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Etymological Problems in the Lexicon of Chinook Jargon: Some Proposed Solutions

Part I: Words of French and Canadian French Origin

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1.0 INTRODUCTION

The lexicon of Chinook Jargon, the nineteenth century trade language of the Pacific Northwest, has, like that of all pidgins, a number of sources. The core vocabulary is chiefly from Chinookan and Nootkan languages, but English and French also made large contributions. While most of the lexical items in the Jargon have been more or less satisfactorily accounted for, there remains a score or so of what might be termed 'mystery words' — words for which an etymology either is not given[1] or is of dubious accuracy. The intent of this paper is, therefore, to attempt to track down the probable origin of as many of these words as possible (and, in three cases, to make corrections to the etymologies as given). Since French is my second language, and the one, next to English, with whose history and structure I am most familiar, the first part of this study will deal with those items which are apparently of French or Canadian French provenance. But before dealing with the words themselves, it is necessary to discuss briefly the phonology of

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[1] Each dictionary maker, at least anyone who attempted etymologies, of course relied heavily on his predecessors. Thus, words of unknown or debatable origin tend to remain so from one dictionary to the next, usually marked 'Quaere U. D.', roughly, 'query whence descended'.

Chinook Jargon as supporting evidence for my later etymological claims.

2.0 PHONOLOGY

Most of the dictionaries which I have consulted make little attempt to indicate pronunciation,[2] apart from marking stress, relying rather on a sort of generalized English orthography which is not always entirely consistent. It is therefore impossible to give an accurate rendering of any given item, but only a broad semi-phonetic transcription based on Shaw's 'Guide to Pronunciation'.[3]

Like all pidgins, Jargon had a phonological system that was a compromise among the systems of the various contributing languages, consisting basically of those sounds that are common to all, with, of course, much local and personal variation (especially where the vowels are concerned) depending on the mother-tongue of the speaker. Native speakers of English and the local indigenous languages would thus denasalize the French nasal vowels, while a French speaker would retain them; an Amerindian speaker would devoice the voiced obstruents of English and French; English and French speakers would deglottalize the glottalized consonants of the local languages and render

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[2] Chiefly, Gibbs' A Dictionary of the Chinook Jargon or Trade Language of Oregon (1863), and Shaw's The Chinook Jargon and How to Use It (1909), plus two or three smaller and lesser known works. Shaw, who was my main lexical source, is an exception to this general rule.

[3] Where Shaw did not give a pronunciation, I have attempted a transcription based on the orthography of the item in question compared to that of items for which pronunciations are suggested. Such transcriptions are indicated by a following question mark thus: [ɬikɬé]?

the difficult (to them) laterals [λ] and [ɬ] as the cluster [kl] or the sibilant [š], and so forth. Some compromises were made by everyone, the two most notable being the substitution of [p] for [f], and of [l] for [r] and [R] in words of English or French origin. Chinook Jargon, therefore, was highly dialectal, not to say idiolectal, in spite of its demonstrated success as a lingua franca.

2.1 The vowels

It is very difficult to discuss the vowel system of the Jargon except in the most general terms. Although Shaw uses eighteen combinations of *a, e, i, o, u* and diacritics, plus two digraphs *ou* and *oi*, to account for seventeen vowel sounds and three diphthongs, it appears on analysis that the number of vowel phonemes could be reduced to six (plus the three diphthongs [ai], [oi], [ou]). However, as on an individual word basis there seems to be a complete lack of minimal pairs, this hypothesis is difficult to prove.

Basically, then, the vowel system of Chinook Jargon seems to be as follows:

a. a high front vowel [i] ~ [I];
b. a mid front vowel [e] ~ [ɛ];
c. a low front to low central vowel [æ] ~ [a] (the distribution here appears to be [æ] if stressed, unless an original [R] or [r], or an [l], follows, [a] elsewhere or if stressed under the condition just stated);
d. a mid central vowel [ʌ];[4]

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[4] Shaw's 'Guide' does not indicate in any way that unstressed vowels might weaken to [ʌ] or [ə], although a transcription of the Lord's Prayer in Chinook Jargon, given to me by a student, would indicate that such indeed was, at least in some words, the case. (Her transcription is from the speech of an elderly male relative who had

e. a high back vowel [u] ~ [ʊ];

f. a mid back vowel [o] having lower variants [ɔ] and/or [a] (the distribution of these appears to be very complex depending, at least for words of French origin, on the environment of the corresponding sound in the word in the source language).

2.2 The consonants

The consonantal system is easier to determine, having probably consisted fundamentally of these sounds:

p	t	č	k	
	s	š	(x)	h
m	n		(ŋ)	
w	l			

It should be noted that, as stated above, English and French speakers would have voiced stops in words having them in those languages; thus Fr. (*la*) *bouteille* 'bottle' became CJ *labooti* [labutí]? or *laputay* [lapʊté]?. [č] apparently varied with[ts]: French and English [f] invariably became [p], and [v] became [w].[5] [s]

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learned to speak the Jargon in his youth.) It is also apparent from this transcription that, in the speaker's dialect at any rate, the tense mid vowels [e] and [o] are replaced by the tense high vowels [i] and [u]. The transcription, interlined with the orthographic version, is appended at the end of Part II, WPLC 2-1 (forthcoming).

[5] There is one exeption to this, *lummieh* [lʌ́miʌ] 'old woman' from French *la vieille* [lavjɛ́j], where the [v] has changed to the corresponding labial nasal, presumably because of the relative difficulty of articulating a string consisting of vowel, glide, vowel, vowel, as would have been the case if the expected change had taken place.

occasionally varied with [z], e.g. *le sap* [lIsáp] 'egg(s)' ~ *lezep* [lɛzɛ́p] from French *les oeufs*.[6] [x] is marginal in the sense that Shaw does not indicate it as such, but where the orthography has *gh*, his 'Guide' gives [hh] as the corresponding sound, which he may have intended to represent the velar fricative; in the transcription of the Lord's Prayer referred to in footnote 4, [x] is used for the medial consonant in the word *saghalie* 'above' (It also appears from this transcription that [k] was sometimes fricativized.) The velar nasal [ŋ], although listed in Shaw's 'Guide', appears in only one item, *lalang* [lalǽŋ] 'tongue, language', and is probably entirely due to interference from English *language*. French [ʀ] and English [r] (and variants thereof) become [l] or disappear altogether in final position or as the first member of a consonant cluster, e.g. *leplet* [lIplɛ́t] 'priest' from Fr. (*le*) *prêtre* 'priest'; *waum* [wam] 'warm'.[7] [j] occurs only prevocalically in initial position; a medial [j] from English or French becomes [i] in Jargon, and since [i] never occurs prevocalically in initial position, [j] may thus be considered a positional variant of [i] and as such is not included in the inventory.

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[6] The final [p] in this word, although necessarily derived from [f], should not have been there if the derivation is from the French plural form alone, as the final consonant was lost during the Early Modern French period, giving *oeuf* [øf] sg; but *oeufs* [oe:] pl. However, since the word no doubt came into the Jargon via the French of Canadian fur traders, the final consonant in the plural may well have been retained in their more conservative speech. (The tendency to retain final consonants, especially [t], still exists in some modern dialects of Canadian French.)

[7] Where no derivation is indicated, the etymon is the same as the English gloss.

Before going on to a discussion of the 'mystery words' in Chinook Jargon, I should like to point out three errors in Gibbs' and Shaw's etymologies. The first is simply an error in the gender of the French etymon; they have derived *lekleh* [lɨklé]? 'key' from French *le* [sic] *clef* when *clef* is, of course, a feminine noun. The blame for this error cannot be laid at the door of 'mispronunciation' on the part of Jargon speakers, as the next entry in both dictionaries is *lemah* [lɨéma] 'hand', correctly derived from *la main*. The other two errors are less trivial, in that the wrong French lexical item has been given as the etymon for the Jargon word. Our two lexicographers stated the derivation of *lebal* [lɨbál] 'ball, bullet' to be 'French, - idem', thereby indicating *(le) bal* 'dance' (as in *un bal masqué* 'a masked ball') as the etymon, when clearly it should be *(la) balle* 'ball, bullet'[8] Gibbs has also given the French etymon of *lasanjel* [lɨasánǰɛl] ? 'girth, strap, belt' as being *la cingle*, a word which I cannot find in either Larousse or Robert; he clearly meant *la sangle* 'strap, cinch'(Shaw includes the word only in his 'Supplemental Vocabulary' so it is indicated simply as being of French origin, with no etymon given).

4.0 WORDS OF APPARENT FRENCH ORIGIN

The following items are all of apparent French derivation (and in 'French' I include the Canadian as well as the European variety),

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[8] These three items are the only ones of those of French origin borrowed with article intact - as are most French nominals - that have, so to speak, changed gender in their migration from one language to the other.

but either were not identified as such by earlier lexicographers or were given an etymon which is at best uncertain, and frequently dubious. I should like to propose here some probable (or possible) etymologies for these words based on a combination of the known phonological correspondences and some provable semantic correspondences. The words are discussed in alphabetical order according to Shaw's orthography.

4.1 *Lagwin*

Lagwin, lakween [lagwín~lakwín]? 'a saw' is listed in Shaw only in his 'English-Chinook' section, and no derivation is suggested. The usual word for the instrument was apparently *lasee* [lasí] from Fr. *(la) scie* 'saw'. The only French word I have so far found that is phonologically parallel is *(la) gouine* [gwin], an archaic word for a prostitute or a 'woman of loose morals'; its modern popular meaning is 'a female homosexual'. In its older sense, a figurative semantic connection could be made, especially if the saw is of the kind generally referred to as a 'crosscut', i.e. the action is from one man to another.[9] The only other French word even vaguely related either semantically or phonologically is *(le) gouet* [gwɛ], a type of large pruning hook. However, there are various arguments against this as the etymon of *lagwin*. In the first place, as stated in footnote 8, there are only three items in Jargon of known French provenance that shift the article from one gender to the other, and all shift feminine to masculine rather than vice versa as this pair would require. In the second place,

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[9] I have just been reliably informed that a facetious term in English for this kind of two-man saw is a 'come-to-me-go-from-me', as well as other less printable ones.

Fr. [ɛ] remains [ɛ] in words borrowed into Jargon (in one instance [ɛ] > [e], and in another [a], but both these variants — and they are the only ones — can be accounted for). Thirdly, Standard French [i] frequently laxes to [I] in Canadian French speech, thus accounting for the form [lagwín], while the devoicing of voiced stops gives [lakwín]. Lastly, final consonants, especially obstruents and nasals, are preserved in Chinook Jargon. I thus feel that *la gouine* is so far the most likely candidate for the etymon of *lagwin*.[10] The old *coureurs du bois* and *voyageurs* were nothing if not men of robust humour and imagination.

4.2 *Lapellah*

Shaw gives no gloss for *lapellah* [lapɛla]? but simply marks it as a verb and then cites *mamook lapellah* 'to roast before the fire'. Both he and Gibbs note 'Quaere if from the French, - *le foyer*' (which means, basically, 'hearth'). However, apart from the fact, already twice mentioned, of the unlikely event of a 'gender change', the phonological facts are against this derivation. The standard pronunciation of *foyer* is [fwɔjé]; we here have the [p] to [f] correspondence, but no other:

a. [pw] is a legitimate consonant cluster in Jargon, for example, *lepwau* [lIpwɔ́] 'peas'; why then should it be reduced to [p] in this item?
b. Fr. [ɔ] > CJ[o], occasionally [ɔ] but never a front vowel;
c. Fr. medial [j] > CJ[i];
d. Fr. [e] > CJ[i] ~ [I]

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[10] There is also a French verb *couiner* [kwine] 'to squeak, make a sharp sound' which could certainly apply to a saw; unfortunately its corresponding nominal is *(le) couic* [kwik], the gender and the final consonant both disqualifying it.

If the fundamental meaning of *lapellah* is something like 'a spit' or 'a grill' (as the compound form *mamook lapellah* suggests it might be) then two other possible etymons which correspond phonologically better than *foyer* and semantically satisfactorily (if somewhat metaphorically) are *(la) ferrure* and *(la) ferraile*. The former, in its oldest sense, means 'an iron fitting', and the latter '(a piece of) scrap iron', either of which could apply to a rustic or homemade spit or grill. The phonological correspondences are as follows:

Fr. [lafɛʀyʀ] → [lapɛlo_][11]

[lafɛʀaj] → [lapɛla?][12]

Either of these is much closer to the Jargon word than is *foyer*, and it is at least possible that *lapellah* comes from a confusion of *la ferrure* and *la ferraille*, although I personally lean towards the former as being the etymon.

4.3 *Lekye*

Gibbs, quoting Anderson, derives *lekye* [lIkié]? [lIkái]? from a Canadian French word *caillé* for which he gives no gloss. The Jargon word refers to a piebald horse, and also has the meanings 'a spot, spotted, speckled'. In Standard French and in Canadian French, *caillé* [kajé] means 'curdled' or 'clotted', not requiring, perhaps, too

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[11] Fr. [y] normally unrounds to [i] or backs to [u], but in *leloba* [lIlóba] 'ribbon' from *(le) ruban* [ʀybã] it lowers to [o] apparently under the influence of the preceding uvular.

[12] There are no definitely known examples in the Jargon lexicon for derivations of the French sequence [aj]; [ɛj] > [i] or [ai]. See also item 4.3.

fanciful a semantic leap to apply it to a 'curdled' colour. However, there is also a Canadian French adjective *caille* [kaj(ə)], meaning 'white spotted with black or tan, piebald', although in Standard French *la caille* means 'quail' — a bird which does not, at least on this continent, fit the colour combination attribted to *lekye*. The nominalization of CF *caille* (adj.) is *(la) caillette*, applied frequently to cows that are piebald or skewbald in colour; it thus could conceivably be extended to refer to horses of the same coloration, although the fact of the final [t] would seem to disqualify it as an etymon for *lekye*. It appears that the lexicon of Acadian Canadian French includes an item *kayé* [sic:Juneau 1977] 'pelt that is white with tan spots'. We thus have two possible etymons for *lekye*: CF *caille* and ACF *kayé*; Anderson (quoted by Gibbs) was presumably referring to the latter. The choice probably depends on the pronunciation of the Jargon word; the orthography would tend to support [lIkaɪ], as one would expect **lekyeh* if a final non-low front vowel were retained. Also, Fr. [e] becomes CJ[i] or [I][13] which would seem to eliminate *kayé*, leaving us with *caille*. The fact that this form is basically an adjective in Canadian French poses no problem, given that most descriptive adjectives in French can also be used as nominals, simply by preceding them with the appropriate article, e.g. *la vieille* the'old woman', *le fou* 'the madman'. As an etymon for *lekye*, then, *(le) caille* fills all the criteria, syntactic (both nominal forms), semantic (identical meanings) and phonological (if indeed *lekye* was pronounced [lIkaɪ] as the orthography indicates — see also footnote 13).

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[13] CJ[e] is rare and is derived from other sources; see Appendix II, Part II, WPLC 2-1 (forthcoming).

4.4 *Lepishemo*

This was the most challenging of all the items. *Lepishemo* [lIpɪ̌šɛma]? means 'saddle blanket, (and) housings of a horse'. The usual etymon given is *puis on monte* 'then one mounts'; I should like to suggest a less 'folk-y' etymology, for various reasons. In the first place, nominal forms derived from syntactic formations are rare at the best of times and especially so where borrowing is involved. Secondly, an expression such as *puis on monte* is used mainly in connected narrative and not, as presumably the lexicographers intended, as an incidental remark made at the time of the action where *alors* would be more likely than *puis*. The phrase is also difficult to justify on phonological grounds, even assuming a close vowel [i] in the [p _ š] environment:

a. the liaison between the underlying [s] > [z] of *puis* [pɥi] and the following vowel [ɔ̃] had been lost before the time of contact;

b. even were the sibilant retained, it should still be [s] in Jargon, not [š];

c. the vowel [ɔ̃] of *on* would become [o] (or, rarely, [ɔ]) — even if unstressed, it would more likely turn up as [ʌ];

d. [ɔ̃t] (in *monte*) would not reduce to [o], cf. *lemonti* [lemɔ́nti] < Fr. *(la) montagne*.

