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#### KEY TO NON-OBVIOUS SYMBOLS:

Items to be italicized are indicated by preceding and following *\_*.

*n*~ = n with superscript circumflex (Zamboanguen~o)

*a*~ = a with superscript circumflex (nasalized "a"; esp. name Piraha~)

*s*^ = s with hachek (a "sh" sound)

*c*^ = c with hachek (a "ch" sound)

*j*^ = j with hachek (a "j" as in "just" sound)

*i*^ = i with ^ (not circumflex, not hachek) over it

*e*^ = e with ^ (not circumflex, not hachek) over it

*i*" = i with superscript umlaut

*V*' = vowel with acute accent over it

7 = glottal stop

*c*, = c with subscript cedilla (in the name Gonc,alves)

*'e* = e with superscript grave accent (in `evoljucii, probl`emes)

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#### Pronoun borrowing

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#### 1. Introduction

A recurring theme in theoretical discussions of language contact is the question of borrowability---specifically, whether there are any substantive constraints governing the kinds of lexicon and structure that can be borrowed. Nowadays historical linguists are less likely to propose absolute constraints than they used to be, because everyone knows at least a few examples of `odd' borrowings. Still, the feeling that some things ought not to be borrowed persists among both historical linguists and specialists in language contact.

Perhaps the most commonly mentioned hard-to-borrow lexical feature is the category of personal pronouns. The reasoning, usually implicit, seems to be roughly this: personal pronouns comprise a closed set of forms situated between lexicon and grammar; they form a tightly structured whole and are so deeply embedded within a linguistic

system that borrowing a new personal pronoun, and in particular a new pronominal paradigm, would disrupt the workings of the system. Therefore, the argument goes, it is extremely unlikely that any language (or rather any speech community) would borrow pronouns.

This paper presents evidence that, given appropriate social circumstances, pronouns and even whole pronominal paradigms are readily borrowed. It is certainly more difficult to find examples of borrowed personal pronouns than examples of borrowed nouns denoting newly acquired cultural items; still, pronoun borrowing is nowhere near as rare as one would suppose from reading the literature. The larger goal of the paper is to provide one more piece of evidence in support of the claim that that speakers' deliberate choices may be the most important factor motivating the borrowing of 'hard-to-borrow' features (see Thomason 1999). And this in turn leads to the conclusion that it is rash, in attempts to untangle a complex historical picture, to treat pronominal paradigms as safe markers of genetic linguistic inheritance.

## 2. Claims about pronoun non-borrowing: a few examples.

A fairly typical, and typically cautious, textbook statement about borrowability is McMahon's formulation (1994:204):

'Some words also seem to be more borrowable than others: specifically, basic vocabulary...is only infrequently affected, and then almost always in situations where neither of the languages involved is perceived as more prestigious than the other. English borrowed a good deal of basic vocabulary, including \_skin, sky, get\_ and the pronouns \_they, them, their\_, from Norse in the late Old and early Middle English period...'

McMahon doesn't explain the basis of her belief that an absence of social asymmetry is a major factor in facilitating the borrowing of basic vocabulary, but it may be because her main example, English borrowings from Norse, is presumed to have been such a situation. Prestige is in any case a slippery concept; we believe that the relevant social factors are far more complex. (Similarly, the general reasons for lexical borrowing are by no means confined to the usual suspects, 'need' and 'prestige'.)

Stronger statements about borrowability have been made by other scholars, perhaps most notably, in recent years, by R.M.W. Dixon and Johanna Nichols & David Peterson. Dixon, while acknowledging that

individual pronouns are sometimes borrowed, says that 'there are certain grammatical phenomena that are very unlikely to be borrowed, under any circumstances. These are:...complete paradigms, e.g. a pronoun paradigm, a noun declension or a verb conjugation' (1997:22). Nichols & Peterson, though their main focus is also on paradigms, argue more generally that 'barring non-normal transmission, pronouns are almost always inherited...the cases where pronouns are known to have been transferred from one language to another are generally not routine borrowing' (1996:337-38; they do not define 'routine borrowing'). They reiterate this argument in their response to criticisms by Campbell (1997), claiming that '...pronouns are almost always inherited and almost never borrowed' (1998:610).

