

# Lexical Splitting in the Kinship Vocabulary of the Buki (Arapesh) Languages

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## 1. Overview

The Buk also known as (Arapesh) languages are spoken in the area surrounding the Torricelli Mountains in northern Papua New Guinea.<sup>1, 2</sup> This paper describes three types of formal patterning within the kinship vocabulary of these languages which, while systematic within each language, stand apart as uncharacteristic from the point of view of the family more generally.

First, while they conform minimally to the most schematic formal rules for pluralizing human nouns, Mountain Arapesh kinship terms are shown to be extremely irregular with respect to plural formation. This contrasts with the tamer irregularity found in pluralization in other types of nouns. Second, in many varieties of Mountain Arapesh, an unusual split occurs between what I refer to as “direct” and “indirect” kinship forms; respectively, those referring to the speaker’s own relation as opposed to those referring to another’s relation of the same sort. In most cases this direct/indirect split is extended as well to the plural, and as a result, many Mountain Arapesh kinship terms have up to four inflectional forms. Finally, in at least two Buki languages, Weri and the Balif dialect of Muhian, kinship nouns (and only kinship nouns) are inherently and inalienably possessed: they are obligatorily inflected for their possessor, even when embedded in the

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<sup>1</sup> The term *Buki (Arapesh)* should be understood to refer to a family (more specifically, a chain; cf. Conrad 1978:75) of languages and dialects. These dialects are spoken by about 25,000 inhabitants of northern Papua New Guinea. Presently their use is supplemented by—and frequently in competition with Tok Pisin, the PNG lingua franca. The Buki chain stretches eastward along the coast from the East Sepik/Sandaun provincial border to the villages just east of Dagua station (about 35 kilometers west of Wewak). It extends inland from the coast, spanning the Prince Alexander Mountains between Drekikir and Yangoru, and continues down into the Sepik Plain in the Weri- and Iahita-speaking areas. The Buki (Arapesh) family has been classified (Laycock 1973, 1975) as belonging to the Kombio stock of the Torricelli phylum.

<sup>2</sup> The author resided in Wautogik village, at the northeasternmost border of the Buki-speaking territory, from December 1997 to March 1999, during which time several short field trips were made throughout the Buki-speaking region. Fieldwork was supported by a Fulbright-Hays Training Grant for Doctoral Dissertation Research Abroad (Award No. P022A70043), a Wenner-Gren Predoctoral Grant (Award No. 6156), and an NSF Dissertation Improvement Grant (Award No. SBR-9707681).

100 Splitting in the Kinship Vocabulary of the Buki (Arapesh) Language Lise M. Dobrin  
 exclusion of names for body parts, is unusual, as far as I know, in the languages of the world.

These types of formal patterning can be unified by recognizing that they all involve lexical splitting: the proliferation of forms corresponding to a single lexeme. The occurrence of such splitting sets off the kinship vocabulary as a distinct segment of the Buki lexicon. We tentatively suggest that the overwhelmingly form-sensitive and otherwise closely cognate Buki noun-class systems can support such proliferation of forms within the lexical entries of kinship nouns because it is primarily this area of the vocabulary that occupies the point in the Buki noun class systems where formal rules for determining noun class give way to semantic rules based on sex, or natural gender.

## 2. Background: The Central Role of Noun Classification in Buki Grammar

Before moving into the main subject of the paper, it is necessary to consider the central role noun classification plays in the organization of Buki grammar. More detailed descriptions can be found in Fortune 1942, Gerstner 1963, Alungum, Conrad and Lukas 1978, Nekitel 1986, Conrad and Wogiga 1991, and Dobrin in prep.

The Buki noun classes canonically pair a singular noun ending in a certain phonological segment with a plural form ending in a different phonological segment. Examples of some of the classes from the Wautogik (Cemaun) dialect of Mountain Arapesh are given in (1).<sup>3</sup>

1) Final Segments	Singular	Plural	Gloss
a. t ~ g <sup>w</sup>	<i>gərəkít</i> <i>aut</i>	<i>gərəkítog<sup>w</sup></i> <i>autog<sup>w</sup></i>	'limbum broom' 'battlefield, hamlet'
b. p ~ s	<i>yougwap</i> <i>marîp</i>	<i>yougwas</i> <i>marîs</i>	'border mark' 'saucepan'

