The retention of lexifier inflectional morphology in pidgins: Evidence for the role of markedness in pidginization

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1. **Introduction**

One oft-cited characteristic of pidgins is a lack of inflectional morphology. According to Romaine (1988:24), the process of language reduction which underlies pidginization strips everything from the lexifying language "but the bare essentials necessary for communication," eliminating redundant and non-essential categories such as grammatical gender and agreement, while employing word order conventions to express syntactic relations. As Holm (2000:127) notes, some have even claimed that pidgins and creoles are "languages without any inflectional morphology whatsoever." Most specialists reject such a sweeping and inaccurate generalization, but pidgin and creole inflections as still generally treated as isolated exceptions to general patterns of language reduction. Some regard them as the few inflections that "sneaked past" the restructuring process of pidginization because of idiosyncratic factors (McWhorter 2000), while others view their existence as evidence of the uselessness of morphology as a typological criterion for pidgins and creoles (DeGraff 2001). Aside from the pioneering work of Bakker (1993, in press), few have tried to make sense of their distribution across pidgins.

As it turns out, inflections are not uncommon at all in pidgins. About half the pidgins surveyed in this paper have some form of inflectional morphology. But the following generalization does hold for all pidgins (as well as creoles): No pidgin has *more* inflectional morphology than its lexifying language, and most (if not all) pidgins have less inflections than their respective lexifier(s). This supports the common view that a reduction of inflectional morphology occurs in pidginization, but often such reduction is not total. New inflections may also develop throughout a pidgin's lifespan. The mere existence of inflections in pidgins is thus less interesting than the question of which inflections tend to emerge in pidgin grammars and which do not.

There are at least three ways in which inflections may end up in the synchronic grammar of a pidgin: innovation in pidginization or subsequent development, borrowing from other languages in contact, and inheritance from the lexifying language. In the first instance inflections are products of the pidginization process itself, created through grammaticalization or metatypy. One well-studied example is *–pela* in Australian and Melanesian pidgin Englishes. Derived from English *fellow*, it has come to function as a pronoun pluralizer and general classifier suffixed to adjectives, quantifiers, and demonstratives in various languages (Mühlhäusler 1996, Baker 1996). Innovated inflections may sometimes express or reinforce grammatical categories in the other languages in contact (Keesing 1988; Siegel 1998).

Inflections may also be borrowed from substrate or adstrate languages; for instance, some varieties of Kenyan Pidgin Swahili have adopted two verbal affixes from other Kenyan Bantu languages: *-anga* for habitual and *–ko* for polite imperative (Heine 1991). Inflections may also be borrowed at a later time from the lexifier itself once the pidgin

has emerged. This is one characteristic feature of "depidginization" and has been observed in modern varieties of Fiji Pidgin Hindustani (Siegel 1987:251).

Most pidgin inflections however are retentions from lexifying languages. The amount of retention varies from pidgin to pidgin, as the process of pidginization leads to different outcomes across different contexts. The degree to which the lexifier is morphologically reduced depends on the many linguistic and social factors governing the development of the pidgin. In principle pidgins are isolating languages and pidginization itself may be characterized as involving a shift from synthetic to analytic morphology and a shift from subordination to parataxis. But in a few cases the amount of retained inflectional morphology may be quite substantial, as evidenced by languages such as Kituba and LiNgala. Although reduced in comparison to their lexifiers, these languages are morphologically quite complex and do not classify easily as pidgins, leading some to question the very usefulness of "pidgin" as a taxonomic term (Mufwene 1997). McWhorter (1999) has proposed "semi-Pidgin" as a suitable term for contact languages which experienced the process of language reduction to some degree in their formation but whose outcomes differ substantially from other pidgins in terms of morphosyntax. This label is best regarded as representing one end of a cline of reduction and not as a discrete, entirely separate terminological category. McWhorter (1998, 2000) includes a similar notion of gradiance in his synchronic characterization of creoles (the "creole prototype"), which he regards as generally descended from pidgins.

The goal of this paper is not to establish the mere existence of retained inflections in pidgins, which is uncontroversial, but rather to uncover patterns in the retention of inflectional morphology across pidgins (and possibly creoles). The preservation of individual bound morphemes is usually examined with the local linguistic situation in mind, such as the degree of typological homogeneity in the languages of the contact situation or accidental homophony between inflections in two or more of the languages (Thomason & Kaufman 1988). But there appears to be more to the preservation of inflectional morphology than just idiosyncratic circumstances, as some kinds of inflections are more likely to be retained than others across pidgin languages. The data in this paper will show that contextual inflections such as case marking on nouns and nominal agreement on verbs are retained far less often than inherent inflections such as number and definiteness on nouns and tense and aspect on verbs.

This asymmetric pattern is motivated by markedness universals, as inherent inflections exhibit greater semantic relevance to the stem than contextual inflections. In most past studies, markedness has been evaluated as a factor in the simplification of the lexifier and the loss of morphology itself (Thomason & Kaufman 1988, Mufwene 1991; Siegel 1997). In this paper we will examine the role of markedness in the *preservation* of inflectional morphology. Our approach, informed by Optimality Theory, assumes that the probability of retention is enhanced if the inflection is unmarked in certain ways.

2. **Pidgins and language typology**

Unlike languages with clear-cut genetic or areal affiliation, pidgins and creoles as a group are defined by their sociolinguistic history. Most would agree that they are languages which emerge in sustained contact situations demanding a mutually accessible means of

communication, such as trade, war, colonialist expansion, and slavery. In such situations there is often a reduced motivation or opportunity to acquire full competence in the socially dominant language and speakers are instead motivated to negotiate a common linguistic medium (Baker 1997). According to Thomason (1997:76):

> [T]he main goal of facilitating intergroup communication dictates a no-frills grammatical system, without (for instance) elaborate embeddings and varied stylistic resources. The process of creating a new contact language in a new contact situation involves cross-language compromise and therefore tends to eliminate unshared hard-to-learn features, such as inflectional morphology and complex syntactic structures.

Pidgins develop as auxiliary languages and thus lack native communities. Creoles, on the other hand, serve as community vernaculars and are usually acquired as first languages. They are not structurally restricted, as they must serve the complex needs of their speakers. Some creoles (such as Pitcairn English Creole and Unserdeutch) emerged at once as community vernaculars, while others (such as Tok Pisin, Grand Ronde Chinook Jargon, and Sango Creole) developed from formerly restricted pidgins (Grant 1996; Samarin 1997; Thomason 1997; Mühlhäusler 1997). In the later circumstance, the pidgin may vernacularize before it has nativized and undergo significant structural expansion without yet serving as anyone's native language. The term *expanded pidgin* is often used to refer to such languages, but the lack of any clear-cut structural differences between expanded pidgins and creoles has led some to regard the term as introducing "a fairly empty terminological distinction" (Thomason 1997:79; McWhorter 1999, 2000).