Dixon and Nichols & Peterson have theoretical reasons for believing that pronoun borrowing is vanishingly rare. For Dixon, the significance is that, since pronominal paradigms are (in his view) among the linguistic features that are least likely to be borrowed, they are one of 'the surest indicators of genetic relationship' (1997:22). Nichols & Peterson are less clear in their theoretical argumentation, but they too seem to be suggesting that, because pronouns are so rarely borrowed, a pattern of paradigmatic pronominal similarities over several different language families probably indicates distant genetic relatedness (1996:337-38).

Linguists interested in developing claims of long-range genetic relationships very often agree with Dixon in considering pronouns to be safe indicators of genetic relatedness. Vitaly Shevoroshkin, for instance, says that 'pronouns of the sort "I", "me", "thou", "thee" are not borrowed from language to language; they are inherited' (1989:6), and Joseph Greenberg & Merritt Ruhlen, focusing on pronominal affixes rather than independent pronouns, claim that 'pronominal affixes are among the most stable elements in languages: they are almost never borrowed' (1992:97---cited, along with the Shevoroshkin quotation, in Campbell 1997:340-341).

### 3. Some examples of borrowed pronouns.

A search of the literature, especially for Southeast Asia and the Pacific but also in the Americas and elsewhere, turns up a sizable number of examples of borrowed pronouns. Several are cited in Campbell's response to Nichols & Peterson 1996 (1997:340): besides English \_they, their, them\_, there are the independent pronouns of Miskito (Nicaragua), borrowed from Northern Sumu (Campbell cites Kenneth Hale, p.c., as the source of this information); and Alsea

(Oregon), a non-Salishan language, has apparently borrowed 'a whole set of Salishan pronominal suffixes' (citing Kinkade 1978).

Campbell also refers to documented cases of borrowed pronouns in 'Southeast Asian languages, Austronesian, and Papuan languages' (1997:340). As an example he cites, from Foley (1986:210), the striking case of two apparently unrelated non-Austronesian (so-called 'Papuan') languages of New Guinea that share first- and second-person pronouns, but with reversed meanings: Kambot borrowed the latmul word for 'I' in the meaning 'you', and the latmul word for 'you (feminine)' as 'I'. The phenomenon of pronoun borrowing with reversed meanings may not be as rare as one might expect. Miller, writing about pronouns in Japanese and Altaic languages, writes that

'one of the most perplexing problems...[is] the shifting back and forth in semantic category from one person to another...Common to all these examples of semantic interchange between first-person and second-person are two sociolinguistic elements---the self-deprecatory employment of a pejorative second-person in the resultant sense of a humble first-person; and the converse employment of a humble, self-deprecatory first-person in the sense of a particularly pejorative second-person' (1971:173).

Now, Miller's goal is to argue forcefully for a genetic relationship linking the Altaic languages (a genetic unit that is itself controversial) to Japanese and Korean. But his picture of the semantic shifts in first- and second-person pronouns resembles the pattern in the shared pronouns of Kambot and latmul so closely that it seems more likely to support an alternate hypothesis, namely, that lexicon and structure are shared by the proposed Altaic languages because of long and intimate contact rather than because of inheritance from a common ancestor. We have not carried out any kind of systematic analysis of the Japanese, Korean, Tungusic, Mongolian, or Turkic data; the point of this observation is therefore not to argue for an areal source for the semantic interchange in Altaic pronoun systems, but rather to argue against the too-easy assumption that the partly shared Altaic pronominal systems must be inherited.

Borrowed individual pronouns are fairly easy to find in lists of loanwords from a variety of languages. To take just one example, Thurgood's list of loanwords into Proto-Chamic (Austronesian; Southeast Asia) includes two personal pronouns, \*\_dahla7\_ 'I (polite)' (from an unknown source) and \*\_ha\_ 'you; thou' (from an unknown source); and his list of loanwords into Chamic languages after the

breakup of Proto-Chamic includes two more pronouns, *\_BiN\_`we'* (from Mon-Khmer) and *ih`you; thou'* (from Mon-Khmer) (1999:337, 338, 351, 356).