The etymon that I propose is not, I admit, to be found in any of the dictionaries that I have consulted; it is however, based on sound syntactic and morphological principles.[14] The French verbs *panser* [pãsé] and *bichonner* [biš̌ɔné] both mean, among other things, 'to groom a horse', the latter being a colloquial form also having

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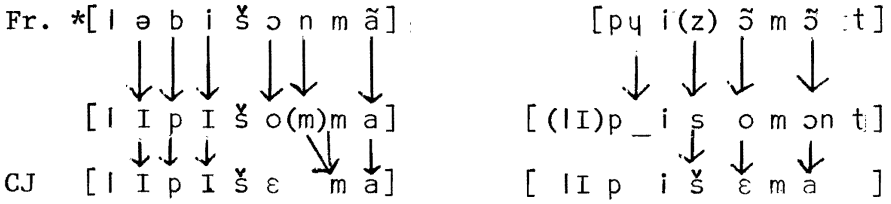
[14] I have also 'tried it out' on two French-speaking colleagues, and they agree that my suggested derivation is not only possible but probable.

the meaning 'to dress up' (and if you 'dress up' a horse, presumably you put on its saddle blanket, saddle, bridle, and so forth). The corresponding standard French nominal forms are *(le) pansage* and *(le) bichonnage*, where the suffix [-až] denotes 'the action of'. However, there is another Standard French nominal derived from *panser* (in its sense 'to dress (a wound)'), i.e. *(le) pansement* 'a bandage', the suffix [-mã] here indicating the thing used to perform the action. All these forms also exist in Canadian French. It would therefore seem not unreasonable to posit a nonstandard form **le bichonnement* [ləbišɔnmã] arising through analogy. Phonologically, while the correspondences with *lepishemo* are not perfect, they are a good deal better than those of *puis on monte:*



The derivation from **le bichonnement* illustrates the typical Jargon devoicing of the voiced stop, the equally typical laxing of [i] to [I] (also typical of Canadian French, as noted above), the retention of Fr. [š], and the assimilation of the [n] to a following [m] as a manifestation of the cluster reduction common in Chinook Jargon. The last two vowels create a minor problem, if one assumes that the given orthography *lepishemo* reflects the pronunciation relatively accurately;[15] however, if one takes the position that the unstressed [o] could have reduced to [ʌ], and looks upon *o* as a possible spelling for any low non-front vowel (final

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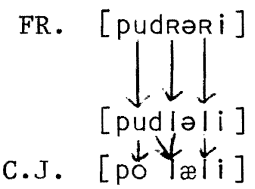
[15] One can only assume this for the most basic items of the lexicon and even they often have at least one alternate spelling; some words have as many as five or six or more.

[o] is usually spelled *-oh*), the problem solves itself.

4.5 *Polallie*

This word means 'gunpowder; dust, sand'. Gibbs says, 'The word is neither Chinook nor Chehalis,' and suggests Fr. *poudre*; Shaw adds 'certainly' to Gibbs' statement and notes 'Quaere French, *Poudre*. He gives the pronunciation as being [pōlǽli], but also lists seven alternate spellings, five consistent with this pronunciation, but two (*poolala, pooale*) indicating variant forms having a high vowel [u] in the first syllable. I should like to make a case for Canadian French *poudrerie* [pudʀəʀí] 'snow that the wind lifts and blows in swirls' as the etymon for this item, perhaps confused with *poudrière* [pudʀíɛ́ʀ] 'gunpowder store'. The former accounts for the phonological shape of the word:



(note the cluster reduction typical of Jargon borrowings). *Poudrerie* also accounts, by extension, for the glosses 'dust' and 'sand', both of which typically blow in swirls in the same manner as does powder snow, which is a climatic rarity in this part of the world. *Poudrière* would contribute to the meaning 'gunpowder', which, while indisputably of dusty or sandy consistency, is less likely to be found blowing about in large quantities.

5.0 SUMMARY

There remain to be dealt with a dozen or so words which may or may not be attributable to some definite source, and a few whose origin has been obscured by the passage of time. These

will be dealt with in detail in Part II of this paper, 'Words of other than French origin'. Meanwhile, I should be very intersted in receiving any comments that readers might have to make, especially if they can cast any further etymological light into these murky depths of linguistic history.

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[16] The full bibliography, as well as the two Appendices, 'Transcription of the Lord's Prayer in Chinook Jargon', and 'Phonological Correspondences between French and Chinook Jargon' will appear with Part II, WPLC 2-1 (forthcoming).

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Glottalization in Cowichan[1]

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1. INTRODUCTION

The phonological status of glottalization--ejection in stops and affricates and glottal stricture in sonorants--is not altogether transparent, since these phenomena could be assigned segmental status (as /ʔ/) or ascribed to a feature [+glottal] associated with the segment. The latter analysis raises the issue of whether one phonological feature of glottalization should be associated with both glottalized sonorants and the glottalized obstruents which abound in the Pacific Northwest. Data from the Cowichan dialect of Halkomelem, a Coast Salish language, shows systematic relationships between glottalized sonorants, glottal stop and, to a limited degree, glottalized obstruents, which leads to the hypothesis that these elements share a common phonological feature.

2. GLOTTALIZATION AS A FEATURE

The evidence for underlying glottalized segments in Cowichan is not compelling. That is, it is at least possible to analyze putative glottalized obstruents and sonorants as sequences with an adjacent glottal stop. We shall see in this section, however, that reduplication rules operate on these elements as single phonological units, not as clusters, and therefore glottalized segments must exist at some point in the phonology. This can be taken as indirect

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[1] This work was supported in part by Social Sciences and Humanities Research Council of Canada Grant No. 410-78-0599. My thanks go to Ms Ruby Peter of Duncan, B.C., who contributed the majority of the forms cited here.

evidence for a feature or component of glottalization in Cowichan--an analysis which is supported by phonological alternations discussed in section three. Given that glottalized segments must exist at some rather abstract level in Cowichan phonology, it is not clear that there are descriptive advantages in positing underlying sequences involving glottal stop unless such sequences are motivated in specific cases by alternations in surface forms.

Let us consider first the case for glottalized obstruents in Cowichan. For every plain stop or affricate there is a glottalized counterpart (see Table 2.1), with the exception of /k/, which is acquired through loanwords. The converse holds as well, except that there is no plain counterpart to the glottalized lateral affricate /ƛ̓/. Excluding the latter, one might analyze the glottalized segments as sequences of obstruent plus /ʔ/. This fills a distributional gap, since apparently such sequences do not occur at the phonetic level.

A case for a segmental analysis could be made for three forms which exhibit an alternation between [t̓] and [tVʔ].

(1) i. x̌téʔ 'do'
ii. x̌ə́t̓ə 'doing'
(2) i. x̌ʷtéʔ 'go that way'
ii. x̌ʷə́t̓ə 'going that way'
(3) stəʔé ~ st̓e 'be like'

The progressive forms (1ii) and (2ii) exhibit a regular vowel infixation process which applies to CC-initial bases in progressive formation (Hukari 1978, Jones 1974). However, the alternation between CVʔ and C̓ is unique to these forms (though perhaps phonologically definable in this narrow context of fricative, /t/ plus /ʔ/).

Table 2.1
Tentative Distinctive Feature Matrix of Cowichan Consonants[2]

m	m̓	n	n̓	l	l̓	y	y̓	w	w̓	h	ʔ	θ	s	š	ɬ	xʷ	x̌	x̌ʷ	p	p̓	tθ	t̓θ	t	t̓	c	c̓	č	č̓	x̣	k	kʷ	k̓ʷ	q	q̓	qʷ	q̓ʷ	
+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SONORANT
-	-	-	-	-	-	+	+	+	+	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	+	+	-	+	+	+	-	-	HIGH
-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	BACK
-	-	-	-	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	CONTINUANT
+	+	+	+	+	+	-	-	-	-	-	-	+	+	-	-	-	-	-	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	ANTERIOR
-	-	+	+	+	+	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	CORONAL
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	+	+	+	+	-	-	-	-	-	-	-	DELAYED RELEASE
-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	LATERAL
												-	+								-	-			+	+	+	+								STRIDENT
+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	VOICED
-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	+	+	-	-	+	+	+	ROUND
-	+	-	+	-	+	-	+	-	+	-	-	-	-	-	-	-	-	-	-	+	-	+	-	+	-	+	-	+	+	-	+	-	+	-	+	GLOTTAL

The glottalized segment in these progressives is copied in CVC-plural reduplication.

(4) x̌ə̀ʔx̌ə́ʔtə 'they are doing'

(5) x̌ʷə̀ʔx̌ʷə́ʔtə 'they are going that way'

The fact that such glottalized stops, though derived from sequences, reduplicate indicates that processes such as reduplication are not compelling evidence against a sequential analysis, although they show that at some point in the derivation glottalized stops must exist. In particular, the plural reduplication pattern above never copies more than the sequence CVC (i.e., not CVCC), hence /tʔ/ must be a glottalized consonant at the point in the derivation where plural formation applies.

Elsewhere glottalized stops do not alternate with sequences and they pattern as single phonological segments, as in the reduplication of CV-initial progressive bases (CV-reduplication) and of diminutives (CVʔ- ~ Ciʔ- reduplication) (Hukari 1978).

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[2] This chart follows Jones (1974) in many respects. However, I assigned /h/ the specification [-glottal] on the assumption that degree of stricture is significant. So far as I know, /h/ does not interact with glottalized segments in the manner of /ʔ/. Underlying /h/ does alternate with /ʔ/, however in reduplicated forms, where root-initial /h/ becomes glottal stop.

hé̓səm breathe

hé̓ʔsəmʔ breathing (from /hehsə́m/)

This feature assignment was suggested to me by my colleague Dr. G. N. O'Grady.

(6) i. t̓íləm sing
ii. t̓ít̓ələm? singing[3]
(7) i. k̓ʷíc̓ət cut it
ii. k̓ʷík̓ʷəc̓ət cutting it
(8) i. š.k̓ʷíɬəw? in-law
ii. š.k̓ʷí?k̓ʷɬəw? little in-law
(9) i. c̓é?wi?tən dish
ii. c̓éc̓wi?tən? little[4] dish

Note that initial glottalized stops reduplicate as single units. Further, such forms would undergo vowel insertion instead in progressive formation if the initial glottalized segment were a sequence at the time progressive formation applies, as in (1ii) above. It seems reasonable to assume that there are underlying glottalized segments in Cowichan, except in specific cases which show alternation, as in (1) and (2).

The facts are somewhat more complex for glottalized sonorants, since they clearly may arise from sequences and further, segments which must be glottalized sonorants at some point in the derivation are phonetically realized as sequences, as discussed in sections two and three. The argument for the existence of glottalized sonorants at some point in the derivation is essentially the same as for glottalized obstruents: they pattern as single segments in reduplication.

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[3] Hereafter, glottal stricture in the environment of sonorants is given rough phonetic form: preglottalization being represented as ?S, simultaneous glottalization as S̓ and postglottalization as S?. S̓ in forms enclosed by slashes denotes the feature [+glottal].

[4] /?/ drops in diminutive prefixes when followed by an obstruent plus a sonorant.

In CVC plural reduplication, glottalized sonorants are copied as in (10) and (11).

(10) i. q̓ʷu•n? ear
ii. q̓ʷən?q̓ʷu•n? ears

(11) i. sî?lə grandparent
ii. səl?sî?lə grandparents

Note that the phonetic sequence [?l] in (11) patterns systematically as a glottalized segment, as discussed below in sections two and three. The underlying forms for (10i) and (11i) might then be /q̓ʷu•n̓/ and /sil̓ə/.

Similarly, glottalized sonorants do not pattern as sequences of glottal stop plus sonorant in progressive reduplication, despite the fact that this may be their phonetic realization. CV?-initial bases reduplicate in the progressive as Cə- instead of CV-, as in (12) and (13), but full CV-reduplication occurs in (14) and (15).

(12) i. c̓e?t putting it on top
ii. c̓əc̓é?t putting it on top

(13) i. t̓ʰe?t chew it
ii. t̓ʰət̓ʰé?t chewing it

(14) i. c•q̓í?lə make dry food
ii. c•q̓íq̓'əl?ə making dry food

(15) i. tá?əlt learn it
ii. tátəl?ət learning it

Full reduplication in (14) and (15) follows if these forms contain a glottalized sonorant rather than glottal stop at the point when progressive reduplication applies. That is, their underlying

representations are /c+q̓il̓ə/ and /tal̓+t/.[5]

We can conclude that glottalized stops and sonorants exist at some point in the derivation of Cowichan forms. While some surface forms point to a sequential analysis, it seems plausible to posit underlying glottalized segments in a significant number of cases.

3. PHONETIC REALIZATION

The realization of glottalized obstruents seems to be straightforward, involving co-articulation of the primary articulator and the glottis, with raising of the glottis creating supraglottal pressure. The oral closure is released followed by release of the glottis, creating an ejective consonant (cf, Chomsky and Halle 1968, p. 323, Ladefoged 1964, and Dickson 1977). The auditory effect is quite distinct from a sequence of stop plus glottal stop due to the ejectiveness of the oral release, although there is a notable moment of silence before the onset of a subsequent vowel. I am not aware of significant alternations in the timing of glottal structure with respect to the oral release, but this should be confirmed by acoustic studies. There is apparently variation in the amount of supraglottal pressure, as the ejectiveness of the oral release varies, but, again, I have not noted systematic variation.

The remainder of this section is confined to glottalized sonorants, which present a more complex picture. The phonetic realization of sonorant glottalization (regardless of its phonological source) appears to involve two parameters: degree of stricture and timing with respect to the sonorant. These parameters are conditioned by the phonetic context, as discussed below, although the findings must be taken as tentative pending detailed acoustic studies.

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[5] /-t/ is a transitive suffix and /c-/ is a verbal prefix.

3.1 Preglottalization

Glottalic stricture in word-initial position appears to occur at the onset of the sonorant, although examples of this are apparently confined to the following.

(16) ʔmi come

(17) ʔnan very, too (also [nan])

The degree of stricture may vary from speaker to speaker, probably being complete stoppage before the sonorant in the most markedly discernible cases.

Preglottalization also occurs when preceded by a strongly stressed, tense vowel (not shwa) and followed by a vowel.

(18) sí̓ʔlə grandparent

(19) mé̓ʔməlʔq forgetting

(20) hə̀mʔəšé̓ʔnəmʔ taking shoes off

(21) wé̓ʔwənʔš̆ throwing

(22) yá̓ʔyə̓kʷəmʔ shattering

The degree of stricture may diminish in rapid speech, with the effect of shifting stricture into the sonorant. This is particularly notable if the preceding vowel has secondary stress.

(23) hə́nʔətèʔwət ~ hənʔətè̓wət being called, named

3.2 Glottalization concomitant with the sonorant

Glottalization of the sonorant itself, perceived as stricture during the sonorant, occurs between unstressed lax vowels (shwas), but may also occur in rapid speech in other positions. This glottal stricture may be sufficiently weak as to become imperceptible on occasion.

(24) lé?ləm̓ət looking at it
(25) c̓éc̓əẃət helping
(26) sísəl̓ə grandparent (diminutive)

In distinct, lento speech the glottalic activity may become more pronounced and is perceived as post-sonorant stoppage.

(27) lé?ləm?ət looking at it
(28) c̓éc̓əw?ət helping
(29) sísəl?ə grandparent (diminutive)

3.3 Postglottalization

In other positions glottalization of sonorants is perceived as occurring at the end of the sonorant, varying from stricture to complete stoppage. The environments include preconsonantal and word-final positions, after stressed shwa and preceding a stressed vowel.