Pidgins and creoles do not constitute a structurally unique type of language, aside from the three features identified by McWhorter (1998, 2000) as unattested in combination outside of pidgins and creoles: (1) little or no inflectional morphology, (2) little or no use of contrastive tone, and (3) transparent derivational morphology. These features are not necessarily shared by creole languages, but they occur in most pidgins and McWhorter (1998) regards the presence of these features in creoles as the effects of pidginization. The degree to which pidgins and creoles conform to the "prototype" depends on the degree to which the lexifying language has been simplified, how much time has transpired for language change to produce new inflections, tonal contrasts, and semantically opaque derivations, and the amount of contact the language continues to have with its source languages. While debate on the empirical validity of McWhorter's criteria will continue for some time (cf. Goyette 2000; Ansaldo & Matthews 2000; DeGraff 2001; Plag 2001), most agree that pidgins are typologically analytic and depend on word order and function words to convey grammatical information. No pidgin is polysynthetic and only the "semi-Pidgin" languages of LiNgala and Shaba Swahili approach anything close to the synthetic parameter (Knappert 1979; de Rooij 1995).

The categorization of pidgins is slippery on several fronts. As noted above, there is a rather fuzzy boundary between pidgins and creoles which the category of "expanded pidgin" attempts to circumvent. The category of "semi-Pidgin" similarly accommodates the fuzziness between contact languages that undergo radical structural reduction and those that do not. Mufwene (1997) also points out that some classify LiNgala as a koine, revealing a slipperiness between pidgins and koines depending on the degree to which the "languages" in contact may be regarded as dialects of the same language. Some pidgins are also classified as "jargons" if they lack linguistic stability (Romaine 1988).

Another problem in the study of pidgins is empirical. Some pidgins (such as Tok Pisin, Chinook Jargon, and Hiri Motu) are very well documented, while others are known from a single study. Only a few scraps of data exist for Icelandic Pidgin Basque, Pidgin Haida, and Pidgin Ngarluma (Bakker et al. 1991; Grant, in press; Dench 1998), while no linguistic data (beyond isolated lexical items) exists for such varieties as Broken Slavey and Jargon Loucheux (Bakker 1996). Our examination of pidgin inflections will thus be based on only the best known varieties and not a random selection of pidgins.

The reduction of inflectional morphology occurs early in pidgin genesis through target model simplification (Romaine 1988, Siegel 1997), and thus its effects would be visible in more mature pidgins and creoles. However the leveling of retained inflections may continue through the lifespan of the pidgin/creole and so early-stage pidgins make better witnesses of the process of language reduction than more mature ones. To provide the most representative sample of pidgins, we will include examples from the four types discussed above (as well as from "semi-Pidgins" such as Kituba and LiNgala) but the emphasis will be on socially restricted pidgins and jargons.

Table 1 on the opposite page displays information on the 27 pidgins surveyed in this paper, including name, location, classification (PJ=unstable jargon, P=stable pidgin, PE=expanded pidgin, C=creole), the morphological type of its main lexifier(s), and the source of information on each respective language. The only creoles included in Table 1 are those which developed from former restricted pidgins such as Nubi and Sango. The classification is based mostly on the work of Smith (1995).

3. **The retention of inflectional morphology in pidgins**

According to Anderson (1982), inflections occur further from the stem than derivational morphemes and generally they contribute syntactic information to the sentence. Booij (1993, 1996) has posited two kinds of inflection: *inherent inflection*, which signals grammatical meanings inherent in the word itself, and *contextual inflection*, which signals syntactic relationships between words. The following is an incomplete but useful list of verbal and nominal inflections:

(1)	Inherent	V:	1a. TENSE/ASPECT, 1b. MOOD, 1c. NEG
		N:	2a. NUM, 2b. GEND(incl. CLASS), 2c. DEF
	Contextual	V:	3a. AGR(incl. PERS/NUM/etc.), 3b. GF(incl. DIR)
		N:	4a. GF(incl. CASE), 4b. AGR

Tense/aspect, mood, and negation are expressed by inherent verbal inflections, as these express grammatical meanings inherent to verbs. Inherent nominal inflections include specifications for number, grammatical gender (as well as noun class), and definiteness.

Contextual inflections build syntactic relationships in the sentence. Examples of such inflections on verbal stems include agreement affixes and bound pronominals (which mark the person, number, gender features of nominal arguments), and direct and inverse markers which signal relational information. In languages such as Swahili, the bound pronominal also specifies the grammatical function of the argument (i.e. AGR +

Name	Location	Classification	Main lexifier	Morphological type	Sources
Asmara Pidgin Italian	Eritrea, Africa	P	Italian	fusional	Marcos 1976
Bilkiire	northern Cameroon	PE	Fula	agglutinating	Noss 1979
Broken Ojibwe	Wisconsin, USA	P	Ojibwe (Algonkian)	polysynthetic	Nichols 1995
Chinook Jargon	Pacific Northwest, USA	P, PE, C	Lower Chinook	polysynthetic	Silverstein 1972, Thomason 1982
Fanagalo	southern Africa	P	Zulu-Nguni (Bantu)	agglutinating	Mesthrie 1989
Greenlandic Pidgin Eskimo	Greenland	PJ	West Greenlandic Eskimo	polysynthetic	van der Voort 1996, 1997
Gulf Pidgin Arabic	Persian Gulf	P	Gulf Arabic	symbolic fusional	Smart 1990
Herschal Island Trading Pidgin	Alaska and the Yukon	PJ	Iñupiaq Eskimo	polysynthetic	Stefansson 1909
Hiri Motu	Papua New Guinea	PE	Motu (Austronesian)	analytic/isolating	Dutton 1985, 1997
Kenyan Pidgin Swahili	Kenya (eastern Africa)	P	Swahili (Bantu)	agglutinating	Duran 1979, Heine 1991
Kituba	Zaire (central Africa)	PE	Kikongo (Bantu)	agglutinating	Mufwene 1997
Koriki Hiri Trading Pidgin	Papua New Guinea	PJ, P	Koriki (Papuan)	analytic/isolating	Dutton 1983, 1985
Jargon Kaurna	South Australia	PJ	Kaurna (Australian)	agglutinating	Simpson 1996
Kyakhta Pidgin Russian	Kyakhta (Siberia)	P	Russian	inflectional/fusional	Wurm 1992
LiNgala	Zaire, Congo	PE	BoBangi	agglutinating	Dzokanga 1979, Meeuwis 1998
Mobilian Jargon	east of Mississippi River	P	Choctaw, Chickasaw, Alabama (Muskogean)	agglutinating	Drechsel 1997
Nagamese	Nagaland (India)	PE	Assamese (Indic)	fusional	Sreedhar 1985, Boruah 1993
Nubi-Juba Arabic	southern Sudan, Uganda, Kenya (eastern Africa)	PE, C	Egyptian/Sudanese Arabic	symbolic fusional	Owens 1991, 1997
Pidgin Delaware	New England, USA	P	Unami Delaware (Algonkian)	polysynthetic	Goddard 1997
Pidgin Fijian	Fiji	P	Fijian (Austronesian)	analytic/isolating	Siegel 1987
Pidgin Haida	Pacific Northwest, USA	P	Haida	polysynthetic	Grant, in press
Pidgin Hawaiian	Hawaii	P	Hawaiian (Austronesian)	analytic/isolating	Roberts, in press
Pidgin Ngarluma	Northwestern Australia	PJ, P	Ngarluma (Australian)	agglutinating	Dench 1998
Russenorsk	northern Norway	PJ, P	Norwegian, Russian	inflectional/fusional	Broch & Jahr 1981, Fox 1983
Sango	Central African Republic	PE, C	Ngbandi	agglutinating	Samarin 1970, Pasch 1997
Taymir Pidgin Russian (Govorka)	Taymir Peninsula (Russia)	P	Russian	inflectional/fusional	Wurm 1992, Stern 2001
Toaripi Hiri Trading Pidgin	Papua New Guinea	PJ, P	Toaripi (Papuan)	analytic/isolating	Dutton & Kakare 1977
Yimas-Alamblak Trading Pidgin	Papua New Guinea	PJ, P	Yimas, Alamblak	polysynthetic	Williams 2000
Yimas-Arafundi Trading Pidgin	Papua New Guinea	PJ, P	Yimas, Arafundi	polysynthetic	Foley 1988

