuf - gun
>
> fut - blow
>
> ?æxrs - spit out.

Brazilian Portuguese   Although onomatopoeia is not discussed
by Stoel-Gammon (1976), at least three words appear to be
formed imitatively:

> bibí - car
>
> fomfóm - car
>
> tic-tac - clock.

These forms are used to refer to the object and not just
the sound.

Gilyak   Austerlitz mentions two forms that he considers to
be onomatopoeic in Gilyak (1956:276):

> bič (of bič-naq) - bird
>
> Gawaq - crow.

It seems likely that the following three are also of an onomatopoeic origin:

>   aʔa - defecate
>
>   hisa - urinate
>
>   qaXqah - cannot swallow.

Again, these forms are used to designate the objects or actions and not just the sound itself.

<u>Syrian Arabic</u> Ferguson (1956:125) includes three words in the basic list that I feel are onomatopoeic forms:

>   kuuku - birdie
>
>   maa - sheep
>
>   ʕawʕaw - bow-wow.

Ferguson does not discuss these forms but his translations suggest that the first two refer to the object while the latter indicates the sound only.

<u>General</u> Regarding the general use of onomatopoeia in BT registers, it is valid to state

>   Phonological Universal XXIX: onomatopoeia
>   is used throughout BT registers in varying
>   degrees with slight differences in use.

4.4 Conclusions

The universals stated in this chapter describe the basic phonological pattern of the BT register and outline

the processes of derivation. In general, these BT universals set forth a simplified phonology with fewer phonemes, features and rules than in SA phonology. Furthermore, these universals tend to be absolute, substantive and non-implicational with exceptions being explained in terms of the SA target language.

East Cree appears to be very 'normal' in relation to these universals since it does not involve any exceptions and it manifests all the patterns, if, at imes, to a limited extent.

Certain difficulties in this chapter underline the importance of comprehensive research and the accurate recording of data. I suggest that the succeeding guideline be followed in the collection of BT material:

1. Record both BT and SA terms.

2. Inquire of a competent informer (preferrably a caregiver) if the BT word originates from another source -- e.g., the English 'patties' for 'hands'.

3. Use both standard orthography, when available, and a recognized phonetic transcription.

4. Analyze BT forms not only descriptively but in relation to SA words.

5. If relying on an informant, remember that people seem to 'forget' BT terms and all types of suggestions can be given to trigger their memories: describe situations, give examples from other languages (particularly funny ones from the

scholar's language), discuss nursery rhymes and games, ask
the informant about his/her own childhood.

6. Elicit forms that may not be considered words per se
-- _e.g._,exclamations, onomatopoeic forms.

Ideally, research should take place over an extended
period of time with spaces between observations and inter-
views. This gives informants time to think and 'recall'
new forms. As I have worked on this thesis, more and more
English BT has been remembered by myself and others --
general as well as dialectal, familial and idiosyncratic.
It seems quite probable that the BT lexicons of the other
languages would grow equally given similar circumstances.

I do not feel that improved and more extensive data
collection would weaken the universals stated herein. Rather,
they would be strengthened and clarified.

5.0 CONCLUSIONS

The material examined in this thesis enables me to
set up hypotheses regarding:

1. The universal characteristics of BT;

2. The variation among BT registers;

3. The characteristics of East Cree BT;

4. The fundamental nature of language, in particular the
BT register; and,

5. The acquisition of language.

In the following sections, I state the conclusions that
relate to each of the above-named areas.

5.1 The Universal Characteristics of BT

The universal characteristics of BT refer to those
features of language that are found in all BT registers. In
some instances the lack of a feature in a particular register
(e.g. exclamations in Gilyak) is considered an omission in
data collection and such absences are specified and explained
throughout the text. In other cases, features occur in only
one or two languages and, for stated reasons, are designated
as tendencies or possibilities.   I examine such variations
in 5.2 below and now turn to the summarization of universal
features.

Lexicon The universal categories of the BT register are

1. kin terms

2. body parts and bodily functions

3. modifiers

4. objects

5. creatures

6. actions

7. exclamations

8. sounds.