(30) tə́l?nəx^{w} find out
(31) sc̓éy?x^{w} dried
(32) spa·l? raven
(33) sɬəɬín? woven
(34) nə́w?əš put it in
(35) cə́m?ət Pack it on the back
(36) sən?íq^{w} dozed off
(37) sk^{w}əl?éš gun

Significant differences in the degree of stricture may exist, although a definitive analysis must await acoustic studies. Word-final glottalization is perceived as a shortening of the sonorant--which may be stricture plus devoicing rather than complete stoppage, as lento forms are notable in a perceptible release of a glottal stop, while normal speech forms lack this. Also, glottalic activity between sonorants is perceived more as a moment of stricture (cf,

(30)), while a complete stop seems to occur if the following segment is a stressed vowel, as in (37).

The timing of glottalic stricture with respect to a sonorant appears to be predictable and, as shown below, does not correlate with the underlying status of the glottal as a feature or a segment.

4. ALTERNATIONS

Four rules involving glottalized segments are examined in this section: glottalization, deglottalization, absorption and segmentation, all of which provide additional evidence for glottalization as a phonological feature. Most notably, deglottalization may be thought of as a dissimilation rule which is triggered by either a glottalized sonorant or a glottalized obstruent, establishing a link between glottalization in sonorants and obstruents.

4.1 Glottalization

Sonorants are systematically glottalized in two aspectual categories: progressives and resultatives.[6] As glottalization applies to all sonorants in the word (excepting base-initial position and all prefixes), it seems plausible to treat this as a feature-changing rule rather than the infixation of glottal stops. Further, the phonetic realization of glottal stricture follows the distribution noted above and hence does not correlate with a segmental analysis (distinguishing ʔC from Cʔ) or a segmental verses feature analysis (distinguishing C̰ from the former).

Glottalization is linked with the aspectual categories *progressive* (ongoing or habitual) and *resultative* (a resultant state). Both

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[6] Glottalization also occurs in diminutives, but I omit them here, pending a more detailed study.

categories are variously realized by CV-reduplication or ablaut, with vowel infixation occurring in the progressives as well (cf, Hukari 1978). As glottalization is a constant despite other overt markers, it appears to be an independent phonological process triggered by these aspectual categories.

(38) i. lîq^{w}əm get smooth
ii. lî?ləq^{w}əm? getting smooth
iii. slî?ləq^{w} smooth

(39) i. q̓əl?q̓t hang it
ii. q̓el?q̓t hanging it
iii. sq̓el?q̓ hanging

(40) i. k̓^{w}šem count
ii. k̓^{w}ə́šəm? counting

As glottalization occurs throughout the word (excepting prefixes and base-initial position), object suffixes contain glottalized sonorants as well. Further, glottalization of suffix sonorants is not contingent upon the base containing a sonorant nor is it triggered by inherently glottalized base sonorants, indicating that this is not an assimilation rule, but across-the-board glottalization.

(41) i. səq?q̓t seek him/her
ii. sə̀w?q̓θêləm seek me
iii. sə́w?q̓θə̀?ləm? seeking me (progressive)

The rule may be formulated as follows, where any noninitial sonorant is glottalized.

(42) Glottalization

$$\begin{bmatrix}-\text{syllabic}\\+\text{sonorant}\end{bmatrix} \rightarrow [+\text{glottal}] / [C^{n}\ X\_\_\_$$

This is a morphologically governed rule, triggered by the appropriate

morphological categories.

A glottalization rule seems far more plausible than inserting glottal stops in the environment of sonorants, since this applies throughout the word rather than in just one position as one would expect if it were an infix. Further, in a segmental analysis a choice between a preceding and a following glottal stop would be arbitrary, as the realization of the glottalic stricture will be determined by subsequent rules. Glottalization, then, provides further evidence for a feature analysis.

4.2 Deglottalization

Glottalized sonorants deglottalize when followed by a glottalized segment (with an intervening unstressed vowel). This accounts for the plain sonorants in the following progressives.

(43) i. q̓ʷə́ləm barbecue
ii. q̓ʷəq̓ʷə́ləm? barbecuing
(44) i. wənə́ls throw
ii. we?wənəl?s throwing

This is not simply the failure of glottalization to apply, since underlying glottalized sonorants are also deglottalized.

(45) i. pə́n?əm plant
ii. pəpə́nəm? planting
(46) i. ɬə́n?əm weave
ii. ɬəɬə́nəm? weaving

Glottalized obstruents also trigger sonorant delgottalization, as in the following progressive.

(47) i. qə́ləc̓ spin
ii. qə́qələc̓ spinning

Further, deglottalization is not confined to aspectually marked forms, as illustrated by the following example, where the glottalized obstruent in the lexical suffix /-(i)t$^{\text{ʔ}\theta}$e?/ 'clothing/fibre' deglottalizes /m̓/ in both progressive and nonprogressive forms.

(48) i. t̓ə́m?ət pound it
ii. t̓ə́mət$^{\text{ʔ}\theta}$è?t pound fibre
iii. t̓ət̓ə́mət$^{\text{ʔ}\theta}$e?t pounding fibre

A certain amount of variation has been found in the data. This may reflect, in part, the difficulty in perceiving light glottal constriction; however, there seems to be a tendency to retain glottalization in citation forms on the part of sophisticated informants, which suggests this is a low level phonetic rule.

The fact that the rule is triggered by both glottalized sonorants and obstruents is evidence for a common feature of glottalization. Further, there is evidence that glottalization is also triggered by the segment glottal stop, as in the following progressive form with the lexical suffix /-(i)?q$^{\text{w}}$/ 'head'.

(49) i. šə́mət smoke it
ii. šə́ma?q$^{\text{w}}$t smoke fishheads
iii. šə́šəma?q$^{\text{w}}$t smoking fishheads

This forms an unusual context, as unstressed vowels generally reduce to shwa, but the sequence /ə?C/ does not occur in Cowichan and apparently the vowel tenses to /a/, despite its lack of stress (also triggering vowel assimilation in the root).

The deglottalization rule, then, applies in the contest of any glottalized segment, including glottal stop, across an unstressed vowel, as stated in the following rule.

(50) Deglottalization

$$\begin{bmatrix}+\text{sonorant}\\+\text{voice}\end{bmatrix} \rightarrow [-\text{glottal}] \; / \; \_\_ \begin{bmatrix}\text{V}\\-\text{stress}\end{bmatrix} \; [+\text{glottal}]$$

Note that this presupposes a feature of glottalization common to /ʔ/, glottalized sonorants and glottalized obstruents.

4.3 Absorption

The processes of glottalization and deglottalization make a convincing case for a feature analysis. Nevertheless, sequences of glottal stop plus sonorant must occur in the underlying representation of certain forms, as noted in section one. For example, the following forms have roots of the shape CVʔ, as revealed in the /-t/ transitive forms (i), but the final glottal stop combines with the initial sonorant in the limited control suffix /-nəx^{w}/ (ii).

(51)	i.	k^{w}eʔt	let it go
	ii.	k^{w}enʔx^{w}	drop it
(52)	i.	seʔt	lift it
	ii.	senʔx^{w}	manage to lift it
(53)	i.	t̓$^{\theta}$aʔt	pull it out
	ii.	t̓$^{\theta}$anʔx^{w}	manage to pull it out

While this alternation could be treated as metathesis, it follows the normal distribution for glottalic stricture in glottalized sonorants (cf, section three), making it far more plausible to posit a glottal absorption rule which applies before the phonetic realization rules.

(54) Glottal Absorption

$$\begin{matrix}\text{ʔ} & \begin{bmatrix}-\text{syllabic}\\+\text{sonorant}\\+\text{voice}\end{bmatrix} & \rightarrow & \begin{bmatrix}2\\+\text{glottal}\end{bmatrix}\\ 1 & 2 & & \end{matrix}$$

As in Table 2.1, / / has the feature [+glottal], which is incorporated into the sonorant by glottal absorption. With the application of this rule, the sequence glottal stop plus sonorant merges with underlying glottalized sonorants.

4.4 Segmentation

In addition to absorption, causing merger of glottal stop plus sonorant and glottalized sonorants, the reverse process occurs, whereby the glottal component precedes the sonorant as a separate segment.

Segmentation occurs sufficiently late in the derivation that it does not affect plural or progressive reduplication, as noted in section one in the forms repeated here.

(11) i. sí?lə grandparent
ii. səl?sí?lə grandparents
(14) i. c•q̓í?lə make dry food
ii. c•q̓íq̓əl?ə making dry food

That is, /l̓/ is copied in (11) and full CV-reduplication (not Cə-) occurs in (15), indicating that both forms contain glottalized sonorants at the point where the reduplication rules apply. However segmentation precedes deglottalization, since segmented forms never undergo deglottalization.

(55) i. lém̓əθèləm look at me (passive)
ii. lé?ləm̓?əθè?ləm̓? looking at me

As the phonetic distinction between early glottal stricture and complete segmentation is at best a fine one, further evidence that this is actually segmentation would be welcome. As it turns out, an epenthetic vowel may occur between the glottal stop and the

and the following sonorant, as in the transitive form of the roots /taɬ/ 'know' and /wiɬ/ 'appear':

(56) i. tá?əlt learn
ii. tátəl?ət learning
(57) i. wí?əlt make it appear
ii. wí?wəl?t making it appear

Note that the progressives (ii) indicate that the roots are /taɬ/ and /wiɬ/, respectively. The epenthetic vowel may be the result of metathesis when a glottalized sonorant preceded by a tense vowel is followed by a homorganic obstruent, as this also occurs in the following progressives.

(58) i. násət rub oil in
ii. ná?ənsət rubbing oil in
(59) i. s•net night
ii. xʷə•né?ənt evening (becoming night)

That is, one would otherwise predict the forms */naɬəsət/ and */xʷəneɬət/, with segmentation of the glottalized sonorant.

A formal statement of segmentation brings into question the status of glottalization and its relationship to glottal stop. In sections (4.2) and (4.3), it seemed necessary to assume that /?/ is [+glottal]. Let us assume further that a segment specified only as [+glottal] in an insertion operation is redundantly specified for the features of glottal stop.

(60) Segmentation

$$\begin{bmatrix} 1 \\ +\text{sonorant} \\ +\text{voice} \\ +\text{glottal} \end{bmatrix} \longrightarrow [+\text{glottal}] \begin{bmatrix} 1 \\ -\text{glottal} \end{bmatrix} / \begin{bmatrix} V \\ +\text{tense} \\ +\text{stress} \end{bmatrix} \_\_\_\_ V$$

That is, a glottalized sonorant is realized as the sequence glottal stop plus plain sonorant intervocalically when preceded by a tense, stressed vowel, as discussed in section three.

5. CONCLUSIONS

The existence of glottalized segments in Cowichan at some point in the phonological derivation seems clearly indicated by processes such as reduplication and further corroborated by the glottalization and deglottalization of sonorants. Barring evidence to the contrary in specific forms, it seems reasonable to assume that glottalized segments exist at the level of underlying representation. Further, Cowichan exhibits systematic relationships between glottalization and glottal stop, as in segmentation and absorption (albeit restricted in the case of obstruents) and in sonorant deglottalization, triggered by any glottalized segment, including glottal stop. This leads to the hypothesis that there is a common feature, call it [+glottal], associated with all these segments.

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On the Origins of Philippine Particle/Pronominal Sociolinguistic Use

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Tagalog, like the other languages of the Philippines, belongs to the Western Indonesian grouping of the Austronesian family of languages. Like many other languages, it exhibits forms of respectful address in terms of overtly shown categories. Such sociolinguistic devices express formally and explicitly the social relationship between co-locutors in a given interaction. The key formal devices for showing sociolinguistic differences in Tagalog are the respectful use of enclitic particle and pronominal forms. Two enclitic particles, *po* and *ho*, correlate with the use of the pronouns *ikaw/ka* 'you (sg)' and *kayo* 'you (pl)' in showing sociolinguistic differences in conversational interaction.

The possible historical origins of these sociolinguistic devices in Tagalog is assessed by examining the earliest available descriptions of Tagalog, and comparing them with later descriptive treatments. Another guide is the appearance or non-appearance of such respect forms in the syntax of other languages of the Philippines, as well as related languages like Chamorro in Guam. This examination is to ascertain whether other languages of the group, major or minor, employ either the enclitic particles or the pronominal forms as respect forms and if so, whether there is historical attestation of their appearance. Information on this point should shed some light on the possible extra-familial origins of the sociolinguistic use of enclitic particles and pronominal forms in Philippine languages.

The Tagalog respect forms are several in number. They have, however, the dual functions of distinguishing individuals as members of the same or different groups (acquainted or unacquainted) as well

as designating members of one's own group as equal or unequal socially for various reasons (superior, inferior, or equal). There are two basic ways of indicating respect in Tagalog. One of these is the use of the respect particles *po* and *ho* as contrasted with their absence (zero). This zero is paralleled in the language by the presence of three forms of the affirmative 'yes' (*opo, oho,* and *oo*), corresponding to *po, ho* and zero, respectively. Thus, respect use in simple affirmatives is replaced by a special pair of affirmatives, both meaning 'yes', but with the secondary feature of level of respectful address included. For example, compare *opo* 'yes (*po*)' and *oho* 'yes (*ho*)' with *oo* 'yes'. The negative simply follows the typical enclitic pattern of orderings, with *hindi* 'no, not', acting as the first full sentence word.

Respect particles fall under the heading of enclitics in Tagalog, usually appearing after the first full word or phrase in the sentence. This initial full phrase may be either a verbal or adjectival predicate or a nominal or prepositional phrase. There are, of course, other enclitics, and where two or more enclitics appear, the enclitics are ordered by a fairly rigorous set of occurrence privileges when other enclitics are also present in the same sentence, such that they occur in a rigidly predetermined order. If the full range of enclitics were to appear, they would appear in the following ordering; however, it should be noted that such a full constellation of enclitics rarely appears.

\+ PREDICATE *na nga po ba din lamang sana* ± Substantive Topic

In other uses, the *po* particle (but apparently not the *ho*) is simply frozen in such calcified greeting expressions as *Tao po* 'Anybody home' or 'Hello the house' (usually met with *Tuloy po kayo* 'Come on in!') and in *Mano po,* 'May I have your hand?' (a hand to head

ritual greeting with older respected individuals). It is interesting to note that of the earlier studies in Tagalog, neither Totanes (1745) nor the much later Blake (1925) and Bloomfield (1917) mention *ho* (nor, consequently, *oho*). Of course, neither do some more contemporary studies, as for example, Aspillera (1979). Though this may have been merely oversight on their part, it does not seem likely. Only more contemporary pedagogical treatments concentrating on the colloquial spoken seem to make clear mention of the two, for example, Bowen et al. (1965). Moreover, the apparent variation between *po* and *ho* has not only been noted in Bowen et al. (1956:5), where the inherent variability of the po/ho continuum is noted by indicating that "though *po* is usually considered more formal than *ho*, some speakers prefer one, some the other, and some use both.

The other sociolinguistic device used to express respect is the use of a plural pronoun to address an individual person. Commonly, it is the second person plural pronoun *kayo* which is typically used. Occasionally, and perhaps more rarely now, when the addressee is especially esteemed for his elevated position, Tagalog makes use of the third person plural pronoun *sila* in direct address. It also makes occasional use of it as respectful reference in the axis of conversational reference to a third person singular third party. Such conventions are not unknown elsewhere (see Martin, 1964, for an example of this in Japanese; Hoppe and Kess, 1978, for one in English; and Kess and Juričić, 1978, for an example in South Slavic). It is noticeably lacking in Spanish, classical or contemporary, if one thinks of the latter as a possible origin for such sociolinguistic practices.