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<sup>3</sup> Here and throughout, where no source is given, the data comes from the author's field notes. Wautogik Arapesh forms are given in roughly phonemic transcription; only non-initial word stress is marked. The symbols used are as follows:

î: high central unrounded vowel

ə: schwa

W: voiceless high back round vowel *u*

ʃ: voiceless palato alveolar fricative

c: voiceless palato alveolar affricate

j: voiced palato alveolar affricate

<sup>w</sup> or <sup>l</sup>: labialized release to a preceding word-final *g* or *k*

Forms taken from all other data sources are copied without modification.

c.	r ~ guh	<i>arubər</i> <i>aur</i>	<i>arubəguh</i> <i>aguh</i>	'axe, tommahawk' 'mosquito'
d.	g ~ gəs	<i>yeməg</i> <i>meitəg</i>	<i>yeməgs</i> <i>meitgəs</i>	'face' 'trap, wire'
e.	n ~ b	<i>gîrin</i> <i>duduwin</i>	<i>gîrinəb</i> <i>duduwinəb</i>	'red crab' 'millipede'
f.	ñ ~ c	<i>bowinañ</i> <i>wekuliñ</i>	<i>bowinac</i> <i>wekulic</i>	'kind of black ant' 'kind of banana, flying fox'
g.	m ~ p	<i>urukum</i> <i>doudam</i>	<i>urukwip</i> <i>doudep</i>	'heart' 'spider'
h.	bîr ~ rîb	<i>ahurebîr</i> <i>wábîr</i>	<i>ahurerîb</i> <i>warîb</i>	'banana peel' 'village, place'
i.	W ~ rîh	<i>awágeW</i> <i>rueW</i>	<i>awágerîh</i> <i>ruerîh</i>	'open ground for congregating' 'limbum bark sewn up into a basket'

In all but one Buki language, Weri, these singular-plural pairings play a crucial role in defining syntactic noun classes, which is to say that the number-marking classes are cross-referenced in agreement and pronominalization, as shown in (2) below. Note that the element marking agreement is generally alliterative with the segment marking noun class on the noun itself. Here and elsewhere throughout the paper, elements in bold are triggers or antecedents, while underlined elements signal agreement.

- 2) a.i. *ei* *yarikókum* *anáŋ* *nígát* *nimbát*  
 I 1sg.realis.ask.her.for one.agr immature.agr dog  
 'I asked her for one puppy dog'
- a.ii. *ogog*<sup>w</sup> *gwaniwos*: *bəkgókik!*  
 they (antecedent=*nimbag*<sup>w</sup> 'dogs') agr.realis.don't like it let them (agr) go'  
 'they don't like it; let them go!'
- b. *dəbrîn* *gəna* *gawo* *rowəsip* *rowep*  
 hornbill agr.realis.go agr.realis.eat trees.poss.agr fruits  
 'the hornbill went and ate tree fruits'
- c. *dəbéŋi* *ecah* *hər* *həbəh* *həbəh* *abo* *wab*  
 big.agr rain agr.realis.fall agr.realis.go down (x2) until night  
 'a big rain fell continuously until night'

- d. *sop*      *n̄ipem*                      *gairuh*  
 soap    2sg.irrealis.agr.put      up, on top  
 'put the soap up there'
- e. *kahoruh*      *ohudək*  
 cuckoo-shrike    this here.agr  
 'this one here is a cuckoo-shrike'

In the the Mountain Arapesh dialects, there is a noun class corresponding to nearly every singular-final consonant. The voiced alveolar obstruents *d* and *j* remain outside this phonological generalization, as do vowels; in these cases agreement with a default paradigm (marked by *n̄* in the singular and *c* in the plural) is typically invoked; see (3a,b). Nouns ending in these exceptional sounds also regularly receive the default plural marker *-(ə)həs* on the noun itself. Nouns ending in the alveolar fricative *s* also stand outside the phonological classification system in that they they are assigned no distinct plural (though many can be used to refer to plural entities; i.e., they are not necessarily non-count); however, they generally receive agreement marking not with the default plural but with *s*; see (3c).