Table 1. Pidgins under consideration in this paper, with information on location, classification (according to Smith 1995; PJ=jargon, P=stable pidgin, PE=expanded pidgin, C=creole), main lexifier, the morphological type of the main lexifier, and principal sources on each pidgin.

GF). Contextual inflections on nominal stems specify the grammatical function of the nominal (i.e. case morphology). Dependent nouns also bear an AGR+GF suffix, as they furnish syntactic information for the noun's possessor.

Morphological retention itself is somewhat gradient. Some inflections may survive in the pidgin fully intact. But others undergo some change in meaning and form. In other cases, the segment remains but without discernable meaning. The single most important criterion establishing the retention of an inflection is the survival of semantic content in the segment, as this is the defining property of morphemes. Lexifier inflections may therefore have one of the following fates in the pidgin:

(2a) **Full Retention**: The morpheme is incorporated into the pidgin with little or no change.
(2b) **Partial Retention**: The morpheme is retained in the pidgin but with either semantic reanalysis or structural change.
(2c) **Partial Lexicalization**: The morpheme is retained in form only and remains contrastive only as an empty word class marker.
(2d) **Lexicalization**: The morpheme is resegmented as a non-contrastive part of the stem (or another morpheme) through morpheme boundary reanalysis, resulting in loss of all semantic content of the original morpheme.
(2e) **Full Loss**: No trace of the morpheme remains in the pidgin.

Only the first two consequences (2a, b) will be considered retentions in this paper. The other three fates result in the complete loss of semantic content. Lexicalization is especially common in pidgins drawn from inflectionally rich lexifiers or languages which lack citation forms of nouns, verbs, and other parts of speech. If items from a particular word class enter into the pidgin with fairly regular inflections (such as imperative or hortative for verbs, which is of common occurrence in trade or labor situations), the morpheme may continue to be contrastive as a word class marker. In Yimas-Alamblak Trading Pidgin all verbs obligatorily carry the prefix *nampu-* which likely derives from Yimas *mpan-/kampan-,* the marker for first person agents when they act on second person patients (Williams 2000:52). In Russenorsk, nouns tend to end in *–a* or *–ka* (which derives from the Russian feminine and feminine diminuitive suffixes) and verbs tend to end in *–om*, a suffix of uncertain origin but likely representing a convergence between the Russian 1p present-future suffix, the Swedish hortative suffix (both *–om*), and possibly the pidgin English transitive suffix *–im* (Holm 1989; Fox 1983).

3.1. **Retained inflections in pidgins**

Inherent inflections are preserved about twice as often in pidgins than contextual inflections. This section will explore the retention of inherent and contextual inflections by the word class of the stem.

Retained inherent verbal inflections. Inflections for tense/aspect and modality occur in most lexifiers and these are very often preserved in pidgins. Asmara Pidgin Italian retains past participle *–ato* as a general past marker (Marcos 1976), while Bilkiire preserves imperative *–u*, future *–an*, negative future *–taa*, and negative past *–aay* (Noss 1979). The Arabic nonpast indicative prefix *b-*, which occurs as a future marker in Egypt

and the Levant especially (Mitchell & al-Hassan 1994:13), is retained in Kenyan Nubi as future *bi-* (Owens 1997). Nearly all Bantu-lexifier pidgins and creoles retain at least one tense/aspect or mood affix: i.e. Fanagalo past *–ile* and future *–zo-* (which functions as an analytic preverbal marker), Kenyan Pidgin Swahili non-future *na-* and future *ta-*, Kituba anterior *–á(k)a* (in part from Kikongo *á-*), and LiNgala perfective *–i* and future *–ko* (Sebba 1997; Duran 1979, Heine 1991; Mufwene 1997; Meeuwis 1998). Sango also preserves the Ngbandi use of tone to mark irrealis (Pasch 1997). Nagamese inherited present *–ɔse*, past *–se*, *–sile*, and future *–bo* from Assamese (Sreedhar 1985, Boruah 1993), and Taymir Pidgin Russian preserves most lexifier verbal inflections (Stern 2001). The Yimas-Arafundi Trading Pidgin retains future *–k* and non-future *–nan* (Foley 1988, p c), while the Koriki Hiri Trading Pidgin retains future, intentive *–varia* (Dutton 1983, 1985). Broken Ojibwe has also preserved future *da-,* and obligative *gaa-* (Nichols 1995).

In some lexifiers, negation is expressed with tense/aspect (i.e. Fula) while in others it occurs as a separate affix (i.e. Swahili, West Greenlandic, Yimas). Negation seems to be retained only in tense/aspect morphology (i.e. Bilkiire negative future *–taa*, negative past *–aay*).

Retained inherent nominal inflections. The morphological expression of number and gender/noun class is frequently retained in pidgins. Pidgins lexified by languages with elaborate gender systems exhibit varying levels of reduction: LiNgala retains half of the BoBangi system to mark animacy distinctions, Fanagalo and Kenyan Pidgin Swahili both reduce 15 classes to six (Heine 1973:185-186), and Broken Ojibwe retains two gender distinctions (Nichols, p c). The complex noun class system of agreement in Yimas is nonetheless lost in Yimas-Arafundi Trading Pidgin and Yimas-Alamblak Trading Pidgin (Williams 2000; Foley p c). In Fanagalo, Kenyan Pidgin Swahili, Kituba, and Broken Ojibwe, the inflections were principally retained for the marking of number, such as Fanagalo plurals *zi-, ma-,* and *ma-* from noun class 6 in Kenyan Pidgin Swahili.