In some cases, pronouns seem to have been borrowed to fill a perceived gap in the pronominal paradigm. One example is found among North Halmaheran languages (non-Austronesian; north Moluccas, Indonesia), which are in close contact with Austronesian languages that have an inclusive/exclusive `we' distinction. Voorhoeve (1994:661) says that the first person plural exclusive pronoun in all these languages is probably of Austronesian origin, although the first person plural inclusive pronoun seems to be a native form. Conversely, some varieties of Malay in Indonesia have lost their inherited exclusive/inclusive `we' distinction through borrowing from non-Austronesian languages---that is, they have borrowed a structural pronominal pattern. An example is Manado Malay (in Sulawesi), which has not only lost this distinction but has borrowed both its singular and its plural second-person pronouns from Ternate (Prentice 1994:423); this variety of Malay has thus restructured its pronominal paradigm to match that of the non-Austronesian language Ternate more closely. The same thing has apparently happened in other varieties of Malay as well, under the influence of other languages that lack inclusive vs. exclusive `we'---the distinction has been lost, and first- and/or second-person pronouns have been borrowed, from such languages as Hokkien (Min) Chinese, Portuguese, and English (Smith & Donohue 1998). Smith & Donohue comment on the fact that `varieties of Malay are prone to borrow pronouns from other sources'.

Yet another example comes from the Philippines, where the Spanish-based creole Chavacano is spoken. In Zamboanga city, according to Forman (2000), young people often speak Chavacano in a way that their elders frown upon; this `way of talking is characterized by the preference or tendency to insert Tagalog pronouns, in particular the second person singular, into otherwise Zamboanguen~o utterances'---a pattern that apparently arose because of the influx of large numbers of young soldiers into the city. It's not clear whether this pattern reflects fixed borrowing of the pronouns; but it clearly isn't as ephemeral as one would expect with ordinary code-switching. The recently published *\_Chabacano de Zamboanga handbook and Chabacano-English-Spanish dictionary\_* (Camins 1999) lists alternate sets of plural pronouns, one of Spanish origin and one of Tagalog origin: 1pl inclusive *\_Nosotros; Kita\_*, 1pl exclusive *\_Nosotros; Kame\_*, 2pl *\_Ustedes, Vosotros; Kamo\_*, 3pl *\_Ellos; Sila\_* (pp. 10, 84-85). Note that the Tagalog loanwords

introduce an exclusive/inclusive 'we' distinction into Chavacano. According to Camins, the usage of these different pronoun sets depends on status relations between speaker and hearer. He identifies three status categories, formal (to express respect for age or higher status), familiar (to express familiarity or same status as speaker), and common (to express same status or lower status) (p. 10). The Spanish-origin set is used for formal address and, in 2pl only, for familiar address; the Tagalog-origin set is used for common address and, in 1pl at least, for familiar address. (It's not entirely clear from Camins' account whether familiar 3pl address requires Spanish- or Tagalog-origin pronouns.)

Finally, sets of pronominal affixes are sometimes borrowed. In Meglenite Rumanian, for instance, the fully inflected verb forms 1sg *\_afli\_* 'I find' and 2sg *\_afli\_* 'you find' have been augmented by the addition of Bulgarian person/number/tense suffixes, 1sg present *\_-m\_* and 2sg present *\_-s^\_*, to yield double-marked forms *\_aflum\_* and *\_aflis^\_* (Sandfeld 1938:59). Dawkins, analyzing the heavy Turkish influence on dialects of Asia Minor Greek almost a century ago, reports that Turkish 1pl and 2pl suffixes have been borrowed into some dialects of Silli and Cappadocia and added to Greek verbs (1916:59, 144; these borrowed Turkish pronominal suffixes may be optional---Hovdhaugen 1976:148). Both the Rumanian and the Greek examples involve partial paradigms rather than entire paradigms, and it's futile to speculate about why speakers of one language borrowed only singular affixes while speakers of another borrowed only plural affixes. In any case, they at least attest to the possibility of borrowing sets of pronominal affixes.

An especially striking example is Mednyj Aleut, a bilingual mixed language with both Aleut and Russian grammatical subsystems. Mednyj Aleut apparently developed in the 19th century on Mednyj (Copper) Island off the northeastern coast of Russia, probably among the mixed-blood offspring of Russian fathers and Aleut mothers. The base language is clearly Aleut, although there are many Russian loanwords and some syntactic influence from Russian as well. But according to the first modern linguistic analysis of Mednyj Aleut, (Menovs<sup>c</sup>ikov 1969), the entire finite verbal inflection of Aleut---an enormously complex system---has been replaced by Russian verb inflection. The borrowed inflection includes person/number/tense suffixes and also, because Russian past-tense forms were originally participles and therefore do not code person, independent Russian pronouns in the past tense only. Non-finite verb inflection is still Aleut. (For further discussion, see Thomason & Kaufman 1988:233-238, Golovko &

Vakhtin 1990, Golovko 1994, Thomason 1997).