3)	Singular	Plural	Gloss	Agreement Marking
a. <sup>4</sup>	<i>leij</i>	<i>leijhəs</i>	'type of yam'	<i>n̄</i> ~ <i>c</i>
	<i>gad</i>	<i>gadəhəs</i>	'type of insect'	<i>n̄</i> ~ <i>c</i>
b.	<i>maki</i>	<i>makihəs</i>	'type of frog'	<i>n̄</i> ~ <i>c</i>
	<i>bəruku</i>	<i>bəruluhəs</i>	'type of shell'	<i>n̄</i> ~ <i>c</i>
c.	<i>ərəs</i>	<i>ərəs</i>	'bed'	<i>s</i> ~ <i>s</i>

One interesting feature of Buki nouns is the degree to which plural marking can be irregular, yet still remain constrained enough that the nouns fall within the system of canonical singular-plural pairings and concomitant assignment to syntactic agreement paradigms. In a few classes, there are alternate plurals which can be predicted according to the phonological environment, as in the class of *g*-final singular nouns, examples of which are shown in (4) below. Nouns in this class receive the plural form *s* or *gs*, with the *s* allomorph being assigned to singular forms that meet the phonological condition stated in (5), as in (4a). The remaining nouns in this class receive the *gəs* allomorph, as in (4b).

4)	Singular	Plural	Gloss
a.	<i>deiwəg</i>	<i>deiwəs</i>	'toilet'
	<i>brəwəg</i>	<i>bərəwas</i>	'one-pointed spear'

<sup>4</sup> I have found no other examples besides these two.

	<i>wəyag</i>	<i>wəyas</i>	'river pool'
	<i>ciyag</i>	<i>ciyas</i>	'leg'
b.	<i>ərukweg</i>	<i>ərukwegəs</i>	'shrimp, crayfish'
	<i>baug</i>	<i>baugəs</i>	'tree trunk'
	<i>bərag</i>	<i>bəragəs</i>	'head, hair'
	<i>sañ ig</i>	<i>sañi gəs</i>	'tattoo'
	<i>sumug</i>	<i>sumugəs</i>	'kind of hardwood'
5)	C	V	g #
	[+hi]	[+centr,-hi]	

In most classes the choice of plurals cannot be determined on the basis of the phonological environment. Nevertheless the choice is usually still limited to two or three allomorphs, one of which is more frequent and therefore presumably need not be listed in the nouns' lexical entries. An example is the class of *p*-final singulars. A small number of nouns in this class select the plural allomorph *-gwis*, as shown in (6a), while the rest of the nouns in the class by far the majority select the allomorph *s*, as in (6b).

6)	Singular	Plural	Gloss
a.	<i>irup</i>	<i>irugwis</i>	'feast'
	<i>bakənop</i>	<i>bakenogwis</i>	'jungle'
	<i>wabigep</i>	<i>wabigegwis</i>	'afternoon'
b.	<i>udup</i>	<i>udis</i>	'limbum sheath'
	<i>cəkərop</i>	<i>cəkərs</i>	'bird's beak'
	<i>kacemóruwep</i>	<i>kacemóruwes</i>	'kind of eel'

Note that none of the alternate forms of plural marking shown in (4) or (6) above make any difference for the syntactic classification of the nouns; the nouns in each subgrouping all fall within the range covered by the agreement classes expected on the basis of their singular-final phonological segments. So for example, although the first noun in (6a), *irup* 'feast' and the first noun in (6b), *udup* 'limbum sheath' have unpredictably different plurals, the variation is far from unbounded. Nearly all *p*-final singulars do take plural forms that end in *-s*, and take agreement marking that reflects this generalization: all plural members of this class take alliterative agreement marking with *s*, as shown in the following glossed relevant portions of a sentence adapted from a traditional story:

7)	<i>hatik</i>	<i>unarib</i>	<i>owowiš</i>	<i>ckərəs,</i>	<i>həšisi</i>	<i>omomiš,</i>	<i>əriə...</i>
			their.agr	beak,	they.realis.agr.join	their.agr	
	they removed the cassowaries beaks, joined them to their own, and then...						

Word-internal segmental alternations, or "intervocalic changes" are another type of constrained irregularity characterizing Buki nouns (see Dobrin in prep. for further data and a fuller analysis). Intervocalic change is a lexical phenomenon in which a singular-plural pairing that defines a morphosyntactic noun class when it appears word-finally occurs word-internally without affecting a noun's classification. Such alternations are essentially syntactically inert echoes, wedged inside nouns of independently determined class. As with the choice of plurals, the occurrence of intervocalic change is largely unpredictable. Nevertheless, these noun-internal alternations are commonly constrained to the patterns also found at the ends of nouns. To my knowledge, intervocalic change occurs in every Buki dialect. Some examples from Wautogik Arapesh are given in (8) below, with the segments marking class agreement for each noun shown in parentheses in the last column. Note that the syntactic noun class of each example is the one that is expected on the basis of the noun's final phonological form.