Other number affixes retained in pidgins include Sango plural *á-*, Nubi-Juba Arabic plurals *–á* (from the Arabic feminine plural *-āt*), *–ín* (from the masculine plural), Gulf Pidgin Arabic plurals *-āt*, *–ín*, and Nagamese plural *–bilak* (Owens 1997; Smart 1990; Sreedhar 1985, Boruah 1993).

Definiteness is expressed inflectionally in a number of lexifiers, such as in Arabic *al-* and Assamese definitives which are fusional in terms of number, noun class, and definiteness. Nagamese *–bilak*, a generalized human/animate/inanimate plural definitive in Assamese (Goswami 1982:246), does not specify for definiteness. The North Russian definite suffix *–to* is retained in Govorka, but with some shift in meaning (Stern, in press).

Retained contextual verbal inflections. Most pidgins and creoles eliminate bound pronominals and agreement morphology on both verbs and nouns. The loss of such morphology tends to be categorical within a given pidgin (unlike the partial preservation of noun classes in several Bantu-lexified pidgins) and occurs regardless of whether the affixes reference the grammatical function of the signified argument. Independent pronouns usually occur in their place:

	Zulu					**Fanagalo**			
(1a)	ngi-	-ya	-ku	-bona	(1b)	mina	bona	wena	
	1SG	TENSE	2SG	see		1SG	see	2SG	

'I see you.' (Sebba 1997:59)

	Kikóngo					**Kituba**			
(2a)	ka-	-ku	-zól	-elé	(2b)	yándi	zol-a	ngé	
	3SG.SUBJ	2SG	like	ASP		3SG	like	2SG	

'He/she likes you.' (Mufwene 1997:176)

	Swahili					**Kenyan Pidgin Swahili**			
(3a)	h-	-a	-fik	-i leo	(3b)	yeye	hapana	fika	leo
	NEG	3SG.SUBJ	arrive	NEG today		3SG	NEG	arrive	today

'She doesn't arrive today.' (Heine 1991:46)

	Arabic					**Nubi**			
(4a)	masha	le	al-	suug	(4b)	úwo	rúwa	fu	sú
	3SG.MASC.SUBJ.go	to	DEF-	market		3SG	go	LOC	market

'He went to the market.' (Owens 1991:25)

	Russian					**Russenorsk**			
(5a)	ja	po-	-kupaju	rybu	(5b)	moja	kupom	fiska	
	1SG.SUBJ	PRF	buy.1SG	fish		1SG	buy	fish	

'I buy fish.' (Holm 1989:624)

	Yimas				**Yimas Pidgin**				
(6a)	na-	-ka	-tupul	(6b)	ama	min	namban	kratiki	-nan
	3SG.PAT	1SG.AGT	hit		1SG	3SG	toward	hit	NONFUT

'I hit him.' (Foley 1988:171)

	Choctaw				**Mobilian Jargon**			
(7a)	chi-	-bashli	-li	-tok	(7b)	ešno	eno	bašle	taha
	2SG.ACC	cut	1SG.NOM	PAST		2SG	1SG	cut	PAST

'I cut you.' (Drechsel 1997:302)

In many pidgins, inflections that facilitate AGR or function as bound pronouns in lexifying languages are lexicalized in the verb stem. The Gulf Arabic prefix *y(V)*- 'third person masculine singular' occurs on 54% of verbs regardless of reference. The example in (7) attests the use of a 1p pronoun with a *y(V)*-suffixed verb, impossible in the lexifier with the intended meaning:

	Gulf Pidgin Arabic		
(8)	niḥna	mā	yifham
	1PL	NEG	understand

'We do not understand.' (Smart 1990:97)

In the following example from Kyakhta Pidgin Russian, the verb is inflected for 3s past tense but occurs with a 1s subject:

Kyakhta Pidgin Russian

(9) mo'ya piri'shol 'esa
1SG come.3SG PRES

'I come.' (Wurm 1993:262)

Lexicalized pronominal inflections are also found in Herschal Island Trading Jargon, Greenlandic Pidgin Eskimo, Chinook Jargon, and Pidgin Delaware:

Iñupiaq Eskimo

(10a) kaak-tok
hungry-3SG

'He is hungry.' (van der Voort 1997:376)

Herschal Island Trading Jargon

(10b) ī̃la kaktuña
3SG hungry.1SG

West Greenlandic Eskimo

(11a) oqaluttuup -pa -kkit
tell- 1SG.SUBJ.2SG.OBJ MOD

'I told you.' (van der Voort 1996:250)

Greenlandic Pidgin Eskimo

(11b) awonga igbik okaktūk
1SG 2SG talk.3SG

Unami Delaware

(12a) k- -əníhəl -a -w
2 kill DIRECT 3

'You killed him.' (Goddard 1997:49)

Pidgin Delaware

(12b) jɷ̃ní entaami
3 rise.up

'He got up.' (Ibid, p. 67)

Chinook Jargon

(13) t'alap'as pi lilú ʌaska maʌayt ixt-ixt ʌaska xaws
coyote and wolf 3PL live one-one 3PL house

'A coyote and a wolf lived with their houses side by side.' (Thomason 1983:847)

In (12) the verb *entaami* 'rise up' occurs with a 3s subject though prefixed with first person *n-*. In (13), the verb *maʌayt* 'live' contains the 2s prefix *m-* where Lower Chinook would instead require *t-/u-* to indicate a 3p subject, and likely derives from the 2s imperative form *mʌait*.

Of the 30 pidgins surveyed in this paper, only 5 show any systematic and productive use of lexifier pronominal inflections. The least pidgin-like of these, LiNgala, retains the full inventory of Bobangi pronominal affixes. Example:

Bobangi

(14) Ngai, na- -ko -ke o mboka no- tonga ndako
1SG 1SG.NOM FUT go to village INF build house

LiNgala

(15) Ngai, na- -ko -kɛnda na mboka ko- tónga ndako
1SG 1SG.NOM FUT go PREP village INF build house

'Me, I'm going to the village to build a house.' (McWhorter 1999:13)

Sango retains the 3s subject prefix *à-* for indefinite-impersonal-nonhuman subjects, which in the lexifier Ngbandi often refers to human subjects as well (Pasch 1997:232). LiNgala was one of the principal contributing languages to Sango and it contains a very similar prefix for singular human subjects.

	Ngbandi				**Sango**		
(16a)	bì	à-	-vu	(16b)	bì	à-	-vu
	night	SUBJ.3	dark		night	SUBJ.3	dark

'The darkness spread.' (Pasch 1997:232-233)

In Govorka (Taymir Pidgin Russian), verbs are suffixed for tense and agree with subjects in number and gender:

	Taymir Pidgin Russian							
(17a)	minjá	pajdú	túndra	tarabá	(17b)	alén'	tibjá	ãúm	staraná	ű́ló
	1SG	go.1SG	tundra	side		reindeer	2SG	teepee	side	go.PST.NEUT.SG
	'I will go north.' (Stern, in press)					'The reindeer went to your camp site.' (Ibid.)				