The relevance of the Mednyj Aleut case to a discussion of pronoun borrowing has been disputed. Nichols & Peterson dismiss it on the ground that Mednyj Aleut is a mixed language (true) and that '[i]t is not that Russian personal endings are borrowed into Copper Island Aleut, but rather they are native to one of the two ancestral languages' (1996:338); similarly, in their response to Campbell, they claim that Russian pronominals in Copper Island Aleut 'are inherited there', because 'Russian is one of the two ancestors' (1998:610). The conception of genetic relationship and inheritance from a common ancestor that these quotations reveal does not match any standard historical linguistic view, and Nichols & Peterson do not explain just what they have in mind by using the term 'inherited'. Like some other bilingual mixed languages, Mednyj Aleut was created in a rather short period of time by bilinguals---the creators must have been bilingual to a considerable extent, because the amount of distortion in either component of the mixed language is small. The base language is clearly Aleut: the bulk of the lexicon, together with the entire nominal inflectional system and all the non-finite verbal inflection, is Aleut. So there is no question of inheritance from Russian; instead, the Russian forms were imported into an Aleut matrix. In any case, for excellent methodological reasons, standard notions of genetic relationship do not permit positing more than one ancestor: either a language's major subsystems are all descended primarily from a single ancestor or they aren't; if they aren't, as with Mednyj Aleut and other mixed languages, then the language has no ancestors at all in the historical linguist's technical sense (see Thomason & Kaufman 1988 for discussion). This is not to say, of course, that there are no source languages that contributed to its lexicon and structure. Nichols & Peterson are correct in attributing the Russian inflection in Mednyj Aleut to 'non-normal transmission' (1996:338), but of course that's true for every specific example of borrowed lexicon and structure in every language, including languages that fit comfortably into a traditional family tree: borrowed material is by definition not inherited from the parent language. It's also true that Mednyj Aleut was created, probably deliberately, to serve as a symbol of the new socioeconomically distinct group of mixed-bloods. But if those bilinguals could combine an inflectional system, including pronominals, with another language's grammar, other bilinguals could do the same thing. And, as we've shown in this section, less dramatic but still striking instances of pronominal borrowing can be adduced from a variety of other languages too.

Moreover, new evidence suggests the sort of process by which the startling mixture found in Mednyj Aleut might have arisen. In an article containing some very interesting examples of interference from Russian in Tungusic languages, Malchukov (2003) notes one set of features adopted by Evenki, a North Tungusic language, from the Turkic language Yakut: Yakut interference in Evenki includes the paradigm of the volitional mood, which comprises a mood suffix borrowed from Yakut together with an entire set of borrowed Yakut personal endings. Why this borrowing should occur in a non-`basic' mood category is unclear; however, it suggests a possible route by which Russian inflectional affixes could have made their way into the Mednyj Aleut finite verb, at first replacing Aleut suffixes only in a secondary paradigm and only later spreading throughout the system of finite verb inflection. Unfortunately, if there were such intermediate stages in the development of Mednyj Aleut, we have no documentation of them. Malchukov's Evenki example does show, however, that the borrowing of finite verb inflection, including pronominal affixes, is not unique to Mednyj Aleut.

It probably isn't accidental that most of the examples mentioned above come from the Pacific and nearby Southeast Asia. In this part of the world pronouns do indeed appear to be borrowed quite readily; Wallace observes that in `some parts of Southeast Asia,...personal pronouns and elements which have become personal pronouns have moved from one language to another in relatively great numbers and with relatively great ease, sometimes replacing an indigenous set, sometimes expanding it' (1983:575). And Foley has said that pronouns in non-Austronesian languages of New Guinea are `definitely not immune to borrowing, nor even particularly resistant' (1986:211); his Kambot/latmul example is just one example of the borrowing of partial pronominal paradigms. He comments that in Southeast Asia `pronouns have already been shown to be prone to borrowing', citing among other examples the borrowing of English \_I\_ and \_you\_ in Thai and Indonesian (1986:210). Thai also has other borrowed pronouns: Christopher Court says that Thai boys often use the Chinese pronouns for `I' and `you' when speaking to each other (1998), and Samang Hiranburana reports that the complex set of Thai `royal' pronouns has been claimed as loanwords from Khmer dating from the 14th and 15th centuries (1998).