Both *kayo* and *sila* contrast with the second person singular pronoun *ikaw* (or *ka*, depending upon sentence position). The pronominal

system of Tagalog is presented below to place pronominal contrasts in focus. If we incorporate the first plural inclusive-exclusive distinction, Tagalog pronouns fall into two categories: (1) those which refer to the speaker (S), the hearer (H), the speaker plus hearer (S+H) or some other person (O), and (2) those which refer to each of the above plus others (See Stockwell, 1959).

	(1) Simple	(2) Plus others
S	ako	kami
H	ikaw/ka	kayo
S+H	kata	tayo
O	siya	sila

In fact, there are three parallel pronominal paradigms in Tagalog: the *ako* paradigm (presented above), the *ko* paradigm, and the *akin* paradigm. These correspond to the particles *ang*, *nang*, and *sa*, which mark the case functions of noun phrases in sentences. Thus, personal pronouns in Tagalog fall into sets corresponding to the three sets of nominal expressions marked by the particles *ang*, *nang*, and *sa*. The *ako*, *ko*, and *akin* pronoun classes are as follows.

	ang/si	*nang/ni*	*sa/kay*
Person:			
I	*ako*	*ko*	*akin*
thou	*ikaw, ka*	*mo*	*iyo*

	ang/si	*nang/ni*	*sa/kay*
I and thou	*kata*	*nata, ta*	*kanita*
he, she	*siya*	*niya*	*kaniya*
we (exclusive)	*kami*	*namin*	*amin*
we (inclusive)	*tayo*	*natin*	*atin*
you	*kayo*	*ninyo*	*inyo*
they	*sila*	*nila*	*kanila*

The rules affecting the respectful use of the second person singular and plural touch identically upon its manifestations in all three paradigms, i.e., for *kayo, ninyo,* and *inyo.*

The respect particles co-occur in principle, though not necessarily in each instance, with the plural pronoun *kayo.* While the particles or the pronoun may occur alone, where only one of them occurs, the absent form is alleged to be implied by the form which does appear. It is always possible to insert the absent respect form without any noticeable grammatical or lexical change in the content of the sentence, as for example,

Pumunta na (po) ba kayo?; Pumunta na (ho) ba kayo? = 'Did you go?'

On the other hand, solidarity and absence of status differences is expressed by the reciprocal use of the second person singular pronoun *ikaw/ka* and the non-use of the respect particles.

The occasions when the singular pronoun *ikaw* occurs with *po,* for example, are rare and are usually sociolinguistically marked. For example, in prayer addressing God or the saints one notes *ikaw* and *po* (see Schachter and Otanes, 1972); this is not unlike the use of *thou, thy, thine* in the Early Modern English version of the King James 1611 *Our Father* ('Hallowed be Thy name') or the Spanish version of the *Padre Nuestro* ('Santificado sea tu nombre'). The Tagalog use of both *ikaw,* the familiar pronoun, and the respectful *po* is simply the best compromise between the respectful awe and filial piety that

Christians are expected to show in respect to the Deity. The only other instances in Tagalog where such a paired presence (*ikaw-po*) occurs is in sarcastically marked speech, as for example, in *ikaw po . . . .* 'you think you're so important, but....' Here one is in disagreement with another's pretended greatness and issues a mocking form of address; the two are in direct contrast, a sociolinguistic contradiction in terms.

It is possible that such usage originates outside the Philippines. Not only are there some interesting differences in the uses of these devices within the Philippine languages themselves, but there are other instances of similar borrowings. For example, kin terms typically have respectful address overtones, since they are non-reciprocal and are embedded in the hierarchically structured familial system. Terms like *ama* 'father', *ina* 'mother', *amain* 'uncle', *ale* 'aunt', *impo* 'grandmother', and *ingkong* 'grandfather' have such dimensions. It is not generally customary for younger siblings to use respectful particles with older siblings, but distinctive terms for the children of a family unit distinguished by order of birth and sex do reflect non-reciprocity. For example, one notes terms like *kuya* and *ate* for the oldest brother and sister, *diko* and *ditse* for the second oldest, and *sangko* and *sanse* for the third oldest. One even has *inso* for spouse of the eldest son and *siyaho* for spouse of the eldest daughter.

Given the roots in *sangko* and *sanse*, one quickly suspects that they may be derived from some Chinese language. Certainly the care in the differential naming of oldest to youngest child in the family unit is a Chinese sociolinguistic practice of long standing. Comparing further the roots in Mandarin, one notes some remarkable similarities, more than could be due to chance. Thus, compare *dì* 第 'second in a counting series' added to *ge* 'elder brother' 哥

and jie 'elder sister'姐 (or zi 'elder sister'姊) for *diko* and *ditse*. One also has *san* 'three'三 and the same previous roots in *sangko* and *sanse*. This borrowing seems to have been extended to *inso* and *siyaho;* compare *sao* 'elder brother's wife'嫂 for *inso* and *jiě* 'elder sister' coupled wity *fū* 'husband'夫 for *siyaho*. One also has *pó* 'paternal' grandmother'婆 for *impo* and *gōng* 'paternal grandfather'公 for *ingkong*. It is easy to see parts of the highly respect-marked kin-address system as being borrowed from some Chinese language.

Use of the respect particles is not a pan-Philippine usage, and it is interesting to speculate on its possible origins. One possibility is that it is derived from Spanish sociolinguistic practices, though this is not easily demonstrated. Spanish, like all the languages of Europe, was party to the courtly spread of the pronouns of power and solidarity, and by the time of its colonial ministrations in Southeast Asia this was a permanent sociolinguistic fixture in Spanish speech.

There is little question that the Spanish colonial regime had a tremendous impact on Philippine culture, and there is a good deal that can be told about the nature of Spanish-Filipino contact by the types of Spanish linguistic elements which find themselves in Philippine languages. Though the use of Spanish has practically disappeared from the Philippine scene, bilingualism at one time was widespread. One sees this both in the number of Spanish contact vernaculars as well as in the large extent to which Spanish borrowings penetrated the vocabulary core of Philippine languages. Wolff (1973:73) cites approximately 25% of the total lexical entries in a Cebuano dictionary as being Spanish in origin. He notes further that in this way Cebuano is probably representative of languages spoken by Chrisitan Filipinos. The sociolinguistic status of Spanish must have always

been that of the prestige language and Filipinos who did not master it would very likely have been wont to emulate it. Bilingualism must have been high in those speech communities which lived directly under strong Spanish influence and this influence must have permeated in some small fashion even the more remote peripheral areas by ripple effect.

The claim that Spanish had a large sociolinguistic influence on the general social mores of large urban centres in the Philippines is supported by lexical borrowings in many languages in the areas of sexual mores, master-servant relationships, superior-to-inferior exchanges, the reception and treatment of guests, and kin terms. It would not be surprising to discover that many other Spanish sociolinguistic conventions may have also found their way directly into the Filipino monolingual and bilingual communities.

Mention of Tagalog forms of respectful address is seen in the earliest Spanish treatments of Tagalog. Totanes (1745:17), for example, notes *po*, but observes that there is no need to add *kayo* (*cayo* in Totanes' text, following Spanish orthographic practices). It may be that the respectful particles were already in use as a Tagalog device and that only the use of pronominal forms were derived from Spanish. The exact extent of the usage is puzzling, and Totanes presents a very incomplete picture, such that we are not sure when he is in fact recording contemporary sociolinguistic usage or simply seeing Tagalog through Spanish eyes. He does list (p. 60) a verb *magpaico* (*magpa-ikaw?*), citing its gloss as *llamar de tu*, presumably the Tagalog equivalent of the Spanish *tutear*. He also (p. 17, paragraph 59) records use of the second person plural for singular addressees in Tagalog. For example, he makes reference to asking questions of an inferior using *ca* or *mo*, depending upon the sequence in question. He also notes the use of *cayo (kayo)*, comparing

it to Spanish usage in the use of *maano cayo?* for *¿Como está VMd.?* It is interesting to note that the older form *maano* is used (cf. *paanó*, 'how') instead of the contemporary borrowing from Spanish, *kumusta* (from *¿Como está?*). This greeting thus entered Tagalog as a fixed locution at a later time. While it is difficult to give a time-scale for such events, the argument for Spanish origins would have been more persuasive had the greeting been *Kumusta kayo*, reflecting the intrusion from Spanish a little more convincingly. Totanes' paragraph (p. 17, paragraph 59) is included below for its insights into that earlier stage.

59. Con este *anó* se pregunta el parenteseo, ó dependencia, que uno tiene con otro, poniendo (para hablar con politica) al que fuere, o parceiere mayor en nominativo, y al otro en genitivo. Vg.: (preguntando al superior) *Anóca nitong babáye, l. báta?* qué eres tú de esta muger, o de este muchacho? Y responde *Amà*, soy padre. *Asàua*, soy au marido, *Panginoon*, soy su señor, etc. *Anómo itong tàuo?* (preguntando al inferior) *Amà*, es mi padre. *Amà* es mi padre. *Asaùa*, es mi marido, etc., aunque tambien ponen en nominativo á aquel á quien preguntan, sin atencion á mayor ó menor. *Anóca nitong babáye?* (preguntando á un chiquillo) *Anàc*, soy su hijo. Hablando asimismo el inferior á su superior como amo, ó P. Ministro, etc., y como usando nosotros nombres de Usted, ó de V. merced, lo practican del modo singuiente; en lugar de las particulas de *icáo, l. ca*, usan de la partícula *cayó*. Vg : *maano cayó?* como está Vmd.? *Cun cayo, i, hindi napa sa Maynila?* si Vmd. no hubiera ido á Manila? y asi del mismo modo en todas las locaciones de esta clase: con la advertencia, de que al *cayo* no se le ha de añadir la partícula *pó:* con lo que se particulariza este comun modo de hablar, bastante usado en los mas advertidos.

By the time turn-of-the-century English descriptions like Blake's appear, this sociolinguistic practice was already well-established, and is of course a fact of current Tagalog usage. (Note that although Blake's comprehensive work, *A Grammar of the Tagalog Language*, appeared in 1925, his research was begun at the turn of the century, as

attested to by his many earlier publications.)

Language-in-contact situations often produce different results, and when we look at the other languages of the Philippines, this sociolinguistic device appears rather limited. Rather than all the languages which had intimate and continuing contact with Spanish having borrowed this practice, the following picture emerges. Tagalog is paralleled in its particle or pronominal usage by those languages which more or less surround it, suggesting a sociolinguistic drift of the practice. Except for Ilokano, which as a large and important language, may have either had more contact with Spanish or Tagalog or both, other languages of the group further north and further south are conspicuously lacking in this device. The same is also largely true for the languages of the Bisayas; this feature has in fact been cited as at least one characteristic differentiating Tagalog from the Bisayan languages. For example, in the Bisayas Cebuano uses titled forms of address. Similar respectful titles of address are found in Hiligaynon, but neither *po*-like forms nor pronominal deployment. On Luzon, Bikol has both respect marker *po* and a second person plural pronoun (*kamó*) usage for a singular addressee. Most interestingly, Mintz (1971:116) notes that *po* is generally used in the Naga dialect of Bikol and dialects north towards Manila, but is rarely heard in the south. It may be that this reflects the earlier spread of this sociolinguistic device from either Spanish or through Tagalog from Spanish making a case for the contact limitations of such sociolinguistic practices derived from Spanish. If this is in fact the explanation for this situation, one speculates that such geographic constraints would have been that much more restrictive in an age without mass media. Mirikitani (1972) notes the Kapampangan respect form *pu* as "a term marking deference and formality of speech (p. 12)", and the distinc-

tion between *ka* 'you, singular' and *kayu* 'you, plural' as being one with politeness overtones (p. 21). Pangasinan has both the use of the second person plural pronoun (kayó) with respectful address overtones and a respect marker *pa*.

Further north, the plural pronoun is used in Ilokano as a sign of respect, but there is no use of respect particles. Similarily, there is neither use of particles nor pronouns for Bontoc, nor for Ivatan on the Batanes islands north of Luzon. An early study by Scheerer (1905) notes that the Nabaloi dialect of Igorot has only respectful overtones to the use of the first person pronouns inclusive and exclusive (*sikatayo* and *sikame*). Scheerer (1905: 113) notes that "*sikame* will be heard, for instance, in a respectful report to a superior; *sikatayo*, on the contrary, in familiar talk among equals. The same propriety in speaking is found in Ilocano, Tagalog, etc., but is especially noteworthy among Igorot who otherwise address everybody, high or low, with *sikam* (thou) after the fashion of the Tyrolese mountaineers." Scheerer, of course, would have been extremely conscious of this distinction, given the status of *Du/Sie* exchanges in German, and so we can accept his testimony as to its non-appearance in Igorot. This is in keeping with the sociolinguistic practices of the other northern languages. Dumagat, a Negrito language of north-eastern Luzon, has neither pronouns nor particles as respectful address devices.

In Mindanao, neither particles nor pronouns are used as respectful respectful address devices for Maranao. Recalling that Maranao is in Muslim territory, with Marawi City a predominantly Muslim city, this absence would be entirely expected if the provenience of such forms of respectful address is ultimately Spanish.

Chamorro, like Palauan, belongs to the Philippine subgrouping by reason of its verb morphology and other characteristics. Chamorro

also has neither respect particles nor the respectful deployment of pronouns like Tagalog. The Marianas were also discovered for Spain by Magellan (chronologically just before the Philippines) on his westward journey home while circumnavigating the globe for the first time. There was also a mission there from the 1600's, and Spanish exerted an early and lasting influence on Chamorro until 1898 when Guam went to the United States.

The presence and importance of Spanish influence linguistically is also testified to by the Spanish contact vernaculars in the Philippines — langauges like Caviteño, Ermiteño, Davaueño, and Zamboangueño. In general, much of the vocabulary of these Spanish contact creoles is Spanish in origin, though the grammar is markedly Filipino in structure, giving some idea of the penetration of Spanish in areas where it impinged closely and continuously on Filipino linguistic communities. Not surprisingly, these contact vernaculars typically show the residue of Spanish sociolinguistic practices, since they were the result of creolization with Spanish, from whence much of the original pidgin was derived. Thus, for example, while there are no particles in Zamboangueño, the second person pronoun set does have respectful uses like the Spanish and Tagalog (Zamboañgueno second person singular pronouns *ʔuste, tu, ʔebos* and plural *ʔustedes, bosotros,* and *kamo* exhibit differences in respect usage).

In those Philippine languages which make use of this sociolinguistic device, the practice seems to run fairly parallel to that of other languages. In fact, claims about sociolinguistic universals have been made by Slobin et al., who suggest (1968:289) that 'it is apparently a sociolinguistic universal that the address term exchanged between intimates ("familiar pronoun," "first name," etc.) is the same term used in addressing social inferiors and that the term exchanged between non-intimates ("polite pronoun," "title and

last name," etc.) is also used to address social superiors.' The universality of such observations is certainly open to question, but those Philippine languages which do use it seem to follow the general pattern. There is little quarrel with other such suggestions that the greater the status difference between individuals, the greater is the probability of nonreciprocal address in those languages which do have such sociolinguistic mechanisms. However, it is certainly not a pan-Philippine characteristic, and many languages do not use it or use other means.

As for extra-familial origins, the Spanish case is attractive, but inconclusive. Either the sociolinguistic device of pronominal deployment was borrowed and assimilated quickly enough from Spanish to have appeared in Totanes (1745) or it was already present. One would have expected other major languages of the grouping to have also done the same; Ilokano seems to have vestiges of it, but Cebuano and other Bisayan languages do not. The case would have been more convincing, had all the major contacted languages had the feature. Those languages surrounding Tagalog probably have it as a result of a ripple effect from Tagalog but the question is whether this is ultimately from Spanish origins or is a feature spread from Tagalog itself. One plausible guess is that the pronominal deployment feature was borrowed from Spanish, and very early, but there is no immediate way of supplying incontrovertible proof for this speculation. The respectful enclitic particles *po* and *ho* likely have their own native history in Tagalog and the languages surrounding it. The best that we can say at this point is that Tagalog is the likely source for such particle/pronominal deployment, while Spanish influence remains a distinct possibility.