It is not altogether clear, however, whether the inflections were retained in the formative stages of Govorka or represent recent developments in the obsolescence of the language.

The Central dialect of Hiri Motu is closer to the lexifier in vocabulary and morphosyntax, retaining possessive case and optional object marking on verbs. These features are absent in Non-Central Hiri Motu. Example:

	Non-Central Hiri Motu				**Central Hiri Motu**			**Motu**		
(17a)	lau	itaita	oi	(17b)	lau	ita-mu		(17c)	na	ita-mu
	1SG	see	2SG		1SG	see-2SG			1SG	see-2SG
	'I see you.' (Foley 1986:33-35)									

This feature may represent a later development in the history of the language. The dialectal distinction in Hiri Motu developed when the original pidgin expanded into new geographical regions, bringing Central Hiri Motu speakers in closer contact with speakers of the lexifier. If this is the case, then the object suffixes represent later borrowings, not retentions. However Taylor (1978) shows that object suffixes occurred occasionally in early texts of Simplified Motu (the jargon stage of the language), so this feature may have remained in Hiri Motu as a retention.

Bound pronominals are also found in Broken Ojibwe, which preserves the person prefixes from the lexifier (unspecified for grammatical function) and recasts them as subject pronouns. Independent pronouns are used for grammatical objects:

	Ojibwe					**Broken Ojibwe**				
(18a)	gi-	-da:	-nis	-in	(18b)	ni-	-daa	-nitoon	giin	
	2	OBLG	kill	INV		1	OBLG	kill	2SG	
	'I should kill you.' (Nichols 1995)									

Direction morphology constitutes another contextual inflection occurring on verbs. Unami Delaware and Ojibwe both possess direct and inverse markers (i.e. direct *–a* and inverse *–in* in examples 12a, 18a), but these were lost or lexicalized in Pidgin Delaware and Broken Ojibwe. In (18b), the person prefix would have been *gi-* if the inverse marker was retained in *–nitoon* 'kill'.

Retained contextual nominal inflections. Inflection for nominal possessor may be found in many lexifiers, including Arabic, Assamese, Chinook, Greenlandic, and Delaware. In nearly every case these were lost in the pidgin. Example:

	Fijian			**Pidgin Fijian**		
(19a)	na	tama-mu	(19b)	na	tamana	koiko
	DEF	name-2SG.POSS		DEF	father	2SG

'your father' (Siegel 1987:110)

The Pidgin Fijian form also lexicalizes the Fijian 3s possessive pronoun suffix *–na* which lacks independent meaning in the pidgin. The central dialect of Hiri Motu is the only pidgin which retains bound pronouns for possession, such as tama-*gu* '*my* father' (Holm 1988:586).

The expression of case on nominals is most extensively retained in Nagamese, which preserves accusative *–k*, dative *–ke*, and locative *–te* (Sreedhar 1985:103). Case is lost entirely in Nubi, Gulf Pidgin Arabic, Govorka, Kyakhta Pidgin Russian, Pidgin Ngarluma, and Jargon Kaurna.

3.2. **Quantitative patterns of inflection retentions**

(I haven't had time to fully complete this section yet, so let me outline the argument so you could helpfully work on the markedness/OT modeling section. First, I want to show that there are differences in retention between inherent and contextual inflections, so I take a close look at pidgin AGR, TMA, and nominal number inflections. Table 2 displays the patterns of inflection preservation in the 30 languages in our sample.

(Then in Table 3, I group the inflections by inherent vs. contextual, and the pidgins display a statistically significant difference in retaining inherent vs. contextual inflections. And the difference is statistically significant regardless of whether "semi-Pidgins," "jargons," or both are excluded from the sample.)

(In Table 4, I group the three types of inflections by noun vs. verb, and the statistical significance disappears, again regardless of whether "semi-Pidgins," "jargons," or both are excluded from the sample.)

(To ascertain more precisely the relevance of the inherent vs. contextual distinction in inflection retention, I determine in Table 5 whether the lexifiers and pidgins respectively express the grammatical categories in (1) as inherent or contextual inflections.

(When the number of categories expressed by inherent and contextual inflections is tabulated, we find a statistically significant difference between pidgins and their lexifiers. Table 6 shows that pidgins have drastically reduced inflectional morphology in comparison to their lexifiers; even in inherent inflections, lexifiers have three times more inflection than pidgins.

(But in Table 7, we see that a difference between inherent and contrastive morphology emerges in pidginization. The lexifiers in our sample have roughly even proportions of inherent and contrastive inflections, and there is no statistically significant difference between them. But pidgins display a highly significant preference for inherent inflections. So we may conclude that this distinction is a relevant factor in the preservation of inflections in pidgin genesis.)

Name	**Retains AGR/bound pronouns**	**Retains verbal TMA, nominal NUM**
Asmara Pidgin Italian	NO	past *-ato*
Bilkiire	NO	imperative *–u*, future *–an*, negative future *–taa*, negative past *–aay*
Broken Ojibwe	1 *ni-*, 2 *gi-*, 3 *o-* (< 3 obviative)	future *da-*, obligative *gaa-* , 2 sets of plural/gender suffixes
Chinook Jargon	NO	NO
Fanagalo	NO	past *–ile*, future *–zo-**; *zi-, ma-* plural
Greenlandic Pidgin Eskimo	NO	NO
Gulf Pidgin Arabic	NO	plural *-āt*, masc. plural *–īn*
Herschal Island Trading Pidgin	NO	NO
Hiri Motu (non-central)	NO	NO
Hiri Motu (central)	1s obj. *–gu*, 2s obj. *–mu*, 3s obj. *–(i)a*, 1p obj. *–da, -mai*, 2p obj. *–mui*, 3p obj. *-dia*	NO
Kenyan Pidgin Swahili	NO	non-future *na-*, future *ta-*; *m-/wa-* noun classes 1, 2, *ma-* plural noun class 6
Kituba	NO	anterior *–á(k)a*; 4 plural class markers
Koriki Hiri Trading Pidgin	----	future, intentive *-varia*
Jargon Kaurna	----	NO
Kyakhta Pidgin Russian	NO	NO
LiNgala	large set of prefixes, i.e. 1s subj. *na-,* 3s subj. anim. *a-*, 3s subj. inan. *e-*	perfective *–i*, future *–ko-*; large set of classifiers, i.e. class 3 sing. *mó* (anim.), class 8 *bi* (inan.)
Mobilian Jargon	NO	NO
Nagamese	NO	present *–ɘse*, past *–se, -sile*, future *bo*; plural *–bilak*
Nubi, Juba Arabic	NO	future *bi-* (< nonpast indicative ~ future *b-*); plural *–á* for most nouns, *–ín*
Pidgin Delaware	NO	NO
Pidgin Fijian	NO	NO
Pidgin Haida	NO	NO
Pidgin Hawaiian	----	----
Pidgin Ngarluma	----	NO
Russenorsk	NO	NO
Sango	3s indef. subj. *à-*	irrealis marked by tone; plural *á-*
Taymir Pidgin Russian (Govorka)	AGR for person, gender, number	verbs inflected for tense/aspect
Toaripi Hiri Trading Pidgin	NO	NO
Yimas-Alamblak Trading Pidgin	NO	NO
Yimas-Arafundi Trading Pidgin	NO	future *–k*, nonfuture *-nan*

Table 2. Retention of AGR/bound pronouns, verbal TMA, and nominal NUM in the survey of pidgins.