Here a very interesting distinction is suggested by Court between `closed' pronoun systems like those in European languages, where the general pattern is just one pronoun for a given person/number combination, and `open' pronoun systems like those in Southeast Asian

languages, where there may be (for instance) dozens of ways to say 'I' and 'you' (1998). Unsurprisingly, pronoun borrowing is more common in languages with 'open' systems (which may, from one perspective, be compared to the several sets of pronominal morphemes in a polysynthetic language like Montana Salish or Aleut). Similarly, and also with reference to Southeast Asian and nearby Pacific languages, Wallace argues that basing theories of pronominal stability on Indo-European languages, where pronominal systems have indeed been relatively stable, is 'founded on limited views of human social organization and cultural contact' and is therefore 'misguided' (1983:575).

For this paper, the crucial point in all these cases is that social factors, not linguistic ones, determine the likelihood of pronominal borrowing. If speakers want to borrow one pronoun or a whole set of pronouns, they can do so; and sometimes speakers do want to do this. The borrowed pronouns may change the structure of the pronominal system significantly, as when a new category of inclusive vs. exclusive 'we' is introduced or lost through borrowing. Or they may merely alter the nature of social discourse, as when Thai speakers use English pronouns, which enable them to sidestep the traditional pronominal coding of social differences in such features as age, status, and degree of intimacy. Borrowing of this type cannot be predicted from general principles, any more than it can be ruled out on the basis of any general principles; it occurs if and only if speakers decide to make it happen---just as other lexical borrowing depends on speakers' decisions. It's worth noting in this context that some languages, including many of those in the Pacific Northwest Sprachbund of the U.S. and western Canada, have only a tiny handful of loanwords from English in spite of a hundred and fifty years of close contact with English. In other words, extensive lexical and structural borrowing is neither inevitable nor impossible in the most intense contact situations.

#### 4. A case study: the pronouns of Piraha~.

Skepticism about the probability, or even the possibility, of pronoun borrowing has led some scholars to reject analyses of borrowed pronominal paradigms out of hand. In our opinion, this view leads to unwarranted conclusions about historical developments in specific languages and language families: if sets of pronouns are sometimes borrowed, then a language's pronouns cannot be automatically assumed to be 'fossils', relics that point directly to a language's genetic affiliation.

In this section we will discuss one case in some detail, to illustrate the kind of argumentation that's needed to make a convincing case for the borrowing of pronominal paradigms when external historical information is largely lacking. The case is that of Piraha~, an Amazonian language spoken in Brazil. According to the *Ethnologue*, which gives the language name as Mu'ra-Piraha~, the language has about 150 speakers, who are 'quite monolingual' (Grimes 1992:31). The *Ethnologue* notes that it is probably related to the extinct language Matanawi; no wider genetic affiliations for the language have been established. Piraha~ is the only surviving dialect of the language. As far as Everett has been able to determine, during visits to Mura settlements and discussions with anthropologists and government employees, the Mura dialect has not been spoken among the Muras for over two generations; the Muras have shifted to Portuguese.

The proposal that the entire set of pronouns of Piraha~ was borrowed came originally from Aryon Rodrigues (personal communication to Everett, 1978). Citing Rodrigues, Everett discussed the idea briefly in three articles (1979, 1986, in press). In this section we offer more detailed arguments to support the proposal that Piraha~ pronouns were borrowed from Tup'i-Guarani', either from Tenharim or from Nheengatu, and either directly or indirectly, via Mura.