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*yamu in Nuclear Pama-Nyungan (and Beyond?)

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It has become increasingly apparent in the course of Pama-Nyungan comparative work over the past quarter century that a distinct majority of the members of the Family show quite massive evidence of genetic relationship. Now that R. M. W. Dixon has challenged the very essence of Pama-Nyungan as a genetic construct (1908:256, and elsewhere), the race is on to demonstrate that one or the other construct — Hale's 'Pama-Nyungan Family' or Dixon's 'Australian Family' — can be shown at least to approximate the essential overall nature of the internal genetic affiliations of the indigenous Australian languages. Whichever construct we choose must account, after all, for the facts concerning these languages.

The purpose of this short pilot study is to take the Dyirbal particle *yama* as the starting point for an experimental cognate search across Australia, and to seek evidence as to whether the provenience of the etymon which it represents correlates in any sense with the putative spread of the Pama-Nyungan languages across seven-eighths of the continent perhaps four thousand years ago, and depicted by O'Grady (1979, 1981). To the extent that the etymon in question turns up in a goodly scattering of Pama-Nyungan languages and fails to appear in languages envisioned twenty years ago by Hale as lying outside the Family, the Hale construct appears as vindicated. As far as the ancestral lexicon is concerned, this vindication would amount to perhaps 1/10 of 1% of what, I believe, will be ultimately possible.

What I mean by this is as follows. It is entirely clear by now that in addition to affixes and basic grammatical configurations,

a thousand or more lexical roots can ultimately be demonstrated for Proto Pama-Nyungan. A solitary starred form such as will be posited as the ancestral shape from which Dyirbal *yama* descends might seem to pale into insignificance by comparison. The author of such a solitary reconstruction could well be excoriated as supposedly misrepresenting (a) an instance of the widespread diffusion of a lexical item, or (b) an example of accidental resemblance in form. How could he turn aside such slings and arrows? He can do this if he and others of like mind can demonstrate that the solitary example being used here represents but a thousandth part of the lexical evidence for the validity of Pama-Nyungan as a genetic construct. It will be seen, sooner or later, that the existence of putative cognates of Dyirbal *yama* elsewhere in Pama-Nyungan does not represent a mere "flash in the pan", but should be seen in the context of a massive core of protoforms which will surely complete the establishment of Pama-Nyungan as a Family. It goes without saying that such a core of protoforms, backed up by a thousand or more viable Pama-Nyungan cognate sets, will be comparable in every way to the lexical attestation of Indo-European presented by Pokorny (1959). To this writer at least, such massive attestation of Dixon's 'Australian Family' will clearly not be possible!

Dyirbal *yama* is depicted by Dixon (1972:121) as meaning 'gently, slowly, TOO gently/slowly, softly'. As a form, it represents an attractive starting point for a systematic cognate search in representative Pama-Nyungan languages (and, out of fairness to Dixon, in non-Pama-Nyungan as well). O'Grady (1957) and Dixon (1972) provide evidence that in Nyangumarda and Dyirbal the statistical probability of a root having an initial *y*, or a single consonant, *m*, following the first vowel is by no means high. For a given root to combine

these two characteristics in the shape *yVmV(...)*[1] is thus even less probable. Dixon's Dyirbal vocabulary (p. 408) cites just four forms, including *yama*, which have this canonical shape, and Hansen and Hansen's large *Pintupi Dictionary* (1974) contains eight comparable roots.

The ancestral Pama-Nyungan consonantism is reflected quite conservatively in a large number of daughter languages (O'Grady 1979, and forthcoming). It is clear that these include both Dyirbal and Pintupi. It will be entirely appropriate, then, on a first pass through the data, to assume that the correspondence relationships *y-* : *y-* and *-m-* : *-m-* hold generally for these two languages. That this is so can be seen from examples such as the following: Dyirbal (DYI) *yanu(l)* ~ *yana* 'to go', Pintupi (PIN) *ya+nu* 'went, came'; DYI *yuray* 'Adj: quiet', PIN *yura* 'reptile in hibernation', *yurati+Y+* 'to creep carefully without going down on all fours'; DYI *nyamu* 'Adj: cooked', PIN *nyamu* 'enough'[2]; DYI *taman* (payi/palan) 'child (of female ego)', PIN *rama* '...angry or emotionally upset — of disobedient children' (*t-* : *r-* correspondence also in DYI *tapa+jana+Y* 'to duck down', based on *jana+Y* 'to stand', PIN *rapi+L+* 'to make room').

We are thus indeed in a position to narrow down the search for Pintupi material cognate with Dyirbal *yama* to just the eight roots mentioned above, so that our task turns out to be akin to searching

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[1] By way of contrast, roots having the shape *kVrrV* (...) are far more common in both languages; the problem of correctly pairing cognates from among such a multiplicity of highly similar forms can become formidable, especially when complex patterns arising from semantic, analogic, and other kinds of change are added to the equation.

[2] I appeal to semanticists and Australianists to refute or confirm the semantic relationship implied here with hard evidence.

for, say, a crowbar in a haystack (rather than a needle). Because of the possibility of sharper focus, we have the opportunity to take a long, hard, look at the *meanings* of the eight Pintupi forms. These are as follows:

(1)	yamalyaru	'emu'
(2)	yamaji	'friend' (Warburton Ranges dialect)
(3)	yamiyami	'wife's mother's father's sister, first daughter's daughter'
(4)	yimangarrka	'area down middle of chest...'
(5)	yiminyjiminyji	'great amount or number...'
(6)	yumari	'mother-in-law, mother-in-law's brother'
(7)	yumu	'without a care, unconcerned'
	yumuyumu	'oblivious or unknowing concerning some happening - daydreaming'
(8)	yumunju	'generous giver...'

Another Pintupi form offering the possibility of semantic reconciliation with Dyirbal *yama*, though with problematic internal *-mp-* consonantism, is *yampurli* 'cradling position for a baby'. Not surprisingly, considering the genetic distance between Dyirbal and Pintupi, none of the Pintupi forms showing direct semantic overlap with the Dyirbal particle being examined appear to be cognate with it — e.g. *karnma* 'slowly, carefully' or *kapalypa* 'soft'[3].

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[3] Pintupi *nyunnga* 'soft' has an etymology which has to be understood in the context of both ancestral *mankarr 'hard, hardwood' and *puulngu 'soft'; *puulngu > *pulngu > *punngu > *unngu > *yunngu and then, influenced by the initial nasal and second vowel of *mankarr, is reanalyzed as *nyunnga*. That the pressure toward reanalysis was exerted mutually is seen in *mankarr > Pintupi *mannga* 'stubborn'. For *p- > Ø, with the *y-* appearing prothetically, see O'Grady (1981:155-8).

Of the eight Pintupi forms given, (2) is taken here to be a direct cognate of Dyirbal *yama*, the semantic relationship being interpretable in terms of the solicitous behaviour shown toward one's *yamaji* in the Western Desert culture. The *-ji* syllable is evidently not analyzable in modern Pintupi, but is surely cognate with the Yidiny comitative suffix *+ji* (Dixon 1977:294ff). An evidently fossilized *-ji* also occurs in many Umpila adjectives, e.g. *mukanji* (~ *mukan*) 'big', *ju'uji* 'small'.

Dead *+lya and *+ru suffixes, discussed in O'Grady (1966:98), appear in Pintupi item (1), *yamalyaru*. This involves a semantic relationship with the Dyirbal form which is probably to be explained in terms of totemic beliefs. Writers such as Meggitt (1962:59ff.) appear indirectly to provide a key to an understanding of the semantic development here: conceivably,

GENTLY ⟶ SOLICITOUS/CARING ⟶ TOTEMIC BEING ('THAT WHICH ONE CONCERNS ONESELF ABOUT') ⟶ A PARTICULAR TOTEMIC BEING (e.g. EMU).

Items (3) and (6) belong in a different cognate set, being related, for example, to Umpila *yaami* 'wife's mother'; the exceptional vocalism in Pintupi *yumari* seems most plausibly to result from taboo-deformation, the 'conscious alteration of the form of a tabooed word' (Watkins 1970:1500), as in English *gad!* (from the name of the Deity). Items (4) and (5) do not appear to relate to the forms being discussed here, so that just (7) and (8) remain. If we think of the semantics of Pintupi *yumu* along the lines of 'taking it easy', 'taking it gently', it seems natural enough to count it as being relatable semantically to Dyirbal *yama;* but what of the *u*-vocalism? This seems most clearly traceable to Warlpiri

rather than to Pintupi sound patterns — specifically, in fact, to the operation of one or other of the vowel harmony rules in the Warlpiri dialects (Kenneth Hale, p.c.). And this, in turn, would presuppose an earlier shape *yamu (or *yuma?). For the unravelling of the remaining strands insofar as Warlpiri, at least, is concerned, we appeal to the same K. L. Hale and other scholars involved in Warlpiri studies to come forward with the rest of the solution. This will need to take account also of Warlpiri *jama* 'generous' - with which comparison should be made at the semantic level with (8), above - as well as of Pintupi *jami* '...person or thing no longer effective; not savage; tame; man who does not shoot game; woman who does not gather food; *Mingkulpa* (tobacco, ...) which has no bite to it'. In view of the sporadic appearance in Pama-Nyungan of this hitherto unmotivated *y-* : *j-* 'correspondence', it should be seen as subsidiary to the dominant *y-* : *y-* and *j-* : *j-* pattern.

In this respect, the evidence from Nyangumarda is perhaps especially instructive: 'sea breeze' in this language is *yaman* (semantically < 'SOFT (WIND), GENTLE (WIND)[4], evidently), showing

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[4] That this is plausible in real-world terms is seen from the following meteorological data recorded by the writer in April, 1951 at Wallal (where the coast has a north-northwesterly aspect):

Day	Temperature(C°)		Wind Direction			Wind Velocity (kph, est'd)		
	Min	Max	0600	1200	1800	0600	1200	1800
18 W	21	35	SW	W	W	8	15	15
19 Th	23	36	S	NW	W	5	15	8
20 F	24	43	SE	E	W	15	15	5
21 Sa	26	41	SE	E	NW	25	25	5
22 Su	21	37	SE	NE	NW	5	8	2

the expected *y-* : *y-* correspondence with Dyirbal; but Nyangumarda, in addition, has a root *jama* 'silent, quiet, taciturn' which also appears to belong in the set of direct and indirect cognates being generated. The appearance of evident doublets (cf. English *shirt, skirt*) is presumably a matter of direct inheritance on the one hand and of borrowing from a neighbouring language on the other. The third Nyangumarda root which is conceivably relevant here is *yama+R+* 'to cover over, erase', perhaps relatable with Dyirbal *yama*, etc. through a semantic development GENTLY > TO DO IT GENTLY > TO COVER OVER (e.g. meat cooking in ashes) CAREFULLY. The existence of this root raises the possibility, in the event that it is *not* cognate with Dyirbal *yama*, that an alternate accounting of the semantic history of Nyangumarda *yaman* would represent the correct etymological interpretation; this would take cognisance of the fact that the sea breeze sometimes brings in low scud which partly OBSCURES the heavens. That this OBSCURING property of cloud is a dominating facet in the aboriginal conceptualization of the universe is revealed through the etymology of the Nyangumarda generic noun *mujungu* 'cloud', the first two syllables of which are relatable to Ngarla *mujura* 'cloud', Gupapuyngu *muthak* 'overcast, covering of cloud', Bayungu *mujirri+Y+* 'to hide, crouch' and Dyirbal *mujan* 'Adj: (fire or light) extinguished'. In Nyangumarda, a kindred form *muju* 'mislaid, lost' appears in constructions such as *kapara muju+ja ma+na+rna* 'yandying dish (ABSOLUTIVE)

The contrast between the searing southeast trade wind from the desert in the earlier part of the day and the langourous afternoon sea breeze, at times the merest zephyr, is dramatic enough to have triggered the institutionalization of the etymon being studied here as a word for *'gentle* wind from the sea'. This seems especially likely if the writer is correct (O'Grady 1979:115) in depicting the Nyangumarda people as having emerged from the Western Desert on to the northwest coast a mere half millenium or so ago.

mislaid+FROM BEING take+PAST+1 SG', 'I found the yandying (winnowing) dish which had been mislaid'.

A pass through available Bayungu and Wadjuk data reveals no evidence of the etymon under study — perhaps due to the fact that the data bases available are considerably smaller than that for Pintupi, as represented by the Hansens' impressively large dictionary. In South Australia, Schürmann (1844:79) cites Pankarla *YAMMARA MANKU+* 'to embrace', where *MANKU+* 'to take, receive' is the extended reflex of ancestral *maa+N, as indicated in O'Grady (1966: 81, 113) and Dixon (1980:405). Semantically, this coheres well with Warburton Ranges *yamaji* 'friend', discussed earlier.

For Gawurna, Teichelmann and Schürmann (1840:59) gloss *YAMMA* as 'adj. ignorant; simple; foolish; stupid'. This form evidently represents a local pejorative semantic development in the etymon being tracked down. An entirely comparable innovation affected Late Old English *sōfte:* in the twelfth century it could mean 'gentle, mild'; in the thirteenth, 'impressionable, compliant'; and by the seventeenth, one of the meanings of its reflex was 'silly, simple'[5], whence the modern usage *he's soft in the head.*

This writer is aware that some scholars deprecate any tendency to draw semantic parallels between indigenous Australian and non-Australian conceptualizations of the real world. Yet it is the same planet that we all inhabit; modern linguistics, moreover, brings into ever sharper focus the fact that many semantic properties of natural languages have an essentially universal provenience. The clinching evidence for the plausibility of the development SOFT >

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[5] See *The Oxford Dictionary of English Etymology* (1966:843).

IGNORANT, SIMPLE... in Gawurna would be, in fact, the documenting of an entirely comparable semantic change, involving a different etymon altogether, in another language belonging to the Australian cultural tradition. Needless to say, this evidence is being pursued.

For the essentially extinct languages of Victoria, Hercus (1969) appears to provide no instance of the etymon being studied in these pages. Again, this could be a matter of a smaller data base not happening to include the etymon in question. Equally, however, this absence could reflect the presence of a deeper genetic gulf between many of the languages of southeastern Australia and, probably, all other Pama-Nyungan languages. Yet the presence of crucial diagnostic Pama-Nyungan inflectional suffixes (both nominal and verbal), pronouns and core lexical roots seems to guarantee a place in Pama-Nyungan for the the languages of the southeast — perhaps as Pama-Nyungan 'Outliers', as Kenneth Hale has suggested (p.c.). This suggestion, in turn, was made in response to our proposal (O'Grady 1979) that languages such as Pintupi and Umpila should count as belonging within 'Nuclear Pama-Nyungan'.

In the northeast of New South Wales, Gumbaynggir *yamaan* is 'creek, small river', as listed in Smythe (1948:144). The semantic reconciliation of this form with the foregoing seems to present severe difficulties, but it is at least worth noting in passing. Other scholars, especially aboriginal scholars, may know of a tradition which would provide a connecting semantic link here.

Immediately to the north, the Bandjalang dialects appear to betray not a trace of the etymon being sought, either in statistic-

ally more probable *yVmV form or in the less frequent metathesized[6] shape, which would be *mVyV in this language.