	Retains bound morphology	Does not retain bound morphology	Significance
Complete sample:			
pronominal AGR	5	21	
TMA, nominal NUM	14	15	
			$\chi = 5.11$; $p \leq 0.025$
Excluding "**semi-Pidgins**":			
pronominal AGR	4	20	
TMA, nominal NUM	12	15	
			$\chi = 4.55$; $p \leq 0.05$
Excluding "**jargons**":			
pronominal AGR	5	19	
TMA, nominal NUM	14	12	
			$\chi = 5.77$; $p \leq 0.025$
Excluding both:			
pronominal AGR	4	18	
TMA, nominal NUM	12	12	
			$\chi = 5.12$; $p \leq 0.025$

Table 3. Statistical significance of retention differences (between inherent and contextual inflections).

	Retains bound morphology	Does not retain bound morphology	Significance
Complete sample:			
nominal NUM	9	16	
TMA, pronominal AGR	14	15	
			$\chi = 0.83$; $p \leq 1.0$
Excluding "**semi-Pidgins**":			
nominal NUM	7	16	
TMA, pronominal AGR	12	15	
			$\chi = 1.03$; $p \leq 1.0$
Excluding "**jargons**":			
nominal NUM	9	13	
TMA, pronominal AGR	14	12	
			$\chi = 0.80$; $p \leq 1.0$
Excluding both:			
nominal AGR	7	13	
TMA, pronominal AGR	12	12	
			$\chi = 1.00$; $p \leq 1.0$

Table 4. Statistical significance of retention differences (between nominal and verbal inflections).

Lexifier	Grammatical categories via inflection	Pidgin	Grammatical categories via inflection
Gulf Arabic	I: T/A, MD, NM, GN, DF; *NG; C: AGR-V, AGR-N, GF-N; *GF-V.	Gulf Pidgin Arabic	I: NM, GN; *T/A, *MD, *NG, *DF; C: *AGR-V, *AGR-N, *GF-V, *GF-N
Egyptian Arabic	I: T/A, MD, NG, NM, GN, DF; C: AGR-V, AGR-N, GF-N; *GF-V.	Nubi, Juba Arabic	I: T/A, MD, NUM; *NG, *GN, *DF; C: *AGR-V, *AGR-N, *GF-N, *GF-V.
Iñupiaq Eskimo	I: T/A, MD, NG, NM; *GN, *DF; C: AGR-V, AGR-N, GF-N, GF-V	Herschal Island Trading Pidgin	I: *T/A, *MD, *NG, *NM, *GN, *DF; C: *AGR-V, *AGR-N; *GF-N, *GF-V.
Assamese	I: T/A, MD, NG, NM, GN, DF; C: AGR-V, AGR-N, GF-N; *GF-V.	Nagamese	I: T/A, MD, NG, NM, GN; *DF; C: GF-N; *AGR-V, *GF-V, *AGR-N.
Choctaw, Chickasaw, Alabama	I: T/A, MD, NG, NM; *GN, *DF; C: AGR-V, AGR-N, GF-V, GF-N.	Mobilian Jargon	I: *T/A, *MD, *NG, *NM, *GN, *DF; C: *AGR-V, *AGR-N, *GF-N, *GF-V.
BoBangi	I: T/A, MD, NG, NM, GN; *DF; C: AGR-V, AGR-N, GF-V; *GF-N.	LiNgala	I: T/A, MD, NG, NM, GN; *DF; C: AGR-V, AGR-N, GF-V; *GF-N.
Fijian	I: *T/A, *MD, *NG, *NM, *GN, *DF; C: AGR-V, AGR-N, GF-V; *GF-N.	Pidgin Fijian	I: *T/A, *MD, *NG, *NM, *GN, *DF; C: *AGR-V, *AGR-N, *GF-V; *GF-N.
Fula	I: T/A, MD, NG, NM, GN; *DF; C: AGR-V, AGR-N, GF-V; *GF-N.	Bilkiire	I: T/A, MD, NG; *NM, *GN, *DF; C: *AGR-V, *AGR-N, *GF-V; *GF-N.
Haida	I: T/A, MD; C: AGR-V.	Pidgin Haida	I: *T/A, *MD; C: *AGR-V.
Hawaiian	I: *T/A, *MD, *NG, *NM, *GN, *DF; C: *AGR-V, *AGR-N; *GF-V, *GF-N.	Pidgin Hawaiian	I: *T/A, *MD, *NG, *NM, *GN, *DF; C: *AGR-V, *AGR-N; *GF-V, *GF-N.
Italian	I: T/A, MD, NM, GN; *NG, *DF; C: AGR-V, GF-V; *AGR-N, *GF-N.	Asmara Pidgin Italian	I: T/A; *MD, *NG, *NM, *GN, *DF; C: *AGR-V, *AGR-N, *GF-V, *GF-N.
Kaurna	I: T/A, MD, NG, NM; *GN, *DF; C: GF-N; *AGR-V, *AGR-N, *GF-V.	Jargon Kaurna	I: *T/A, *MD, *NG, *NM, *GN, *DF; C: *AGR-V, *AGR-N, *GF-V, *GF-N.
KiKongo	I: T/A, MD, NG, NM, GN; *DF; C: AGR-V, AGR-N, GF-V; *GF-N.	Kituba	I: T/A, NM, GN; *MD, *NG, *DF; C:*AGR-V, *AGR-N, *GF-V, *GF-N.
Koriki	I: T/A, MD; C: AGR-V, GF-V.	Koriki Hiri Trading Pidgin	I: T/A; *MD; C: *AGR-V, *GF-V.
Lower Chinook	I: T/A, MD, NM, GN, DF; C: AGR-V, AGR-N, GF-V.	Chinook Jargon	I: *T/A, *MD, *NM, *GN; *DF; C: *AGR-V, *AGR-N, *GF-V.
Motu	I: T/A, DF; *MD, *NG, *NM, *GD; C: AGR-V, AGR-N, GF-V; *GF-N.	Hiri Motu (non-central)	I: *T/A, *MD, *NG, *NM, *GD, *DF; C: *AGR-V, *AGR-N, *GF-V, *GF-N.
Motu	I: T/A, DF; *MD, *NG, *NM, *GD; C: AGR-V, AGR-N, GF-V; *GF-N.	Hiri Motu (central)	I: *T/A, *MD, *NG, *NM, *GD, *DF; C: AGR-V; AGR-N, GF-V; *GF-N.
Ngarluma	I: T/A, MD, NM; C: GF-N; *AGR-V, *GF-V.	Pidgin Ngarluma	I: *T/A, *MD, *NM; C: *AGR-V, *GF-V, *GF-N.
Ngbandi	I: T/A, MD, NM; *GN, *DF; C: AGR-V, GF-V; *AGR-N, *GF-N.	Sango	I: NM; *T/A, *MD, *NG, *GN, *DF; C: AGR-V, GF-V; *AGR-N, *GF-N.
Ojibwe	I: T/A, MD, NM, GN; *DF; C: AGR-V, GF-V, GF-N.	Broken Ojibwe	I: T/A, MD, NM, GN; *DF; C: AGR-V, GF-V; *GF-N.