In 1978, at the beginning of more than twenty-five years of fieldwork on Piraha~ (including nearly six full years in residence in the village), Everett discussed some of his data with his M.A. thesis advisor, Rodrigues. Upon seeing the Piraha~ pronouns, Rodrigues noted that they are nearly identical to the singular Nheengatu forms---in fact, that they are nearly identical to the Proto-Tup'i-Guarani' forms. Rodrigues was quite correct, as we will show. We will argue that Piraha~ pronouns were most likely borrowed from one (or both) of the Tup'i-Guarani' languages with which Piraha~ speakers are known to have been in contact, Nheengatu and Tenharim, but that the pronouns probably entered Piraha~ indirectly, via Mura, rather than directly from one of these languages.

Piraha~ has only three basic personal pronouns (Table 1). There are also several pronominal clitics that are shortened forms of longer (non-pronominal) words; we list the two most common of these in Table 1, but we will not discuss them further.

Phonemic shape	Phonetic shape	gloss
/ti/	[c <sup>h</sup> i]	`1st person'
/gi/, /gia/	[ni], [ni7a]	`2nd person'
/hi/	[hi]	`3rd person'
/7i/		`3rd person feminine'
/7is/		`3rd person non-human'

Table 1. Piraha~ pronouns.

The last two of these five pronominal forms, /7i/ `3rd fem' and /7is/ `3rd non-human' have a special status: neither form is used in isolation. So, for example, in response to the question, `Who did that?', one could answer /ti/ `me', /gi/ `you', or /hi/ `him', but one could not answer /7i/ `she' or /7is/ `the animal'. To refer to a woman or animal actor, it is necessary to use the full form of the word from which the clitic is derived, /7ipoihi/ `woman' or /7isi/ `animal'. (The third-person pronoun /hi/ has specifically masculine reference only when it is contrasted with the 3rd feminine clitic /7i/; see D. Everett 1986.)

The three basic Piraha~ pronouns comprise one of the simplest pronominal systems known. They are often optional in discourse, so that their functional load is not as great as that of pronouns in many other languages---especially given the fact that Piraha~ has no form of agreement marked on the verb, aside from the pronominal clitics. Note that there is no singular/plural distinction in Piraha~ pronouns; in fact, the language has no number distinctions of any kind in its grammar. The pronouns are all number-neutral. If speakers want to talk about more than one of something, they use the quantifier word /7ogia'agao/ `all', which can combine with, for instance, /ti/ to mean `we (all) go'. Note also that the pronouns form a syntactic class of words separate from nouns; they act like clitics and can double nouns (see D. Everett 1987).

In considering the proposal that the Piraha~ pronouns are loanwords, only the three basic pronouns /ti/, /gi/, and /hi/ are relevant, since they are the only `pure' pronouns and the only pronominal forms that can function as independent pronouns. And in comparing Piraha~

pronouns to Tupi'-Guarani' pronominals, it's vital to take the entire inventory of Tupi'-Guarani' pronouns into account, because the languages of this family have two sets of pronouns each. For Nheengatu, for instance, some sources, e.g. Tastevin (1910:62), give only one of the language's two sets, and it's not the set that matches the Piraha~ pronouns; other sources, e.g. Gonçalves Dias (1965:29, 47, 69), give both sets. The relevant set is the independent ergative pronominal paradigm of Nheengatu (and, according to Jensen 1998, this was also the Proto-Tupi'-Guarani' paradigm); these are the most frequently-occurring pronouns in the language:

Phonemic shape	Phonetic shape	gloss
/xe/	[s^I]	`1sg'
/ne/	[ne], [nde]	`2sg'
/ahe/		`3sg/pl'
/i^ande'/		`1pl inclusive'
/ore'/		`1pl exclusive'
/pe/, /pee/		`2pl'

Table 2. Nheengatu free ergative pronouns.

Another relevant form is the prefix (or clitic) /i-/ [I], [e] `3sg/pl'.

Compare this Nheengatu set to the very similar pronouns of Tenharim (from Helen Pease, p.c. 1998):

Phonetic shape	gloss
[j^i]	`1sg'
[nde], [ne]	`2sg'
[hea]	`3sg feminine'

[ahe]        `people', or `person now dead'

Table 3. Tenharim free ergative pronouns.

Our claim is that the basic Piraha~ pronouns are nearly identical to those of Nheengatu and Tenharim. Superficially, however, the Piraha~ pronouns don't look much like the Tupi'-Guarani' pronouns; so this proposal will not be convincing without some additional information about the phonology of Piraha~ that shows how the phonetic realizations of the Tupi'-Guarani' forms align with the Piraha~ phonemic system.