8)	Singular	Plural	Gloss	Intervocalic Change
	<i>yəhárik</i> <sup>w</sup>	<i>yəháguhiu</i>	'species of bird'	r ~ guh
	<i>ahámit</i>	<i>ehépitog</i>	'calf of leg'	m ~ p
	<i>iWáútebîr</i>	<i>iWáúgwerîb</i>	'butterfly'	t ~ gw
	<i>burupik</i> <sup>w</sup>	<i>burusihər</i>	'small river crab'	p ~ s
	<i>irukweW</i>	<i>iruwérîh</i>	'betel nut or coconut skin'	kw ~ w
	<i>báiduwániñ</i>	<i>báiduwábic</i>	'type of ant'	n ~ b

The point to be taken away from the preceding description is twofold. On the one hand, there is a high degree of formal irregularity in Buki nouns, particularly in the area of plural marking. On the other hand, this irregularity is by no means random, but is rather quite constrained, and in by far the majority of instances this constrained irregularity does not interfere with the classification of nouns into agreement classes, because the irregularities do not shift the nouns out of their canonical syntactic class categories, which are defined on the basis of noun-final phonological form. With this general picture in mind, let us now turn to the specific kinds of irregularity that characterize nouns referring to kinship relations in several of the Buki languages.

### 3. Extreme Irregularity in Plural-Marking on Kinship Nouns in Mountain Arapesh

In addition to the phonological and morphological determinants of noun class, all Buki languages have two classes whose membership is determined at least partially according to clear semantic criteria. One class includes all nouns referring to female humans (and in most of the languages, other entities as well), while the other includes all nouns referring to male humans (and nothing else). I will refer to these classes here as Class IV and Class VII, respectively, following the convention introduced by Fortune 1942 for Mountain Arapesh. As with most other noun classes, the patterns of pluralization found for Class IV and Class VII nouns are irregular. However, the degree

of irregularity is exceptionally high: whereas the irregularity in most other classes involves selection from a set of two plurals, plus the possibility of intervocalic change, there are at least eight different plurals that correspond to singulars in Class IV; see (9) (data from Fortune 1942). In addition, many Class IV nouns exhibit intervocalic change (labelled "IVΔ", with the alternating segments following in parentheses).

9)	Singular Marking	Plural	Gloss	Mode of Plural
a.	<i>tagiruk<sup>u</sup></i>	<i>tagirumeb</i>	'species of bird'	meb (replacive)
	<i>pugak<sup>u</sup></i>	<i>pugameb</i>	'bonneting thatch'	
b.	<i>malik<sup>u</sup></i>	<i>maliu</i>	'rattan species'	u (replacive)
	<i>barahok<sup>u</sup></i>	<i>barahou</i>	'granddaughter'	
	<i>mapok<sup>u</sup></i>	<i>masou</i>	'brown toad'	u + IVΔ (p ~ s)
	<i>meherik<sup>u</sup></i>	<i>meheguhiu</i>	'snail'	u + IVΔ (r ~ guh)
c.	<i>yahak<sup>u</sup></i>	<i>yaharib</i>	'a fruit tree'	rib (replacive)
	<i>awhok<sup>u</sup></i>	<i>awharib</i>	'coconut palm'	
d.	<i>serai auk<sup>u</sup></i>	<i>seraišaib</i>	'turtle'	ib (replacive)
	<i>unuk<sup>u</sup></i>	<i>unib</i>	'star, ventral passage'	
e.	<i>mabitek<sup>u</sup></i>	<i>mabiteguhijer</i>	'duck'	guhijer (replacive)
	<i>ramahek<sup>u</sup></i>	<i>ramaheguhijer</i>	'large ruffed lizard'	
f.	<i>uruwhik<sup>u</sup></i>	<i>uruwhijer</i>	'side post of a house'	ijer (replacive)
	<i>arapeik<sup>u</sup></i>	<i>arapešaijer</i>	'female friend'	ijer + IVΔ (ñ ~ š)
g.	<i>babwek<sup>u</sup></i>	<i>babwekomi</i>	'grandmother'	omi (additive)
	<i>jamek<sup>u</sup></i>	<i>jamekomi</i>	'mother'	
h.	<i>nigauwik<sup>u</sup></i>	<i>nigaliheu</i>	'daughter, daughter in law'	heu (replacive) + IVΔ (w ~ ruh??)
	<i>irohokwik<sup>u</sup></i>	<i>ileuliheu</i>	'wife'	heu + ???