Russian	I: T/A, MD, NM, GN; *NG, *DF; C: AGR-V, GF-V, GF-N; *AGR-N.	Taymir Pidgin Russian	I: T/A, MD; *NG, *NM, *GN, *DF; C: AGR-V, GF-V; *AGR-N, *GF-N.
Russian	I: T/A, MD, NM, GN; *NG, *DF; C: AGR-V, GF-V, GF-N; *AGR-N.	Kyakhta Pidgin Russian	I: *T/A, *MD, *NG, *NM, *GN, *DF; C: *AGR-V, *AGR-N, *GF-V, *GF-N.
Russian, Norwegian	I: T/A, MD, NM, GN; *NG, *DF; C: AGR-V, GF-V, GF-N; *AGR-N.	Russenorsk	I: *T/A, *MD, *NG, *NM, *GN, *DF; C: *AGR-V, *AGR-N, *GF-V, *GF-N.
Swahili	I: T/A, MD, NG, NM, GN; *DF; C: AGR-V, AGR-N, GF-V; *GF-N.	Kenyan Pidgin Swahili	I: T/A, MD, NM, GN; *NG, *DF; C: *AGR-V, *AGR-N, *GF-V, *GF-N.
Toaripi	I: T/A, MD; C: AGR-V, GF-V.	Toaripi Hiri Trading Pidgin	I: *T/A, *MD; C: *AGR-V, *GF-V.
Unami Delaware	I: T/A, MD, NM, GN; C:AGR-V, AGR-N; GF-V, GF-N.	Pidgin Delaware	I: *T/A, *MD, *NG, *NM, *GN; C: *AGR-V, *AGR-N, *GF-V, *GF-N.
West Greenlandic	I: T/A, MD, NG, NM; *GN, *DF; C: AGR-V, AGR-N, GF-V, GF-N.	Greenlandic Pidgin Eskimo	I: *T/A, *MD, *NG, *NM, *GN; C: *AGR-V, *AGR-N, *GF-V, *GF-N.
Yimas, Alamblak	I: T/A, MD, NG, NM, GN; *DF; C: AGR-V, GF-V, GF-N; *AGR-N.	Yimas-Alamblak Trading Pidgin	I: *T/A, *MD, *NG, *NM, *GN; C: *AGR-V, *AGR-N, *GF-V, *GF-N.
Yimas, Arafundi	I: T/A, MD, NG, NM, GN; *DF; C: AGR-V, GF-V, GF-N; *AGR-N.	Yimas-Arafundi Trading Pidgin	I: T/A, *MD, *NG, *NM, *GN; C: *AGR-V, *AGR-N, *GF-V, *GF-N.
Zulu (Nguni)	I: T/A, MD, NG, NM, GN; *DF; C: AGR-V, AGR-N, GF-V; *GF-N.	Fanagalo	I: T/A, MD, NM, GN; *NG, *DF; C: *AGR-V, *AGR-N, *GF-V, *GF-N.

Table 5. Comparison of pidgins and lexifiers according to expression of grammatical categories in inherent and contextual inflections.

I: inherent inflections, T/A: tense/aspect, MD: mood, NG: negative, NM: number, GN: gender/noun class, DF: definiteness, C: contextual inflections, AGR-V: agreement/pronominals in verbal inflection, AGR-N: agreement/pronominals in nominal inflection, GF-V: grammatical function in verbal inflection, GF-N: grammatical function in nominal inflection (i.e. case).

	Categories in inherent inflections	Categories in contextual inflections	Significance
lexifiers	113 (74.3%)	81 (86.2%)	
pidgins	39 (25.7%)	13 (13.8%)	
			$\chi = 4.87$; $p \leq 0.05$

Table 6. Statistical significance of difference between lexifiers and pidgins in inflectional morphology.

	Categories in inherent inflections	Categories in contextual inflections	Significance
categories in lexifier inflections	113 (70.6%)	81 (73.6%)	
categories unexpressed in lexifier inflections	47 (29.4%)	29 (26.4%)	
			$\chi = 0.29$; $p \leq 0.1$
categories in pidgin inflections	39 (24.4%)	13 (11.8%)	
categories unexpressed in pidgin inflections	121 (75.6%)	97 (88.2%)	
			$\chi = 6.61$; $p \leq 0.025$

Table 7. Statistical significance of difference between lexifiers and pidgins in the expression of grammatical categories in inflections.

4. **Retention of inflections and markedness**

Markedness is usually viewed as a factor in language simplification and substrate transfer, but it has been defined in interrelated but distinct ways as degrees of typological constancy, structural simplicity, learnability, or ease of production and perception. The unmarked form is typically characterized as most *natural* in some theoretical sense and often viewed as respecting certain universal conditions on linguistic representations.

The notion of universality in various syntactic frameworks, particularly in Principles and Parameters, requires that forms crosslinguistically *always* satisfy universal conditions at some surface or abstract level in the grammar. A well-known example is the universal on *wh*-movement (all *wh*-phrases must undergo movement from their base position), which is respected in surface representations in languages such as English and at more abstract representations (such as Logical Form) in languages such as Mandarin (Aoun & Li 1993). Parameters are the different ways in which principles are respected, the marked settings of which may either be active in a language or "switched off." Violations of a principle would automatically render a representation ill-formed.

Thomason & Kaufman (1988) and Mufwene (1991) point out that markedness, while certainly relevant to some of the changes pidgins and creoles undergo in their formation, leaves a lot of things unexplained. First of all, pidginization may produce innovations or borrow forms that are universally marked in some way. Tok Pisin for instance has developed dual and trial pronouns and an inclusive-exclusive distinction in the first person plural, universally marked categories absent in the English lexifier (Thomason & Kaufman 1988:30). Second, features may be simultaneously marked and unmarked but in different ways. Thomason & Kaufman (1988:24) mention an example from the phonology of Papago, an Uto-Aztecan language spoken in Arizona: "A rule like the Papago one that changes /t/ to [č] before any high vowel /í u/ is less marked than in terms of generality but certainly more marked phonetically than $t \rightarrow č$ / __ *i*." A linguistic change could therefore be a simplification in one part of the grammar and a complication in another.