Piraha~ has just eight consonants in the segmental inventory of men's speech, and seven in women's speech: /p b t k g ʔ h/ and, in men's speech only, /s/ (see K. Everett 1998 for a phonetic study of Piraha~ segments and prosodies). Women substitute /h/ for men's /s/. Several consonant phonemes have significant allophonic variation; for our purposes, the relevant allophones are [b] and [m] for /b/; [g] and [ŋ] for /g/; [t] and [cʰ] for /t/; and [s] and [sʰ] for /s/. The two alveopalatal allophones, the affricate [cʰ] and the fricative [sʰ], occur always and only before a front vowel; but [sʰ] of course occurs only in men's speech. Both men and women have three vowel phonemes, front, central, and back: /i/, with allophones [i] and [e]; /a/; and /u/, with allophones [u] and [o].

Now, compare the Piraha~ pronouns to the Nheengatu pronouns. Nheengatu 1sg /xe/ is pronounced [sʰi], according to various sources (and Aryon Rodrigues, p.c. to Everett, 1998). The only alveopalatal phones in Piraha~ are [cʰ] and [sʰ]; but since [sʰ] is not found in women's speech, [cʰ] is the only alveopalatal consonant found in both men's and women's speech. This makes [cʰ] the most likely Piraha~ nativization of Nheengatu [sʰ]. The affricate [cʰ] would be even more likely if the source pronoun were instead Tenharim [jʰi] `1sg'; note also that, according to Jensen (1998:6), the relevant Proto-Tupi'-Guarani' pronoun began with a voiceless alveopalatal affricate.

The Nheengatu 2sg pronoun varies between [nde] and [ne]; the second pronunciation is conditioned by a preceding nasal segment. Since Piraha~ has no [d], but does have [n] as the word-initial allophone of /g/, both [nde] and [ne] would be expected to be borrowed as Piraha~ /gi/ [ni]. (See D. Everett 1979 for details of /g/

allophony.)

This leaves the Piraha~ third-person pronoun /hi/ to be accounted for. Both Nheengatu and Tenharim have a third-person pronoun /ahe/, though with slightly different meanings (`3sg/pl' in Nheengatu, `people' or `person now dead' in Tenharim). In addition, Nheengatu has a prefix (or clitic) form /i-/ [l], [e] also meaning `3sg/pl'. Now, Piraha~ lacks vowel-initial syllables entirely (D. Everett 1988, K. Everett 1998), so that the Nheengatu form /i-/, if borrowed into Piraha~, would need an added prothetic consonant---presumably either the unmarked continuant /h/ or the unmarked stop /ʔ/---to satisfy the language's syllable structure constraints (D. Everett 1988). In this instance, a prothetic /h/ seems the more likely choice, because a prothetic glottal stop would make the general third-person pronoun homophonous with the derived Piraha~ clitic /ʔi/ `3 feminine' (if this feminine clitic already existed in Piraha~ at the time of borrowing). Piraha~ /hi/ is also a reasonable nativization of the Nheengatu (or Tenharim) third-person pronoun /ahe/; since this pronoun already has a consonant, deleting the initial vowel rather than adding a second consonant would not be surprising. The Piraha~ pronoun /hi/ and the Nheengatu pronoun /ahe/ share a striking, and unusual, usage feature which adds strength to the case for a historical connection between them: in addition to their use as ordinary third-person pronouns, both are also used as demonstratives---even for non-third persons, as in Piraha~ \_hi ʔobaaʔai ti\_ `I am really smart', literally `This one/someone sees well, me').

We do not claim to have demonstrated in this section that the three basic pronouns of Piraha~ were borrowed from Nheengatu or Tenharim, or (conceivably) both, either directly or indirectly by way of Mura (see below). What we have demonstrated is that Piraha~ pronouns match the relevant pronoun sets of Nheengatu and Tenharim very closely, phonologically and, in the case of /hi/ in one quite specific usage feature. The match is so close, in fact, that coincidence is not an appealing explanation, though with such short forms it is still a possibility. As we noted above, borrowing is in itself quite likely, because the Piraha~s have had close long-term contacts with speakers of both Nheengatu and Tenharim---especially with Nheengatu, which was for centuries the trade language of Amazonia. And, as we saw in earlier sections, pronominal borrowing is not especially unusual under certain kinds of social circumstances.