The content of the BT register is dependant upon the functions of physical well-being, socialization and perceptual salience. The content of individual words varies cross-culturally but the inclusion of words in the lexicon depends upon the same factors.

All BT registers include some hypocoristic kin terms and the extent of use of such forms is indicative of social influences: cultures which emphasize personal autonomy and independance will have fewer easily-learned kin terms while cultures that exhibit rigidly ascribed statuses for a range of relatives will make use of a more extensive hypocoristic kinship terminology.

Inflection and Syntax Universal features of BT inflection and syntax can be described in comparison to adult grammar as follows:

1. pronoun replacement by nouns

2. reduction of inflections

3. multi-functional (or indeterminate) words

4. monoremes (one-word sentences)

5. verbaliztion by means of simplified inflection or an all-purpose verbalizer (which is usually a common verb of the SA language).

In regard to the latter point, verbalization, the process is universal but the method is not: there is a choice between simplified inflection and an all-purpose verbalizer. The choice between the two features represents a primitive language possibility -- primitive in that it is relatively simple, only involving two possibilities, and it precedes rather follows other selections. So, for example, the choice of a verbalizer seems to be independent of any features of grammar that have been established thus far. However, once the verbalizer is chosen, more rigid word order is likely to follow. Conversely, the selection of inflections leads to flexible word order and greater inflection. Along these lines it might be possible to trace a hierarchy of grammatical rules and structures, beginning with the absolute, non-implicational and substantive universals of BT upon which implicational, formal universal tendencies and language possibilities are built. Although this analysis just deals with one aspect of grammar, future data collection and analysis may well lead to stronger statements concerning the acquisition of language in general.

BT does not have a deep and surface structure per se but they seem to be equivalent at this level. In fact, I

suggest that deep structure develops out of BT and is cognitively concrete while SA surface structues are abstract. BT has not undergone simplification by means of a series of complicated transformations but represent the earliest units of grammar. SA structures develop out of these by adding in new features and changing simple structures through the use of transformations. BT phrase structure is consequently quite simple in comparison to SA forms.

Phonology BT phonologies are in general reduced and simplified. The changed features of BT phonology as well as derivation from SA words are summarized by the listed characteristics:

 1. Reduction on the phonemic or subsegmental level;

 2. Emphasis on certain sounds (commonly the nasal and anterior oral stops)

 3. Sensitivity in consonant selection to word-final positioning;

 4. A preference for the CVCV and to a lesser degree the CVC word canons;

 5. A tendency to the open CV syllable canon;

 6. Words of less than three syllables;

 7. Syllables of three phones or less;

 8. An avoidance of consonant clusters;

 9. Syllable reduplication;

 10. Repetition of words;

11. A nursery element or diminutive affix;

12. Attention to acoustically salient syllables in adult words.

The universals in all three linguistic areas -- lexicon, inflection and syntax, and, phonology -- are non-implicational, substantive and largely absolute. Since they are non-implicational, they do not depend upon another feature of language to be stated. It seems logical that this type of universal should appear first as they are less complicated and therefore more easily learned. Furthermore, they provide a base for the dependent universals. Similarly, substantive universals are generally simpler than formal universals in that they state the categories and are therefore descriptive. Formal universals involve processes, and, as suggested by Comrie (1981:16) substantive universals may be necessary to delimit the set of rules that defines the core syntax of a language. The information included in this work suggests that substantive universals do precede formal universals and set up a sort of framework for language development. Finally, the universals of BT are mostly absolute universals: they are the core universals that describe language in general. Universal tendencies and possibilities are a part of the differentiation among languages as development progresses.

5.2 Variation Among BT Registers

Despite the generally universal nature of the BT register, limited variation does occur. This variation represents language possibilities that are incorporated at the BT level and no single BT register exhibits the complete range of possible divergences.

The variations can be explained in terms of the target SA language: difficult or salient features of the adult language are introduced early. This enhances the learnability of a difficult feature before it becomes obscured by other complicating factors and gives the language its characteristic sound. Imagine Arabic with no 'guttural' sounds: Syrian Arabic BT without the posterior fricatives would sound just as non-Arabic to a native speaker as it would to us. Therefore despite their usual late occurrence in the phonological hierarchy, they are included in Syrian Arabic BT.