Many of these problems disappear when markedness is viewed in terms of Optimality Theory. In OT, markedness is not embodied by absolute principles which must either be categorically respected or violated but rather occurs as a family of violable constraints on the well-formedness of linguistic forms (Kager 1999). These constraints impose restrictions aimed to *minimize* the use of structure to express lexical and semantic contrasts and are grounded in speaker-oriented pragmatic principles that minimize production. OT characterizes language as "a system of conflicting universal forces" (Kager 1999:4), such that markedness constraints are satisfied only at the expense of faithfulness constraints which act to *preserve* lexical and semantic contrasts in actually-occurring linguistic forms (i.e. input-output correspondence). Faithfulness constraints maximize the use of structure to express contrasts and are grounded in listener-oriented principles that privilege comprehension over production. Because of this conflict, every single linguistic form simultaneously violates and satisfies different constraints. Moreover, although markedness constraints often fall into smaller sub-families of constraints, they are generally independent of each other. Forms may satisfy some markedness constraints, but not others. It therefore comes as no surprise that pidgins and creoles retain, develop, and borrow forms that are marked in some way. It is, in fact, to be expected.

Although constraints are inherently conflicting, they do not all have the same effect in determining linguistic structure. Some matter more than others. OT assumes that every language ranks constraints in a dominance hierarchy, so that a violation of a highly-ranked constraint may be critical, while a violation of a low-ranked constraint may have no consequence at all in the grammar. Actually-occurring linguistic forms represent the most 'optimal' outputs the grammar can generate, as these satisfy more highly-ranked constraints than any other possible output. So while Principles and Parameters would view languages exhibiting a specific marked trait as having their marked parameter setting "switched on," OT regards the relevant markedness constraint as inactive in such languages because it is dominated by a higher ranked faithfulness constraint.

The compromises between markedness and faithfulness made in ordinary language use is reminiscent of the compromise claimed to occur in pidgin genesis. Pidgins, commonly defined as functionally-restricted contact languages native to no one, are developed primarily to facilitate communication between speakers of different language groups when acquisition of the lexifier is unnecessary or undesirable. The lack of motivation or opportunity to learn the lexifier is the very *raison d'être* of pidgin genesis and introduces the need for structural reduction. The amount of reduction that actually occurs, however, depends on other factors in the social situation – particularly who needs to learn it and what the pidgin is designed the do in the various situations it is used in. The formation of pidgin grammar involves the resolution of these two conflicting factors. Pidgins are structurally reduced only as much as they need to be and may still therefore retain structure considered to be universally marked. There is no reason to assume that pidginization eliminates all marked structure.

For example, as Thomason & Kaufman (1988) point out, the degree of homogeneity between the languages in contact plays a prominent role in pidgin formation. In the case of Chinook Jargon, most of its syntactic and phonological features are readily "explained by reference to typological characteristics shared by Pacific Northwest Amerindian languages." (p. 29) Marked features such as glottalized stops and pleonastic subject pronouns rose to prominence as a result of mutual accommodation between speakers of these various languages. Since such features were already widespread in the languages spoken by the early users of Chinook Jargon, they had less priority in the reduction process than areally less common features in the lexifier.

According to Bresnan (2000), morphosyntactic reduction in pidginization occurs when low-ranked markedness constraints are reranked above the higher-ranked faithfulness constraints that conflict with them. These formerly inactive constraints spring into action and begin eliminating the morphosyntactic structures they penalize. This phenomenon, called the "emergence of the unmarked," is well-known cross-linguistically in non-pidgin languages. Lee (1999, 2000) for instance discusses the suppression of marked word order in cases of ambiguous reference in Hindi and Korean. When viewed as involving markedness constraint promotion, pidginization no appears to be such an exotic and unique process and may be more readily compared to other synchronic and diachronic processes in non-pidgin languages.

Bresnan further notes that not all markedness constraints are targeted for reranking in pidgin formation. Constraints penalizing structures difficult to learn or understand are readily promoted while constraints marking easily understandable forms have less priority. The marked phonological and morphosyntactic features retained in

Chinook Jargon are precisely the ones we would expect because these were already well-known to many of its early speakers. Siegel (1997) points out, however, that other factors appear to be involved in the selection of features that end up in pidgin and creole grammar, including perceptual salience, semantic transparency, economy, and regularity. All these factors are actually embodied as markedness constraints in OT, as they relate to structural form in either production or comprehension. Thus the approach outlined here can directly relate markedness to speech accommodation, as well as incorporate many of the other factors not traditionally regarded as instances of markedness in pidgin/creole studies.

One effect of the demotion of faithfulness constraints is the loss of semantic contrasts formerly marked structurally. One dramatic example of this can be found in the pronoun inventory of Pidgin Fijian. The lexifier contains at most 135 forms of the independent pronoun, exhibiting a four-way distinction in number (singular, dual, paucal, plural), as well as distinctions in inclusiveness, person, and case. The inventory was reduced to only 6 pronouns in Pidgin Fijian, eliminating distinctions of dual and paucal number, inclusiveness, and case in the process (Siegel 1987). Prepositions also commonly lose semantic contrasts in pidginization, as evidenced by the generalized preposition *ma* in Pidgin Hawaiian (derived from the locative, but used also for ablative and direction) and *nà* in Sango which, according to Thornell (1997), is semantically vague and occurs with locative, temporal, instrumental, and comitative nouns.

The picture however is not yet complete. As noted earlier, there are some marked inflections which result from the pidginization process itself and do not represent a residue of marked structure retained in the pidgin. Although universally marked, these inflections enhance communication because they often reproduce structure already familiar to a significant number of speakers. This is certainly the case with borrowed inflections, and innovated ones may express substratal morphosyntactic structure. Since pidginization is primarily driven by mutual accommodation, it may occasionally need to target certain faithfulness constraints for promotion to allow new marked structures to emerge in the language. The range of outcomes in pidginization are thus better explained by viewing faithfulness constraint promotion and demotion as selective, and motivated by the same factors. The difference between the two, it seems, is that retained inflections survive in the pidgin via selective faithfulness demotion while innovated inflections emerge via selective faithfulness promotion.

The following section will discuss how such a conception of markedness could be modeled for pidgins in Optimality Theory.

5. **Structural expression of person, number, and TMA in pidgins**

(This would discuss how a constraint on structure underlies the inherent vs. contrastive distinction in inflections, i.e. Bybee's 'semantic relevance,' and model a rough analysis in OT.)