Class IV includes nouns with referents other than human females, so one might be led to conclude that the irregularity is just a peculiarity of that class. However, when one recognizes that the plurals of Class VII nouns are perhaps even less predictable, it becomes harder to avoid the generalization that the irregularity is associated with

106 Splitting in the Kinship Vocabulary of the Buki (Arapesh) Language Lise M. Dobrin  
 semantic assignment. In Class VII, there are nearly as many plurals as there are nouns;  
 see (10) (data again from Fortune 1942).<sup>5</sup>

10) Singular	Plural	Gloss	Mode of Plural Marking
a. <i>ašuken</i>	<i>ašukenim</i>	'older brother to man'	suffixing
<i>megan</i>	<i>meganomwi</i>	'brother in law to man'	
b. <i>arapeñin</i>	<i>arapeim</i>	'male friend'	suffixing + IVΔ ( <i>ñ</i> ~ <i>š</i> )
c. <i>niganin</i>	<i>nigamin</i>	'son, son in law'	infixing
d. <i>mušaupimin</i>	<i>mušauhem</i>	'man from Muau Island'	derivational
<i>wagehepimin</i>	<i>wagehem</i>	'man from Wagea Island'	
e. <i>raminen</i>	<i>raheim</i>	'husband'	suppletive?
<i>awanin</i>	<i>arahim</i>	'younger brother to man'	
f. <i>barahan</i>	<i>barahowhim</i>	'grandson'	suffixing

I argue elsewhere (Dobrin, in prep.) that while the plurals of Class IV and Class VII nouns are indeed unpredictable, they nevertheless can be seen as conforming to two very abstract yet clearly storable schemas or plural constellations, each organized around a central phonological element by a system of conventional but motivated extensions. The central subcategory of the Class IV plural is the phonological feature +LABIAL (hence the high frequency of *u*'s, *b*'s and *m*'s in Class IV plural endings), and the central subcategory of the Class VII plural is the labial nasal *m*. Thus, even in these cases of extreme irregularity, it is possible to state if not a set of rules at least a rule schema to which the attested plurals correspond. As a result, these classes still fall within the system of canonical pairings described at the beginning of Section II (Class IV: *k*<sup>w</sup> ~ +LABIAL; Class VII: *n* ~ *m*).

That plural assignment in two noun classes should be so irregular is not in itself of special interest; it is which classes these are that deserves our attention. Specifically, apart from the phonologically-assigned *k*<sup>w</sup>-final Class IV nouns, it is nouns referring to humans that fall into these highly irregular classes. Mountain Arapesh encodes human character types not morphologically or lexically (i.e., as nouns meaning 'one who has X attribute'), but rather syntactically (using modification with adjectives or relativization), and there is little traditional specialization of work to encode (i.e., I know of very few

<sup>5</sup> Fortune 1942 does not mention the contrast between direct and indirect kinship terms in his grammar of Arapesh, though the kinship forms he lists appear for the most part to be direct forms. To the best of my knowledge, Fortune described the speech of present-day Woginara. The direct/indirect contrast is discussed at length in the next section.



nouns meaning 'one who does X activity'). Place of origin of an individual or group can be encoded as nouns, but the mechanism for doing so is relatively regular and involves a derivational process, as shown in (10d) above. Thus, apart from a few nouns referring to traditional roles (e.g., Wautogik *hərn* ~ *hərim* 'enemy', *rowəgik* ~ *rowəher* 'old woman'), the majority of nouns referring to humans and certainly those with the highest frequency of use are kinship terms. As a consequence, a disproportionate amount of the exceptional irregularity discussed above for Classes IV and VII is found in the kinship vocabulary.