For the representative Pama-Nyungan languages of northeastern Australia with the ancestral sound pattern preserved more or less intact, we turn to Guugu Yimidhirr and Umpila. Here the etymon under study appears to be clearly represented in the form *yamunh* 'cooled off, no longer hot', given in Haviland (1972:83) for the former; for Umpila, data recorded by the writer include the form *aami* 'at rest (e.g. not away from camp hunting)' and the derived construction *aami nhiina+Ø+* 'to have a rest', where *nhiina+Ø+* is 'to sit' (O'Grady 1968:1). Semantically, these forms cohere well with the foregoing[7]. What of their phonology? From the Guugu Yimidhirr and other evidence — including the postulated Warlpiri form **yumu* — we reconstruct the ancestral Nuclear Pama-Nyungan shape as **yam$_u$*[8], with one or another nasal suffix (Alpher, p.c.) appearing in individual daughter languages; *+n* in Nyangumarda *yaman*, *+nh* in Guugu Yimidhirr *yamunh*. The ancestral representation of the latter is taken to be **+ny*, following Hale (1966, 1976a,b)

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[6] Compare, for example, **puka$_2$* >Gawurna *BUKKI* 'formerly; a long time ago', Gidabal *kupa.ni+* 'to do first', Umpila *ukaapi* 'in front, first'; and **nguku* > Kala Lagaw Ya *nguuki* (and, as a loan therefrom, Miriam *goke)*, Yaralde *NGUKE*, Bayali *KOONGO*, Gidabal, Waalubal *kung* 'water'. The latter two forms were not recognized in O'Grady (1979:109-10) as part of a metathesis pattern in the languages of this area.

[7] The presumed development is: GENTLE/GENTLY → TAKING IT EASY → TAKING A REST/COOLED OFF.

[8] Other study of the reflection of Pama-Nyungan roots of *CaCu* shape has been carried out by Dixon (1980:344-5) and by O'Grady (forthcoming).

and Black (1980). There remains the problem of the historical derivation of Umpila *aami*. This is taken to have proceeded via four stages:

		*yamu+ny
1.	fronting of *u* preceding laminal	yami+ny
2.	suffix lost through reanalysis	yami
3.	glide assim. to vowel in tongue position	a̯ami
4.	glide assim. to vowel for [syl]	aami [ǎ:mi]

In several further instances, the loss of ancestral initial glides *w and *y in Umpila is also accompanied by lengthening of a following short vowel. Note, for example, pre-Umpila *wutu (< *ngurru) > *uutu > *uu'u* 'forehead', discussed in detail in O'Grady (1981:157); proto Nuclear Pama-Nyungan (PNPN) *wulu > Yindjibarndi *wulu* 'thigh', Gidabal *wulu* 'ankle; foot of tree', Guugu Yimidhirr *wulu* 'leg', and Umpila *uulu*, attested in *tali uulu* 'shin' (*tali* 'lower leg'), *muji uulu* 'backbone' (*muji* 'back, spine'); PNPN *yaaju+L > Nhanda *athu+* 'to burn it, cook it', Pintupi *yujurn.pu+NG+* 'to cook in the ground', Strelley Nyangumarda *yujurn.pi+R+* 'to cook', Guugu Yimidhirr *yaaji+L* 'to burn, be burned, get burned', Umpila *aaji+Y+* 'to cook, burn it, light it'; the Umpila reflex shows loss of the initial *y but not, to our ears at least, triple vocalic length in the adjacent vowel. Pintupi *yampurli* 'cradling position for a baby', mentioned earlier in connection with Dyirbal *yama*, is more plausibly to be related etymologically to Wik Mungkan *ep*[9] 'lap' (Sayers and

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[9] In which an *m, however, has to be posited as being exceptionally

Kilham 1967) and to Umpila *aampa* 'lap'; since none of these languages can be counted in this instance as being diagnostic for ancestral vowel length, the protoform must be represented as *yAmpu pending the marshalling of cognates from length-preserving languages (cf. Dixon 1980, e.g. p. 406). If cognation is assigned correctly here, then the Umpila form at all events shows the expected loss of *y-.

The widespread Australian retroflex continuant, *r*, identified as a glide in Hale (1966, 1976a, b), O'Grady (1966, 1976, 1979) and Wurm (1972), but counted as [+rhotic] in Dixon (1980:192), is lost in Umpila with concomitant lengthening of a preceding short vowel in PNPN *parntung > *paanti.ku* 'all' (O'Grady, forthcoming).

Despite this reassuring array of examples of systematic glide loss in Umpila, we now feel compelled to propose a revision of an earlier claim concerning a particular etymon: O'Grady (1981:158-60) posited a development whereby ancestral *yuuri+L was reflected in Umpila as *aa'i+L+* 'to play, dance, sing'. This proposal seemed solidly based, especially in light of Guugu Yimidhirr *wuurii+* 'to play, dance'. Consider, however, the following: Wik Mungkan *kee'+* (Hale 1968), Bakanha *ka'i+* (Sommer 1968) 'to play, dance'. Black (1980) appears to list no forms which would shed light on the source of the internal glottal stop; in terms of Umpila historical developments, it could be any one of *p, *t, *rr or *r (O'Grady 1976). If it were to turn out to be *rr, then the Wik Mungkan and Bakanha forms probably enjoy cognation with Warlpiri *karri+Y+* 'to stand', 'Kalarko' *karri+* 'to fall' and Nyangumarda *+karri+Y+* 'STATIVE verb marker'.

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absent; cf. Proto-Paman *kaampa* > Wik Mungkan *kaamp+* 'to cook in earth oven', Proto Pama-Nyungan *kumpu > Wik Mungkan *kump*, Umpila *kumpu* 'urine' (Hale 1976a:55). A rule which deletes the nasal in a homorganic nasal + stop sequence is an attested Paman feature, but in languages further to the north, and in an environment different from that involved here. See Hale (1976b).

The vocalism of Umpila *aa'i+L+* poses no problems vis-à-vis the assigning of cognation with the forms just cited; on the other hand, this form would then have to count as the solitary example known to us of the outright loss of initial *k in this language. Whereas, however, Proto-Paman *kalmpar > Wik Mungkan *kemp*, Thaayorre *karmpar* 'flesh', cited in Hale (1976a:54), Umpila shows as an apparent reflex *yalmpay* 'meat, flesh; body (?)', with apparently unmotivated initial *y*. Since the loss of initial glides, on the other hand, is well documented in Umpila (though under conditions which are not yet fully understood), it seems preferable, pending a possible final breakthrough, to regard Umpila *aa'i+L+* as a blend resulting from mutual influence exerted between reflexes of *yuuri+L and, presumably, *kArri+Y.

The final Pama-Nyungan language to be examined here is Yuulngu of Northeastern Arnhem Land. In Lowe and Lawton's ms. *Gupapuyŋu Dictionary* there appears a solitary candidate for cognation with Dyirbal *yama* and the other forms proposed as cognates of it: *yämba* 'senile'. This seems semantically compatible with Gawurna *YAMMA*, discussed earlier. Conceivably, semantic drift has resulted in the evolution of pejorative meanings in these two Pama-Nyungan languages from the extreme north and south of Australia, as well as in English *soft in the head*. If this is so, then the long vowel *ä* and the epenthetic (?) *b* in Gupapuyngu *yämba* would require a principled explanation. Alternatively, this Gupapuyngu form may be eventually assignable as representing a widespread Pama-Nyungan 'widower' etymon, seen in Pankarla *YAMBINNA* with this meaning, as well as in Nyangumarda *yamparra* 'single person' [10].

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[10] Specialists in Yuulngu dialects are urged to come forward with any

As promised earlier, we turn finally to a consideration of four representative non-Pama-Nyungan languages; Ngandi, Maung, Tiwi and Ungarinyin. Of these, the first and the last appear to show not a trace of any of the etyma discussed earlier herein. In the case of Ungarinyin, this negative evidence is corroborated in a general sense by Rumsay (p.c.), who noted that the writer's presentation of several dozen Pama-Nyungan etymologies at MIT in January 1979 made clear to him that in the great majority of cases, a cognate set could not be extended to include Ungarinyin. In the case of Tiwi, our findings tally, on the whole, with Osborne's claim (1974:3) concerning the total lack of lexical evidence for genetic relationship between this and other Australian languages, and with Dixon's observation (1980: 430) that for Tiwi it is 'hard to find any correspondence with the verbal pattern reconstructed for pA'[11]. Certainly Tiwi *piyi+ni* and *pithukwayi+ni* (with masculine noun class suffix *+ni*), both meaning 'widower', appear as unrelated to any of the forms studied here. The Tiwi adverb *mamana* 'softly, gently, slowly' shares *-ama-* with Dyirbal *yama;* cognation is certainly conceivable here, yet the possibility of reconciling Tiwi *m-* with Dyirbal *y-*, perhaps through an anticipatory assimilation rule in the former, seems remote indeed. The problem is exactly the same as that involving Tiwi *kukuni* 'fresh water', and focussed on in O'Grady (1979:109-10): this may reflect Proto-Australian *nguku, and the putative development *yamu > Tiwi

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variant shapes in which this form may appear, in the interests of a solution to this problem. If indeed there is no evidence for an historical rule in Yuulngu phonology whereby intervocalic *m would descend as *mb* in certain contexts (cf. OE *θȳmel* > NE *thimble*), then Gupapuyngu *yämba* would appear to represent the 'widower' etymon.

[11] ... studied here [12].

[12] Tiwi *amparrú* 'widow, widower', however, recognized by Osborne

mama.na may even - who knows? - reflect the selfsame assimilation rule. We may well be ten thousand years too late to work out in detail the evolution of Archaic Tiwi phonology, semantics and grammar (let alone more recent developments), and in this era in man's existence all that is possible is to grasp at the odd straw.

Comparative method linguistics, an immensely powerful tool when applied to languages showing massive evidence of genetic relationship - such as Dyirbal and Pintupi - stands as helpless as a person trying to reconstitute a plate of scrambled eggs back into the original eggshells when faced with an enormous time span such as no doubt separates Tiwi from its nearest relatives[12].

Finally, turning to Maung, the remaining non-Pama-Nyungan language, we note a solitary lexeme which could possibly represent a non-Pama-Nyungan cognate of Dyirbal *yama:* Maung *yimijimi* 'gentle rain', which appears on p. 166 of Capell and Hinch (1970). This is certainly attractive semantically as a possible cognate form, but if a relationship does indeed exist here, the extremely deep genetic gulf between Maung and Pama-Nyungan languages may forever preclude the possibility of actually demonstrating cognation. Time will tell.

Other problems remain, including the need to reconcile the final vowel of Proto Nuclear Pama-Nyungan *yamu 'gentle, soft' with its apparent /a/ reflex in Dyirbal *yama*. Vocalic fluctuation, such as is seen in Dyirbal *yanu(l)* ~ *yana* 'to go', cited earlier, may well provide a clue here. In any event, it is hoped that other workers in this vast field will come forward with further evidence which will either effectively negate or provide backup for the protoforms

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(p.119) as a Yiwadja loan, may well represent the etymon referred to above.

[13] I owe this very apt metaphor to colleague Robert D. Levine of the British Columbia Provincial Museum.

put forward in these pages.

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Two Despirantization Processes in Sorbian

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The earliest Slavic dialects of Indo-European did not possess the spirant *x* in their phoneme inventories. While the sound [x] may have occurred very early as an affective variant in onomatopoeic forms, the phoneme /x/ eventually developed in the sixth or fifth century B.C. from Indo-European *s in the position after *i*, *u*, *r*, or *k*, if not before a stop; cf., after *i*: Russian *vexa* 'stake, landmark' (where *e*< *ě* <*oi), Old High German *wisk* 'wisp of straw', English *whisk*; after *u* : Russian *uxo* 'ear', Gothic *ausō*; after *r*: Russian *verx* 'top', Old Indian *vârṣma* 'height, top', Lithuanian *viršùs* 'top'; after *k*: Russian *lox-mot'ja* 'rags', Polish *łachy*, Greek *lakîs* rag, shred', Latin *lacer* 'torn', English *lacerate*. The environment after *k* is in fact the major source of occurrences of initial *x* in Slavic, with *k* itself having elided, i.e., *ks > *kx >*x*.[1]

In medial and final position, *x* has remained fairly stable in Slavic, with the exception of certain Slovenian dialects in which the replacement of *x* by [k^{c}] and [kx] is no doubt due to the influence of Upper German dialects (Isačenko 1939:37-38). Initial *x* is often subject either to despirantization, resulting in [k] or the aspirated [k^{c}], or to replacement by /f/, particularly in the initial cluster *xv*-. Despirantization occurs mainly in West Slavic, while replacement is more typical of both East Slavic and South Slavic.

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[1] For other sources of initial *x* in Slavic, see Shevelov (1965: 134-36). In this article, all italicized forms refer to either orthographic literary forms or recorded dialect material; asterisked forms are Proto-Slavic reconstructed items; and forms in square brackets are given when the orthography deviates from the phonetic shape of items. In phonetic transcription, the apostrophe stands for palatalization, e.g., [s'] , while the superscript [^{c}] stands for aspiration.

In Sorbian, despirantization occurs in two variations. In Upper Sorbian, any initial *x* has been despirantized, while in Lower Sorbian only *x* before a consonant has been subject to this process.[2] The purpose of this article will be to examine the relationship between these two processes in terms of their chronology and conditioning. The scope of this investigation does not allow a detailed discussion of the probable causes for despirantization in Sorbian and other West Slavic languages. These causes can only be hinted at in the course of this study and must be left for a future treatise on the subject.

In the contemporary phonological system of Upper Sorbian, the phoneme /x/ has an allophone [k^c], i.e., a strongly aspirated *k*, which occurs in morpheme-initial position. Thus, the orthographic forms *chodźić* 'to walk', *chěža* 'house', and *wuchod* 'exit; east' are pronounced [k^{c}odžič], [k^{c}ejža], and [u̯uk^{c}ot], respectively. Before the sonorants *r* and *l*, *x* is replaced by the unaspirated [k], cf. [klěp] *chlěb* 'bread'; [kribjet] *chribjet* 'back; spine'; [klěu̯] *chlěw* 'pigsty'.

In Lower Sorbian, *x* is preserved before vowels, cf. *chojźiś* 'to walk'; *chyža* 'hut'; and *wuchod* 'exit; east'. Before consonants, *x* is replaced by *k*: *klěw* 'stable'; *kmjel* 'hop'; *kśěn* 'horse-radish'; *kśebjat* 'back ; spine'.

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[2] We are assuming, in the form of a working hypothesis, that Upper and Lower Sorbian are genetically related and traceable back to a single ancestor, i.e., Old Sorbian. This view is by no means generally accepted in view of the small number of specifically Sorbian innovations as compared with the other languages of the West Slavic branch, i.e., Polish, Czech, Slovak, and the extinct Polabian. Most recently, Schuster-Šewc (1976:70-86) has presented an argument that a number of ancient Proto-Slavic dialects sharing features of all three Slavic language branches, i.e., East, West, and South, may have converged to yield a kind of Common Sorbian language around 600 A.D. This argument has no bearing on the processes under discussion here since their operation is sufficiently far removed from that period.

If we compare this situation with other West Slavic languages, nothing like the development in Upper Sorbian is seen to occur in any one of them. But we find despirantization without aspiration in some dialects of Czech before sonorants, cf. *kvâla* 'praise'; *kvîl'a* 'minute'; *krust* 'June beetle'; and *krobâk* 'dung-beetle'. All of these words have initial *x* in literary Czech.

The question which arises in this respect is whether the two processes, i.e., despirantization with aspiration in Upper Sorbian, and despirantization without aspiration in Upper Sorbian, Lower Sorbian, and Czech dialects are in any way genetically related. Schuster-Šewc (1972:10-27), who argues for such a relation, sees the inception of the change *x-* > *k-* in the dissimilatory change of the sequences *x* + sonorant to *k* + sonorant. Despirantization then spread in Upper Sorbian from this environment to a position before a vowel. In Lower Sorbian the change was restricted to the sequences *x* + *r*, *l*, *ś*, *š* (and even here not regularly). The lower frequency of the new initial *k* prevented this development from spreading to a pre-vocalic position. To explain why Upper Sorbian developed an aspirated [k^c], Schuster-Šewc resorts to the notion of functional load. He argues that if *x* had changed to *k*, the functional load of this phoneme would have been increased excessively (Schuster-Šewc 1972:364). We have shown elsewhere (Schaarschmidt 1978:343) that before a vowel the change *x* > *k* would have resulted in no more than half a dozen cases of homonyms. There seem to be only two clear cases where homonyms would have resulted in a position before a sonorant. Whether this number can be considered sufficient to make a case for functional load as a meaningful criterion for determining the directionality of linguistic change, is not an easy question to answer. In any case, even if functional load were not a factor, this would still not invalidate the argument that the development in Upper Sorbian is in essence the

same sound change as in Lower Sorbian, albeit with a different result.