In this thesis the following exceptions, or possibilities have been noted.

<u>Lexicon</u> The addition of a locations category is necessary in Gilyak and there are differences in specific words across lexicons.

<u>Inflection and Syntax</u> Iranian BT replaces the second person pronoun 'you' with the the first person noun in addressing the child. Thus the child is called 'uncle' by 'uncle' and

so on.

Phonology Posterior fricatives, velarized consonants and geminates are used in Syrian Arabic BT; word-final clusters are common in Gilayk BT; and, Iranian BT does not pay attention to normal features of acoustic salience in syllable reduction from SA to BT forms.

There are limits to what is permissible in variation: e.g., on the lexical level, complicated technical terminology is not included as a category since it is beyond the comprehension of a child; syntactically, complex structures such as embeddings are not used until the simple structures are mastered; and, in relation to phonology, three-phone clusters are unlikely to occur in a BT register given the rarity of two-phone clusters. Variation is limited to a few additional features in each language area and does not involve whole systems of SA language. Thus the diagrams of section 4.1.2, that demonstrate the core universals and possiblities in BT phonology, are applicable to other aspects of the BT register. (In fact, it is also applicable to adult universals with the core being a smaller part of the whole). The basic form of any BT register is predictable and even the possible exceptions may be predictable if one is familiar with the adult language. Conversely, the BT register of a particular language, that exhibits variation beyond the universal core, can be used to predict the difficult or salient features of the

corresponding SA language.

5.3 Characteristics of East Cree BT

East Cree is unexceptional in comparison to the cross-linguistic material presented in this thesis and elsewhere. It does not exhibit any exceptions to the universals drawn throughout this work despite the distinctive nature of adult speech.

Lexicon. East Cree BT words fit nicely into the revised classification with words in all categories and no words that do not fit one of the categories. The content and function of East Cree words are adequately outlined by the examination of the factors that universally influence BT lexicons: physical well-being, socialization and perceptual salience. East Cree exhibits a limited number of hypocoristic kin terms -- baba, mama, gugu, ǰumšum -- which is predictable on the basis of Cree respect for autonomy and independance as well as few rigidly ascribed statuses.

Inflection and Syntax. East Cree BT grammar follows the universal pattern. The only possible exception to the norm is its selection of an simplified inflectional system rather than an all-purpose verbalizer. The choice is dependant upon the target language and we see a similar pattern in Gilyak. Rather than being an exception, this may be an example of the development of language to include possibilities as well as universals.

<u>Phonology</u> East Cree BT is once again quite typical: all
the absolute and preferred patterns of universal BT exist
here. In particular, East Cree BT exhibits the highest rate
of use of the preferred CVCV canon, only one consonant cluster,
a very limited phonemic inventory, a strong preference for
reduplication. The allophonic variation of voiced and voice-
less stops and the devoicing of vowels do not occur as in
SA East Cree.

In short, although we tend to think of SA Cree as a
very difficult language, we see that the BT is as easy to
learn as any presented herein. With the early introduction
of simplified inflection we get an idea of how the Cree child
develops competency in the SA language. Starting with a
universal basic language, the child learns the linguistic
complexities step by step. His language diverges from the
other languages as his linguistic competence develops. There
is no mysterious comprehension of an apparently incomprehensible
language but a gradual progression from East Cree BT to SA
East Cree.

5.4 The Fundamental Nature of Language and the BT Register
          Language, for the purpose of this discussion, is the
verbal, usually oral, form of communication between people.
The defining of adult language becomes quite complex and often
deals with such notions as abstractness and arbitrariness.

An exmination of BT, the first language spoken to a child,
can eliminate many of the complexities and lead us to an
understanding of the foundations of language. Since most
features discussed in this thesis have been proven universal,
the following discussion has a universal application.