#### 4. The Direct/Indirect Distinction in Mountain Arapesh Kinship Forms

In most of the Mountain Arapesh dialects spoken in the Dagua area, reference to a kinship relation requires the speaker to make a distinction between what I call for lack of a better (or a precedent) term "direct" and "indirect" relationships. It is similar, but not identical, to the address/reference distinction commonly referred to in kinship studies, which it will be useful for purposes of comparison to clarify. A term of address is "[a] kinship term used when speaking to or addressing a relative" (Schusky 1965: 72), whereas a term of reference is "[o]ne used in speaking about a relative" (Schusky 1965: 78). Thus, an American speaker of English may call her father "daddy" when speaking to him, but it would not generally be appropriate for her to say "my daddy" when speaking about him to others. Instead, in such circumstances she will speak about "my father", or perhaps "my dad", using a term of reference, rather than address.

The direct terms of Mountain Arapesh are used in address, but they are also used as terms of reference when referring to one's own relative. When speaking about the relative of another, the indirect term is used. Thus, a Wautogik Arapesh speaker will call out to his mother's brother "hello *wawen*," using the direct term, and tell stories about "my *wawen*". But when he tells a story about your or another's mother's brother, he will call him "your *waken*" or "her *waken*", using the indirect term.<sup>6</sup>

There is an obvious formal relationship between most direct terms and their indirect counterparts; often the indirect term ends with an additional syllable, as can be seen from the Wautogik Arapesh examples in (11a) either reduplicating the final class-marking consonant (as in *nigauin* (direct) vs. *nigauinen* (indirect)), or infixing the phoneme *k* before the final consonant (as in *babwen* (direct) vs. *baboken* (indirect)). Less frequently, the two terms are formally unrelated; see (11b). In still other cases, no direct/indirect distinction is maintained: the same form is used whether speaking about one's own or another's relation; see (11c).

<sup>6</sup> Breaches of this convention are heard, most frequently to show solidarity with an interlocutor in another's presence. So I may choose to address your approaching mother's brother as *wawen* in your presence as a signal that I'm considering the interaction from your perspective.

11) Direct (one's own)	Indirect (another's)	Gloss
a. <i>nigáúin</i>	<i>nigáúinen</i>	'son in law'
<i>wawen</i>	<i>waken</i>	'mother's brother'
<i>mehin</i>	<i>mehinen</i>	'nephew'
<i>barahok</i> "	<i>barahokwik</i> "	'granddaughter'
<i>kasin</i>	<i>kasinen</i>	'child's spouse's father'
<i>mohun</i>	<i>mohunin</i>	'brother; man's sister's husband'
<i>babwen</i>	<i>baboken</i>	'grandfather'
<i>yain</i>	<i>yaken</i>	'father'
b. <i>yamo</i>	<i>amakek</i> "	'mother'
<i>abáhik</i> "	<i>acîkek</i> "	'woman's elder sister'
c. <i>makik</i>	<i>SAME</i>	'father's sister'
<i>makinen</i>	<i>SAME</i>	'father's sister's husband'
<i>kədáik</i>	<i>SAME</i>	'younger sister'
<i>yamwenen</i>	<i>SAME</i>	'great grandfather'

The distribution of direct and indirect forms varies as one moves through the Buki-speaking villages in the Dagua area. In Woginara, to the west of Wautogik in the mountains, the distribution is nearly identical to Wautogik's. In Dogur village, directly on the coast midway between Wautogik and Woginara, there is no direct/indirect distinction whatsoever; interestingly, the kinship nouns attested in Dogur resemble the longer, indirect forms listed above: *waken* 'mother's brother', *amakek* 'mother', *yaken* 'father'. Still further west in the coastal village Balam, the entire kinship system is simplified relative to Wautogik, and there are fewer direct/indirect contrasts, though one does find some; see (12).

12) Direct (one's own)	Indirect (another's)	Gloss
a. <i>yayan</i>	<i>yayaken</i>	'father'
<i>irámin</i>	<i>iráminen</i>	'husband'
<i>nakur</i>	<i>nakurinen</i>	'spouse's father'
<i>mîgán</i>	<i>mîgánikik</i> "	'woman's sister-in-law'
b. <i>yam</i>	<i>SAME</i>	'mother'
<i>wawen</i>	<i>SAME</i>	'mother's brother'

In light of the nature and distribution of these forms, it would be inappropriate to posit anything more productive than a lexical relationship between direct-form kinship nouns and their indirect counterparts. In no dialect that I have encountered can the formal relationships be stated as rules dissociated from the specific lexemes to which they apply: which "rule" (final-C reduplication, *k*-infixation) to apply, which kinship noun to apply it to, and even whether the rule applies in the dialect in question; all of these things can only be determined on a lexeme by lexeme basis. So again, as with the irregularities in plural marking on kinship nouns, the direct/indirect distinction occurs strictly in the lexicon; it cannot be expressed adequately by morphological rules of any generality.