Stieber (1934:67) argued against a genetic relationship between the two processes because he noticed that in those dialects where initial *x* had been preserved, there exist nonetheless forms like [klěp] *chlěb* 'bread'. He maintains that this development is not related to the change *x* > *k* in Upper Sorbian, but is part of a more general change *x* > *k* in the environment before a sonorant. Stieber does not provide any evidence against the possibility that Upper Sorbian may in fact be at a more advanced stage of a process which can be traced back to a common origin.

The answer to this question can only be found in the internal phonological history of Sorbian, an area which has received far too little attention among students of Sorbian. For the purpose of the present problem, it will be worthwhile returning to the rule given by Schuster-Šewc for despirantization in Lower Sorbian. After stating that Lower Sorbian has not been affected by the Upper Sorbian change *x* > *k*, Schuster-Šewc notes that there is a similar change in Lower Sorbian, viz., the change *x* > *k* before the sonorants *r*, *l*, *m* and the spirants *ś* and *š*.

The above rule could actually be simplified by stating the environment as [+cons], since the list of phonemes given exhausts all possible preconsonantal environments for *x*, with the exception of *w*, a bilabial glide in Lower Sorbian. The problem with the proposed rule is, however, that there simply did not exist a stage in the development of Sorbian at which we can assume **xś* and **xš* sequences. If we examine the examples given by Schuster-Šewc, we note that in most cases *ś* and *š* are derived from Proto-Slavic *r: *kśěn* < **xrěnъ* 'horse-radish'; *kśebjat* < **xrьbьtъ* 'back; spine'; *kšopa* < **kropa* 'drop'; *kšostaś* < **xrostati* 'to rustle'. In one case, *ś* is derived from *t via *ć*: *kśěś* < *xьtěti* 'to want', cf. Upper Sorbian *chcyć*.

The only way to derive a *ś* or *š* from *r in Lower Sorbian is by the process of *r*-assibilation. This process operated only in the environment after the voiceless stops *p*, *t*, *k* with *ś* resulting before a front vowel, and *š* before a back vowel, cf. *pśi* < *pri 'at; with'; *kśiwy* < *krivъ 'crooked'; *tśi* < *tri 'three'; *pšosyś* < *prositi 'request'; *mokšy* < *mokry 'wet'; *sotša* < *sestra 'sister'.

Therefore, at the time when *r* was becoming assibilized to *ś* or *š* in Lower Sorbian, *x* must already have become *k*, or else assibilation would not have occurred. The assibilization of *r* thus provides a terminus ante quem for the despirantization of *x* in Lower Sorbian: if *r*-assibilation took place around or before the tenth century A.D., then the change *x* > *k* must have been completed by that time.[3]

The assibilation of *r* also provides a terminus post quem for despirantization in Upper Sorbian. As in Lower Sorbian, *r* in Upper Sorbian underwent assibilation after the voiceless stops *p*, *t*, *k*, but only before front vowels, cf. [pšɨ] *při* 'at; with'; [kšiwy] *křiwy* 'crooked'; [ts'i] *tři* 'three'; but: *prosyć* 'request'; *mokry* 'wet'; *sotra* 'sister'. Even though in contemporary Upper Sorbian, inherited *x has become [k] before *r*, that *r* itself has not undergone assibilation, cf. [kribjet] *chribjet* 'back; spine'; [krěn]

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[3] The exact mechanism and chronology of *r*-assibilation in Sorbian are still poorly understood. On the one hand, it appears to be a very old process which may have been completed well before the tenth century (Faska 1973). On the other hand, there is evidence which suggests that assibilation was the end product of a number of intermediate stages stretching over two or three centuries (Mareš 1976:54-63).


Beeskow
Eisenhüttenstadt
Spree
Odra
N
Lübben
Lubin
Guben
Gubin
Luckau
Łukow
Poland
Cottbus
Chośebuz
Calau
Kalawa
Forst
Barść
Finsterwalde
Grabin
Spremberg
Grodk
Senftenberg
Neiße
Zły Komorow
Weißwasser
Běła Woda
Schw. Elster
Hoyerswerda
Wojerecy
Niesky
Niska
Röder
Kamenz
Kamjenc
Bautzen
Budyšin
Görlitz
Zhorjelc
Bischofswerda
Biskopicy
Löbau
Lubij
Dresden
Elbe
Zittau
Zitawa
0 5 10 15 20 km
Czechoslovakia
Sorbian-German bilingual area
north x-/ south kc - 'chodźić'
north g-/ south kc - 'Koch'

chřěn 'horse-radish'. Thus, *x* must still have been a fricative in Upper Sorbian at the time when *r*-assibilation took place.

Michałk (1979:194-95) using evidence from documents, dialects, and studies of Sorbian-German bilingualism, comes to the conclusion that despirantization cannot have been an active process in Upper Sorbian before the sixteenth or seventeenth centuries. For expository purposes, then, we may sum up the history of despirantization in Sorbian by the following set of rules:

(1) $x \longrightarrow k / \#$ _____ sonorant — Lower Sorbian, Ninth century

(2) $r \longrightarrow \check{r} / \{p, t, k\}$ _____ — Lower and Upper Sorbian, Tenth century

(3) $x \longrightarrow \begin{bmatrix} k \\ k^c \end{bmatrix} / \#$ _____ $\begin{bmatrix} \text{sonorant} \\ \text{vowel} \end{bmatrix}$ — Upper Sorbian, Sixteenth century

The final question that remains to be examined within the scope of this study is why Upper Sorbian developed an aspirated k^c from *x before vowels, while Lower Sorbian did not. Since the answer can obviously not be found within the internal phonological development of Upper Sorbian, we must turn to an examination of possible external causes. As the map shows, there is an interesting correspondence between the x/k^c isogloss in Sorbian and the g/k isogloss line in the German dialects west of the Sorbian language area.[4] As we have described elsewhere (Schaarschmidt 1978:339-40), initial k of whatever origin is strongly aspirated pretonically and before vowels in West Lusatian, an East Middle German dialect bordering on Upper Lusatia to the west, cf. $k^c\varrho x$ 'cook'; $k^c\bar{u}$ 'cow'; $k^c\bar{e}$ 'no; none'; $k^c i\varsubsetneq e$ 'kitchen'. Before sonorants, the aspiration of initial k is

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[4] This map is adapted from Herrmann (1970:409). The author wishes to thank the Akademie-Verlag in Berlin for granting him permission to reproduce the map.

either weak or non-existent, cf. *glī* 'clover'; *gnī* 'knee'; *grǟɔ* 'crow'; *grum* 'bent'.[5]

North of the West Lusatian area, in the Eastland Seam (German *Osterländische Staffel*), initial *k* is realized as a voiceless, non-aspirated lenis before both vowels and sonorants, cf. *gɣx* 'cook'; *gū* 'cow'; *gē* 'no; none'; *giɣe* 'kitchen'.

Since the change $x > k^c$ spread from west to east in the Upper Sorbian area (Michałk 1979: 194-95), the assumption of a possible superstratal influence seems quite plausible. Since German, at least Low and Middle German, has not had an initial *x* since the sixth century A.D., the aspirated k^c of East Middle German was reasonably close phonetically to Sorbian *x* in order to facilitate a replacement. In Lower Sorbian, the phonetic distance between the non-aspirated lenis of the adjacent German dialects and the native *x* was too great to allow any such replacement.

We tend to agree with Michałk (1979), however, that before final judgment can be passed upon this hypothesis, the exact dialect boundaries and the core of the Sorbian-German bilingual area need to be established. It is always difficult to deal with interference phenomena in a historically remote period, the more so when, as in the case of Sorbian, documentary evidence is sparse. In the meantime, however, the proposed hypothesis can provide a meaningful starting point for examining alternative solutions to the problem under investigation.

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[5] In the practice of German dialectologists, this voiceless, non-aspirated lenis is transcribed as *g* .

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British and American Influences on Canadian English

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1.0 INTRODUCTION

Canadian English is often characterized as a variety of English closely resembling American English, yet exhibiting many features typical of British English. This generalization presents certain problems in that there is a great diversity of dialects in both the United States and Britain. American English in this context presumably refers to the standard variety based on the regional speech of the North and West, sometimes referred to as General American (Thomas 1947:142-147). The model of British English for such a comparison usually is Southern Standard English.

The choice of Southern Standard British English as a basis for comparison is, in a sense, unfortunate in that many of the features of Canadian English introduced by the early settlers from the United Kingdom will thus be overlooked. The preponderance of the early immigration to Canada from Britain was not from southern England, but from northern areas of the British Isles; e.g., Yorkshire, Scotland, and Ireland. In 1871, for example, of over two million British immigrants residing in Canada 846,414 were Irish (Scargill 1977:10, figure quoted from Urquhart and Buckley 1965:18). It is interesting to note that a century or so earlier the same northern British dialects were the main contributors to what became the North and West dialect of the United States (Kurath 1971: 12-21). It is not inappropriate to reason, therefore, that the immigrants from northern Britain and the already established (American) Loyalist settlers found some compatability in each others speech ways; and,

rather than the new immigrants quickly abandoning their dialects, there ensued a blending or levelling of these closely related dialects which gave rise to a new dialect, Canadian English. Features of Canadian English such as the raised diphthongs [ʌy] and [ʌw], and neutralizations of the low back vowels, to name but a few, can be attributed to the influence of northern British English dialects. Although the close relationship of Canadian English to the northern dialect of the U.S. is undeniable, scholars in this field have largely neglected to examine the influences of British dialects other than Standard English of southern England.

The purpose of the study reported here was to determine the position of Canadian English in relation to American and British English using data obtained by means of the 1972 Survey of Canadian English (Scargill and Warkentyne 1972). Twenty-two items were selected on the basis that the choice of responses represented divided usage, one of which was typical of American English, and the other related more closely to British English. Data consisting of the responses to these items by informants who completed the Survey questionnaire were used in the analysis described below.

2.0 THEORETICAL CONSIDERATIONS

Implicit in the notion of determining the position of Canadian English with respect to American (U.S.) and British (U.K.) usage is the assumption that there exists some form of a continuum or line joining the extremes of U.S. and U.K. usage, and that we can measure the position of Canadian English along this line. Further, we are assuming that a set of items extracted from the questionnaire can represent this continuum in some way, and that the responses to these items may be used to make measurements along it. The validity of these assumptions must be tested before any attempt is made to determine the position of Canadian English, and certainly

before any conclusions are drawn concerning the meaning and importance of the position determined.

One model for the latent continuum along which we propose to make measurements, which contains methods of testing for its existence, is provided by Guttman scalogram analysis. The essential criterion that a set of questionnaire items must satisfy in order that it be considered to comprise a scale in the Guttman sense is cumulativity. Items are ordered according to 'difficulty' which, in our case, means that they are ordered according to the proportion of informants who have selected the U.K. usage response. The set of items so ordered would satisfy the cumulativity criterion perfectly if no informant selected a U.S. response for an item less 'difficult' than an item for which he had selected the U.K. response. Some latitude for variability is provided for in the method so that a number of errors or failures to fit the perfect scale pattern are tolerated and a set of items may still be regarded as constituting a scale.

Two properties or statistics frequently computed from responses to a set of items being tested as to whether or not it constitutes a scale are Coefficients of Reproducibility (REP) and Scalability (SCAL). REP is used to measure the fraction of responses which conform to the perfect scale response patterns, and SCAL measures, in effect, the fractional decrease in the number of errors observed over the maximal number of errors expected, given the numbers of informants selecting U.S. or U.K. responses for each item. By convention, if the fraction of errors is less than 0.10 or 10%, so that the value computed for REP exceeds 0.90, the set of items may be considered a scale. (In addition to applying the arbitrary value of 0.90 for REP as the critical value for cumulativity, we employed a Monte Carlo procedure, which we describe below, to test statistical significance of REP values.) Alternatively, if the ratio of the

number of errors observed to the maximal number expected is less than 0.40, so that the value of SCAL exceeds 0.60, the set may be regarded as a scale. If a set of items satisfies these criteria, one can infer the existence of a latent continuum underlying the items and can use scores computed from responses to items in the set to make measurements along this continuum.

3.0 THE DATA

3.1 The Sample

The original Survey of Canadian English data file containing the coded responses of 15,575 informants, consisting of grade nine students and their parents, was used to create a subfile containing the records only of informants born in the province in which they responded to the questionnaire. This subfile contained 11,561 records of which 710 were provided by informants in British Columbia, 969 from Alberta, 1326 from Saskatchewan, 950 from Manitoba, 1103 from Ontario, 1132 from Quebec, 1370 from New Brunswick, 1892 from Nova Scotia, 1391 from Prince Edward Island and 718 by informants from Newfoundland. A second subfile was created from the first by extracting 2000 records from it by a random process with the restriction imposed that the number of records drawn from each province be proportional to its English-speaking population. Thus a random sample was produced which could be construed as representative of the nation as a whole. The size of this sample was governed by the size of the original sample from Ontario, the province in which the largest number of English-speaking Canadians resides.

3.2 The Linguistic Items

Items were selected from the Survey questionnaire which offered a choice between a response that could be identified as representing preference for U.S. usage and a response that could be regarded

	U.S. usage		U.K. usage		*either*
Pronunciation					
lever	/lɛ́vər/	(16)	/lɪ́vər/	(71)	(13)
new	/nu/	(36)	/nyu/	(44)	(17)
student	/stʊ́dənt/	(65)	/styʊ́dənt/	(26)	(9)
schedule	/skɛ́ǰəl/	(78)	/šɛ́dyʊl/	(15)	(7)
(the letter) *z*	/zi/	(11)	/zɛd/	(78)	(11)
lieutenant	/lutɛ́nənt/	(69)	/lɛftɛ́nənt/	(22)	(9)
leisure	/lɪ́žər/	(67)	/lɛ́žər/	(24)	(9)
ate	/et/	(97)	/ɛt/	(3)	
aunt	/ænt/	(80)	/ant/	(20)	
progress	/prɒgrɪs/	(51)	/progrɪs/	(49)	
route	/rawt/	(22)	/rut/	(69)	(9)
Vocabulary					
	fall	(60)	*autumn*	(10)	(30)
(cloth)	*napkin*	(46)	*serviette*	(33)	(21)
(paper)	*napkin*	(37)	*serviette*	(43)	(20)
	toward	(29)	*towards*	(54)	(17)
(french)	*fries*	(69)	*chips*	(31)	
	mailman	(75)	*postman*	(8)	(17)
Spelling					
	color	(25)	*colour*	(52)	(23)
	center	(36)	*centre*	(40)	(24)
	traveled	(18)	*travelled*	(75)	(7)
	defense	(22)	*defence*	(54)	(24)
	gray	(27)	*grey*	(43)	(30)

Table 3.1 Questionnaire items showing U.S.-U.K. dichotomy with relative frequencies of responses (in percent) as observed in the random national sample.

as reflecting U.K. usage for purposes of this study. (Some items also allowed the ambivalent response of *either*.) A total of 22 such items were identified; eleven of these were classified as dealing with pronunciation, six with vocabulary, and five with spelling. The items selected are listed in Table 3.1 as representing U.S. (i.e, General American) or U.K. usage. Relative frequencies of the responses for each of the 22 items were determined for the random national sample of 2000 informants. The frequencies observed are recorded in Table 3.1 as percentages, appearing in parentheses following the responses to which they refer.