In spite of the close contacts between Piraha~, Nheengatu, and Tenharim, we consider it most probable that Piraha~ acquired its personal pronouns from its sister dialect Mura rather than directly from Nheengatu and/or Tenharim. The Piraha~s have long resisted influence from outside cultures and their languages; their language has relatively few of the more usual sorts of loanwords, though there are several from Nheengatu, among them *\_purasey\_* 'to dance', *\_cosisi\_* 'to sleep' -- which Nheengatu probably originally borrowed from Portuguese *\_coxilar\_* 'to nap' -- and *\_maoa\_* 'dead'. Piraha~ also has a few words borrowed directly from Portuguese, e.g. *\_boitohoi\_* 'motor' (a slang word for boat in that region) and *\_nahiao\_* 'airplane', and one or two from English (e.g. *\_topagaha\_* 'tape-recorder'). But the Piraha~a and Muras used to be in daily contact, and it is plausible that their very close contacts, and the mutual intelligibility between their languages, motivated and facilitated the transfer of pronouns from Mura to Piraha~. There is solid evidence that Mura personal pronouns were themselves borrowed from Nheengatu (also called the *Lingua Gera~l*, or 'general language'), as reported by Nimuendaju, who reported on Mura toward the end of its existence (1948:257):

'Martius' contention that most of the words of the Mura language are of Tupian origin has remained unsubstantiated. Even the number of elements adopted from the *Lingua Geral* is strangely small. Most noticeable are the regular use of the first and second singular, personal pronouns, and first person plural of *Lingua Geral*.'

In other words, even as the Muras were shifting rapidly to Portuguese, they apparently shared with the Piraha~s the social characteristic of resisting borrowing; and among the few words they borrowed were at least two of the very pronouns that, we propose, Piraha~ likely borrowed, and ultimately from the same source. We have only a tantalizingly incomplete picture of contacts between Muras and Nheengatu speakers, between Piraha~s and Nheengatu (and Tenharim) speakers, and even between Muras and Piraha~s. What we do know about these contacts makes our hypothesis plausible; and the close match in structure and function of the Piraha~ and Nheengatu pronouns seems to support it. (Unfortunately, no such detailed analysis is possible for Mura, because this dialect was not extensively documented before it died.)

Caution is required, of course: as noted, we have too little information about the specific social circumstances of the relevant

contacts, and we have much too little information about the history of Piraha~, given its lack of well-attested relatives. The language does, or did, have relatives, including at least Matanawi, Yahahi, and Bohura, as well as Mura, which was a dialect of the same language as Piraha~; but all these relatives are extinct, and we have virtually no linguistic data for them. That is, we can establish two of the requisites for a successful argument for borrowing in this case: there was certainly extensive contact, and the pronouns in question are certainly old in Tupi'-Guarani' languages. It is also true that no genetic relationship has been established between Piraha~ and Tupi'-Guarani'. Still, we can't prove that the pronouns in question are innovative in Piraha~, or, for that matter, in Mura, in spite of Nimuendaju's observation; and there are few definite loanwords in Piraha~ from Tupi'-Guarani' or any other language. Nevertheless, even with large gaps in the case for borrowing, on balance it seems to be the best historical explanation for the Piraha~ facts.

## 5. Conclusion.

The rich body of evidence from Southeast Asia, New Guinea, and parts of the Pacific, together with scattered examples from other parts of the world, supports our claim that pronoun borrowing---like other contact phenomena---is subject to deliberate and conscious choices made by speakers of a variety of languages. These choices in turn are conditioned by a variety of cultural traits. But since cultural traits such as attitudes toward borrowing are extremely difficult to discover in past contact situations, it is never safe to assume any particular cultural stance toward borrowing, without external evidence. And this makes the common assumption that pronouns must be inherited because they are almost never borrowed unwarranted at best: we can't know, without specific linguistic or social evidence, whether a given past culture was more like those of Indo-European languages, where most pronouns are in fact inherited, or more like those of languages whose speakers borrow pronouns freely. In other words, assuming as a default that matching sets of pronouns infallibly indicate genetic relationship is unwise: there are no shortcuts to the establishment of genetic relationship.

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