The direct/indirect distinction in kinship nouns applies not only to singular forms, but cross-cuts the dimension of number as well. In Wautogik Arapesh, most kinship nouns that have both direct and indirect forms have distinct plurals that correspond to each of those forms in addition; see (13a). For the example listed in (13b), the direct/indirect distinction is realized only in the plural, as the singular term for 'father's sister's husband' does not have separate direct and indirect singular forms. Finally, the plurals in (13c) follow the common pattern for direct vs. indirect plurals formally, but are in fact used simply as interchangeable alternates for the direct singular form, *abahik*."

13) Direct Plural (one's own)	Indirect Plural (another's)	Gloss
a. <i>niáúginem</i>	<i>nigáúinoguhem</i>	'sons-in-law'
<i>wawenomi</i>	<i>wakeñim</i>	'mother's brothers'
<i>yamekomi</i>	<i>amakeñu</i>	'mothers'
<i>yainomi</i>	<i>yakeñim</i>	'fathers'
<i>barahec</i>	<i>baraheci</i>	'grandchildren'
<i>babekomi</i>	<i>babakñeiu</i>	'grandmothers'
<i>nakurehec</i>	<i>nakuricic</i>	'spouse's parents'
<i>kasiguhec</i>	<i>kasiguwec</i>	'child's spouse's parents'
<i>mohonomi</i>	<i>mohoWim</i>	'brothers; man's sisters' husbands'
<i>abáhikomi</i>	<i>acíkeiu</i>	'woman's elder sisters'
<i>barahoWim</i>	<i>barahomi</i>	'grandsons'
b. <i>makinenomi</i>	<i>makinoguhem</i>	'father's sisters' husbands'
c. <i>abáhikomi</i>	<i>abáhiu</i>	'woman's own elder sisters'

There are certainly dominant patterns in the formation of these plurals. *-omi* is the most common plural on direct forms, for both Class IV and Class VII kinship nouns. Indirect forms tend to be pluralized with *i* followed by the class marking plural: *iu* (Class IV), *im* (Class VII), or *ic* (the default form used with nouns of mixed classes). Even so,

110 Splitting in the Kinship Vocabulary of the Buki (Arapesh) Language Lise M. Dobrin  
however, there are a sufficient number of exceptions that the rules are of only limited validity.

We thus see again in directness-marking what we saw previously in plural-marking: an inflectional paradigm held together by at best weak morphological patterning. The real “glue” holding these split forms together is the lexeme corresponding to each kinship noun itself. Arapesh speakers do not perceive direct and indirect forms as distinct nouns, but rather as inflectional forms of the same noun; pairs of forms like *wawen* and *waken* are no more differentiable to Arapesh speakers than third-person singular verb forms (usually suffixed with *-S*) are from all other person/number categories to non-trained speakers of English. As a result, the lexical entry with the semantic value ‘mother’s brother’ includes not just two (singular and plural) phonological forms to which it corresponds, as is the case with most other Arapesh nouns, but rather four: singular direct, singular indirect, plural direct, and plural indirect. This, as we have seen, is true of a large number of Arapesh kinship nouns.<sup>7</sup>

### 5. Inherent/Inalienable Possession of Kinship Nouns in Balif Muhian and Weri

Normally in Buki languages, possession is expressed by creating a syntactic NP in which the possessor noun is suffixed with a marker indicating the class (and number) of the possessed noun, as in the examples from Wautogik Arapesh in (14) below.<sup>8</sup>

- |        |                                 |                      |
|--------|---------------------------------|----------------------|
| 14) a. | <i>ənən - i - g<sup>w</sup></i> | <i>mbagw</i>         |
|        | he - poss - agr                 | dogs ‘his dogs’      |
| b.     | <i>eik - i - ŋ</i>              | <i>araminen</i>      |
|        | me - poss - agr                 | husband ‘my husband’ |