The reader will readily notice that the members of sets comprising the responses cannot all be exclusively assigned to U.S. or U.K. usage. Although by no means exclusively, the items assigned to U.S. usage are commonly used in General American, but not in British English. One exception to this criterion is *serviette*, the equivalent of which is U.S. *napkin* and U.K. *table-napkin*. According to Oxford English Dictionary older forms of *serviette* (*serviot, serviat, servit,* etc.) were used in Scotland exclusively. In the nineteenth century it was introduced into England with its French spelling, and presumably gained wide currency. However, *serviette* later came to be considered vulgar, and has disappeared from standard usage in England. From this account we may conclude, therefore, that *serviette* was introduced into Canadian English by British settlers.

4.0 ANALYSIS

4.1 Scaling Tests

A computer program was written to test the scalability in the Guttman sense, of the 22 items. The algorithm employed in this program followed that of Anderson (1966) used in the SPSS program Guttman Scale procedure (SPSS:528-539). This program had to be written

since the SPSS program permits scales consisting of, at most, twelve items. For this study it was desirable that large numbers of different sets of items be tested in an automatic way without the necessity of preparing different control cards for each set.

Scaling tests were performed using the national sample. For each subset of items tested, subjects who gave the ambivalent response *either* or who failed to respond to an item were excluded. The set of all 22 items was found not to comprise a scale, nor was any of the 22 subsets of 21 items found to comprise a scale. Since it was impractical to test all possible subsets consisting of from three to twenty items, we decided to follow a different procedure in the search for a subset which would comprise a scale.

From the set of all 22 items, the 22 subsets of 21 items each were generated by removing, in turn, each of the 22 items. Each of these subsets was tested for scalability, and the subset yielding the highest value of the Coefficient of Scalability (SCAL) was selected for the next step. On the basis of this subset 21 subsets were produced and tested, again retaining the subset yielding the highest SCAL. This procedure was repeated until a set of items was found which exhibited sufficiently high values of SCAL and REP that we could consider it to satisfy the conventional criteria for a Guttman Scale. The systematic elimination of items to produce successively smaller subsets was performed automatically by the computer program. The subset of five items comprising a scale derived from the 22 items is shown in Table 4.1 as the composite scale. Values of SCAL and REP obtained on the five-item composite scale were 0.5265 and 0.9070, respectively. It will be noticed that the SCAL value is somewhat below the 0.60 criterion value. Reducing the scale to four items by removing *lieutenant* would have yielded the values SCAL = 0.6516 and REP = 0.9360. However, we

chose to retain *lieutenant* and to deal with the five-item set on the grounds that the Coefficient of Reproducibility (REP) was sufficiently high that the five-item set could be regarded as a scale.

Composite scale	Pronunciation scale
center/centre (spelling)	*new*
z (pronunciation)	*student*
lieutenant (pronunciation)	*z* (the letter)
mailman/postman (vocabulary)	*ate*
ate (pronunciation)	

Vocabulary scale	Spelling scale
fall/autumn	*color/colour*
napkin/serviette (paper)	*center/centre*
mailman/postman	*traveled/travelled*

Table 4.1 Items comprising the scales

The pronunciation, vocabulary, and spelling subsets each were subjected separately to the stepwise scale derivation procedure. Scales obtained were a four-item pronunciation scale (SCAL = 0.6201, REP = 0.9121), a three-item vocabulary scale (SCAL = 0.6492, REP = 0.9163), and a three-item spelling scale (SCAL = 0.5394, REP = 0.8484, see further discussion below). The four subsets representing the four scales are shown in Table 4.1.

To decide if a set comprised a scale, we applied a test of scalability in addition to that provided by the REP and SCAL criterion values. We generated fifty independent sets of responses to

the 22 items which were random but subject to the condition that frequencies of responses to each item be the same as those observed in the national sample. For each of these fifty sets of randomly generated responses to the five items we took to comprise a scale, we determined a value for REP. The mean of these fifty values was computed, obtaining the value 0.8927, with a standard error, 0.003529. We tested the set of fifty REP values for skewness and kurtosis, and found the REP values to be distributed symmetrically about the mean, and observed that the distribution was mesokurtic. We then tested the distribution of REP values against a normal distribution with the same mean and variance by means of a Kolmogorov - Smirnov one-sample test, and found that the REP values did not differ significantly from a normal distribution at less than the 0.01 level. We therefore concluded that REP values computed from random responses were normally distributed; and that, if responses observed in the national sample were random, the statistic computed by dividing the difference between the mean REP from the random responses and the observed REP from the national sample by the standard error would be distributed standard normally. We tested the hypothesis that the responses observed in the national sample were random by determining the probability associated with the value of this statistic from a table of normal probabilities. We concluded that, if responses to the five items on the composite scale by the 2000 subjects in the national sample were random, the probability of a value of REP as high as the one observed would be less than one in a thousand. Therefore, we rejected the randomness hypothesis and concluded that responses to the five items were not random and hence, this set derived from the set of 22 items could be regarded as comprising a scale.

The sets of four pronunciation and three vocabulary items also

passed our randomness test and therefore satisfied our criterion for scalability, as well as the REP and SCAL criteria. Although the set of three spelling items failed to satisfy the REP and SCAL criteria, the value of REP obtained was sufficiently large that the chance of responses to these items being random was very small. We therefore concluded that this set could also be regarded as comprising a scale.

4.2 Statistical Measurements

Scores on the four subsets comprising scales were computed for the national sample as follows. For each item in the subset, a subject was assigned a score of -1 if he indicated a preference for the U.S. usage and a score of +1 if he selected the U.K. usage. In order to include the responses of subjects who chose the ambivalent response *either* to one or more items in a subset, a score of 0 (zero) was assigned to this response. Subjects who had failed to answer an item in a subset were excluded. Each subject's score for a subset of items was computed by summing his scores for individual items in the set. A mean score for the subset of items was computed by summing scores of subjects' given scores for the subset and dividing this sum by the number of subjects retained. This mean score was then divided by the number of items in the subset to produce a mean score per item.

The following mean scores per item were obtained: the composite scale, -0.279; the pronunciation scale, -0.154; the vocabulary scale, -0.371; and the spelling scale, +0.291. Mean scores per item and standard errors per item for all informants in the national sample on the four subsets of items are reported in Table 4.2. On the same four subsets, mean scores per item and standard errors per item for students and parents separately extracted from the national sample,

	Composite Scale	Pronunciation Scale	Vocabulary Scale	Spelling Scale
All informants	-0.279 (0.008)	-0.154 (0.008)	-0.371 (0.010)	+0.291 (0.012)
Students	-0.346 (0.008)	-0.222 (0.010)	-0.428 (0.012)	+0.280 (0.014)
All Parents	-0.154 (0.014)	-0.027 (0.016)	-0.266 (0.018)	+0.314 (0.022)
Parents by education				
Level 1	-0.196 (0.016)	-0.057 (0.019)	-0.282 (0.022)	+0.285 (0.025)
Level 2	-0.121 (0.056)	-0.030 (0.070)	-0.278 (0.059)	+0.278 (0.089)
Level 3	-0.048 (0.032)	+0.071 (0.026)	-0.221 (0.035)	+0.436 (0.046)

Table 4.2 Mean scores per item and standard errors per item (in parentheses) for students and parent subsamples of the national sample.

	Composite Scale	Pronunciation Scale	Vocabulary Scale	Spelling Scale
Students				
B.C.	-0.390 (0.013)	-0.190 (0.016)	-0.532 (0.018)	+0.191 (0.023)
Alta.	-0.401 (0.011)	-0.141 (0.015)	-0.556 (0.017)	-0.129 (0.021)
Sask.	-0.368 (0.011)	-0.168 (0.013)	-0.484 (0.016)	+0.050 (0.017)
Man.	-0.370 (0.012)	-0.132 (0.016)	-0.358 (0.016)	+0.107 (0.021)
Ont.	-0.290 (0.011)	-0.249 (0.013)	-0.352 (0.016)	+0.466 (0.016)
Que.	-0.363 (0.010)	-0.157 (0.013)	-0.503 (0.014)	+0.270 (0.016)
N.B.	-0.346 (0.010)	-0.220 (0.012)	-0.704 (0.013)	+0.143 (0.017)
N.S.	-0.351 (0.010)	-0.222 (0.012)	-0.605 (0.014)	+0.016 (0.016)
P.E.I.	-0.413 (0.011)	-0.235 (0.014)	-0.663 (0.015)	+0.016 (0.018)
Nfld.	-0.441 (0.018)	-0.269 (0.021)	-0.240 (0.023)	+0.112 (0.023)
Parents				
B.C.	-0.105 (0.026)	+0.119 (0.030)	-0.335 (0.035)	+0.364 (0.041)
Alta.	-0.241 (0.016)	+0.006 (0.020)	-0.434 (0.021)	-0.043 (0.028)
Sask.	-0.214 (0.014)	-0.053 (0.017)	-0.339 (0.018)	+0.041 (0.023)
Man.	-0.171 (0.018)	+0.123 (0.021)	-0.165 (0.023)	+0.088 (0.032)
Ont.	-0.089 (0.019)	-0.066 (0.023)	-0.181 (0.022)	+0.580 (0.025)
Que.	-0.146 (0.028)	+0.023 (0.032)	-0.283 (0.035)	+0.330 (0.044)
N.B.	-0.254 (0.014)	-0.115 (0.017)	-0.604 (0.019)	+0.097 (0.022)
N.S.	-0.220 (0.011)	-0.067 (0.013)	-0.409 (0.016)	+0.088 (0.017)
P.E.I.	-0.329 (0.014)	-0.136 (0.018)	-0.481 (0.020)	+0.102 (0.021)
Nfld.	-0.456 (0.020)	-0.215 (0.024)	-0.175 (0.026)	+0.147 (0.028)

Table 4.3 Mean scores per item and standard errors per item (in parentheses) of scale subsets for students and parents by province

and for parents on the basis of their educational level are also shown in Table 4.2. Mean scores and standard errors per item were computed for students and for parents by individual province, and are reported in Table 4.3.

5. RESULTS

5.1 Significance Levels

In the description of the results of the statistical tests, if we are able to reject the null hypothesis of the test at the 0.05 (5%) level of significance, than we refer to the difference between two means being tested for equality, or the difference between a mean and some constant as significant. At the 0.01 (1%) level we describe the difference as highly significant.

If, in a one-sample test, a particular score under examination is negative, we conclude that the informants for whom the mean was calculated show a preference for U.S. usage; a positive mean, on the other hand, indicates a preference for U.K. usage. If the mean is not significantly different from zero, we conclude that there is no discernible tendency towards either U.S. or U.K. usage. For the one-sample tests involving the equality of mean scores per item to -1 (U.S. usage extreme), to +1 (U.K. usage extreme), and to 0 (zero) for the various subsamples of informants taken on the four scales, since the sample sizes were very large, a z-statistic was computed and critical values were taken from a table of areas under the normal curve. For the two-sample tests of significance of a difference between two means, we employed a t-statistic, with different critical values being employed to compensate, when necessary, for unequal sample variances.

5.2 National Patterns

In all tests of mean scores per item against the U.S. and U.K. usage extreme values, all means were found to be highly significantly

different from both the U.S. and U.K. extremes. We concluded from the results of these tests that, although subsamples of informants might indicate a preference for U.S. or U.K. usage in the categories of items tested, none of the subsamples tested indicated strictly U.S. or U.K. usage.

After testing mean scores for equality to zero, we concluded that informants comprising the random national sample show a highly significant tendency towards U.S. usage on the pronunciation and vocabulary scales, and a highly significant tendency towards U.K. usage on the spelling scale. This observation also applies to the subsample of students.

Parents from the national sample, including all three levels of education in the one subsample, show a significant (although not highly significant) tendency towards U.S. usage on the pronunciation scale, a highly significant tendency towards U.S. usage on the vocabulary scale, and a highly significant tendency towards U.K. usage on the spelling scale. For parents at the first level of education (not beyond high school), the tendencies toward U.S. usage in pronunciation and vocabulary and towards U.K. usage in spelling are all highly significant. For parents at the second educational level (beyond high school, but not university), the tendencies towards U.K. usage in spelling and U.S. usage in vocabulary are highly significant. However, the preference for U.S. usage in pronunciation is not significant. Parents from the national sample at the third level of education (university training) show highly significant tendencies towards U.S. and U.K. usages in vocabulary and spelling, respectively; but, unlike all other subsamples, they show a significant (although not highly significant) tendency towards U.K. usage in pronunciation.

In addition to the one-sample tests described above, we also

conducted two-sample tests of the equality of mean scale scores per item (SPSS:267-275). When mean scores for students were compared with mean scores for parents, we found that students show a highly significantly greater tendency towards U.S. usage on pronunciation and vocabulary than do parents. In the case of spelling, however, the difference between student and parent mean scores is not significant. When mean scores for students were compared separately with those for parents at the three educational levels, we found that students' preference for U.S. usage in pronunciation is highly significantly different from the preferences indicated by parents at all of the three levels. In the case of vocabulary, students show a highly significantly greater tendency towards U.S. usage than parents at the first and third educational levels. The difference between the preference exhibited by students and by parents at the second educational level for U.S. usage in vocabulary is not significant. The mean scores for students and first and second level parents on the spelling scale do not differ significantly. However, the tendency towards U.K. usage in spelling by parents at the third level of education is highly significantly greater than that of the students.

Comparison of the mean scores for parents at the three educational levels showed that the only significant differences occur between the first and third levels. These differences appear in the cases of pronunciation and spelling, and they are highly significant. Differences between parents at the first and second levels, and between second and third levels in pronunciation and spelling are not significant. In the case of vocabulary none of the differences amongst the three levels is significant.

5.3 Provincial Patterns

When mean scores on pronunciation for parents in each province

were compared with zero, we found the tendency towards U.S. usage in Saskatchewan, Ontario, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland to be highly significant. The tendency towards U.K. pronunciation in British Columbia and Manitoba is highly significant. Preferences indicated by parents in Alberta and Quebec do not differ significantly from zero on this scale. In the case of vocabulary the tendency towards U.S. usage demonstrated by parents in all provinces is highly significant. The tendency towards U.K. usage in spelling by parents in all provinces, except Alberta and Saskatchewan, is highly significant. This tendency is significant in Saskatchewan. In Alberta there is a slight preference for U.S. usage in spelling, but the mean score is not significantly different from zero.

For students, there is a highly significant preference for U.S. usage on both pronunciation and vocabulary scales. On the spelling scale, there exists a highly significant tendency towards U.K. usage in all provinces except Alberta and Prince Edward Island. In Alberta the tendency towards U.S. usage in spelling is highly significant. The preference for U.K. spelling in Prince Edward Island is not significant and therefore no conclusion can be formed regarding a tendency in this direction for students of this province.

6. DISCUSSION

The step-wise scale derivation procedure used in this study (described in 4.1) is not exhaustive, and therefore there is no guarantee that the scale obtained will be that one, amongst all those of the same size, with the highest Coefficient of Scalability. The procedure does, however, permit subsets of items satisfying scaling criteria to be derived from larger sets which do not satisfy scaling criteria, at moderate expenditure of computational time and money compared with what would be required for an exhaustive search.

Since the set of spelling items was small we were able to test all possible subsets of three items for scalability in this category. Although this may be a special case, we found that the stepwise procedure did produce that set of three items with the highest value of the Coefficient of Scalability.

The reader is cautioned that there are limitations on the degree of validity of the results presented here. For example, the distribution of the responses elicited by the 1972 survey was not random in the technical sense; and, therefore, the claim that our results reflect the usage of the whole English-speaking population of Canada is somewhat of an over-statement. However, inasmuch as the survey did succeed in sampling a cross-section of the population, albeit informally, our results can be accepted at a reasonable level of confidence.

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