Lexicon and Semantics Semantically, language at the BT level
has very specific functions. As stated, these functions are
comprised of physical well-being, socialization and perceptual
salience. These functions which are therefore fundamental
to semantics also relate to the fundamental needs of man:
physical, social and neural. The latter, neural, combines
both sensory and intellectual aspects: as the child learns
to name different objects, he is also learning to identify
things through the use of his senses. He satisfies intellec-
tual curiosity while learning to differentiate, define and
order the objects of his universe and he learns which sensory
cues to apply in each case. At the BT level, this identi-
fication is generally related to social and physical survival
but in the long run leads to notions that transcend such
needs. BT is concrete, non-arbitrary and immediate, It
provides the child with the tools to understand his environ-
ment and communicate his needs before moving to more abstract,
arbitrary and removed phenomena. It seems likely that the
concrete, non-arbitrary and immediate features of BT are not
only fundamental to language learning but to the origins of

language. As in any undertaking, the basic building blocks must exist before the complexities can be added in.

<u>Syntax</u> It is also evident that certain syntactic features must exist first and universally. These core features provide a base out of which the complex and disparate features of the world's languages grow. My study demonstrates that these phenomena are universal in BT despite the wide variation among the SA languages. Once again, it is probable that the development of individual languages and evolution of language followed along similar lines.

The deep structure of SA speech is similar to the structure of BT though SA phrase sturcture does include more features. The subsequent application of transformations leads to the SA surface structures that are further away from the original BT form. BT and SA deep structures are therefore cognitively concrete while SA surface structure is cognitively abstract.

<u>Phonology</u> On the phonological level, the ideas presented by Jakobson (1972) provide us with a good base. Although his rigid hierarchy of phonological development must be questionned, his basic notion of hierarchical learning, beginning with the most easily distinguishable forms, seems correct. In BT, certain sounds do predominate, in particular the nasal and anterior oral stops. This parallels the occurrence of sounds

across languages and undoubtedly the evolution of sounds. However, beyond the initial base a good deal of variation does occur. In BT this variation can be explained in terms of the target adult language. But, what of the variation in adult languages? It seems likely that once a core language was established, divergence occurred partly according to chance (a particular feature was 'discovered' and used productively) and partly according to what other features had already been added on to the base (relating to implicational universals).

General The fundamental nature of language, with special reference to BT and the development of SA speech, can be described as a universal core of simple structures and features, that are easily identifiable, out of which more complex structures can be developed by adding new features and processes. The basic features and structures do not change although they may be obscured by the complexity of the fully developed form . Specifically the fundamentals are: semantically -- concrete, non-arbitrary and immediate; syntactically -- simple structures initially of an indeterminate form that become grammatical as they differentiate in function; and, phonologically -- a base of easily identifiable sounds, with obvious feature distinctions, that develop hierarchically.

5.5 · The Acquisition of Language

Through the presentation of BT material, it can be seen that language is acquired in a developmental mode. Simple structures and features are learned and more complicated ones develop out of these. Thus the main points concerning the acquisition of language and BT:

1. The child is presented with a highly simplified register;

2. This simplified register is quite similar across languages;

3. Phonology, syntax and semantics develop out of the simplified base;

4. As the child becomes more competent linguistically, the language addressed to him becomes more complex resembling the adult register more and more and the other developing languages less and less.

With reference to the last point, language acquisition can be seen as a process of differentiation on the universal level as well as development on the individual level. BT exhibits largely universal features and these features introduce children everywhere to language. That is, BT represents a core language that is universal and children must learn this before they can acquire the specifics of their mother tongue. The languages that develop from this universal base vary radically because they develop in different directions, selecting from a range of language possibilities.

The process of language acqusition can be summarized

in two steps: the learning of the universal core of features that define and unify language in general; the development of language beyond the universal core to incorporate the features of widely varying SA languages. With the initial step we can associate substantive, non-implicational and absolute universals while the second stage includes formal, implicational and statistical universals or language possibilities. The two steps can be described as the learning of language versus the learning of a particular language.

BT is, in a sense, the tool of the first step of language learning. Through it, adults present children with a simple, straightforward version of language. BT does not provide imput that is of a "degenerate quality and narrowly limited extent" (Chomsky 1965:58) but it provides a coherent base upon which the complexities of language can be added step by step. As a part of an adult language continuum, BT represents the first stage in a complex interplay between the adult's understanding of the child's linguistic competence and the resulting adjustments in the speech addressed to the child.

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