The Buki languages form a dialect chain, so it should not surprise us to find grammatical features that do not occur elsewhere in the family occurring in different Buki languages that are spoken in adjacent areas. In Balif Muhiang and Weri, which are

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<sup>7</sup> Practices regarding name use in the Mountain Arapesh area are relatively rigid. As a rule, it is disrespectful to use the proper name of in-laws or of individuals who are older than oneself. People get around these constraints by two main means: (1) the use of teknonyms, whereby individuals are referred to and addressed in terms of their children, so that for example a woman will commonly be called “mother of [child’s name]”, typically (but by no means always) the eldest child’s, and (2) the use of kinship terms. Kinship nouns are thus in regular use, and while some of the plurals listed in (13) above may be rather rare (especially the indirect forms), they are nonetheless part of the active vocabulary of fluent Wautogik Arapesh speakers.

<sup>8</sup> To my knowledge there is only one Buki language, *Abu’*, that does not require syntactic agreement in possessive phrases. The unmarked order of possessor and possessed is reversed in some Buki languages (with a concomitant reversal in the order of agreement and possessor morphemes), but the pattern of possession formation is otherwise essentially the same throughout the family.

Maprik and Dreikir, the formation of possessive NPs is more complicated when the possessed noun refers to a relation of kinship. In such cases, not only is the possessor noun suffixed according to the normal means described above, but the class of the possessor is in addition marked on the possessed noun. In other words, kinship nouns in Balif Muhian and Weri are inalienably possessed.

In languages that distinguish between alienable and inalienable possession, a grammatical distinction is made between items that can be alienated items that can be transferred from their possessors, such as knives and yams and pigs and items that cannot be so alienated. In some languages, nouns that would appear to be perfectly transferrable on the basis of their semantics may fall into the grammatically inalienable category, but the core group of inalienably possessed items is thought "always [to] include kinship terms and body parts" (Payne 1997: 105), as these are transparently difficult to dissociate from their possessors. As we will see, however, inalienable possession in Balif Muhiang and Weri treats only kinship terms as non-transferrable. Generally, the possessed term in an inalienable construction is morphosyntactically closer to its possessor than is the possessed term in an alienable construction. In Balif Muhian and Weri, this increased morphosyntactic proximity is expressed by the presence of a noun class marker, agreeing with the class of the possessor, suffixed to the possessed noun.

The pattern for alienable possession phrases in Balif Muhian is presented in (15). The Weri pattern is similar, except that in Weri all non-human nouns fall into a single syntactic noun class since the phonological class-assignment rules that function throughout the rest of the language family are inoperative in this one language. The result is that the agreement marker is the same (varying only to distinguish singular from plural) for most alienably possessed nouns; see (16).

- 15) a. *bol*            *ei' - el - i*  
       pig            1.sg.pro - agr - poss  
       'my pig'
- b. *kap*<sup>9</sup>        *anon - ip - i*  
       cup            3.m.sg.pro - agr - poss  
       'his cup'
- 16) a. *buri'aW*      *ei' - er - i*  
       leg            1.sg.pro - agr - poss  
       'my pig'

<sup>9</sup> The noun *kap* 'cup' (plural *kapifex*) is a Tok Pisin borrowing incorporated into the class system on the basis of its final phonological segment, as are most other borrowings with non-human referents.

- b. *suhup*      *ənənə'* - er - i  
leaf      3.m.sg.pro - agr - poss  
'his leaf (piece of paper)'
- c. *suhis*      *ei - m - i*  
leaves      1.sg.pro - agr - poss  
'my leaves'

In both of these languages, inalienable possession of kinship nouns coincides with their inherent possession: kinship terms are obligatorily suffixed with a marker reflecting the possessor, so that there is no way of mentioning a kinship relationship without also mentioning whose relationship is being referred to. It is this inherently possessed kinship term that is embedded within a possessive construction of the usual sort. The result is a remarkable structure involving "chiastic" agreement: the possessor pronoun agrees with the noun class of the possessed noun (as in all possessive phrases), and in addition, the possessed kinship noun is marked to agree with the noun class of the possessor. This structure is shown in a set of schematic representations in (17). Examples from Balif Muhian (18) and Weri (19) follow.<sup>10</sup>

- 17) NP = [N<sub>possessed</sub> + AGR<sub>possessor</sub>] [N<sub>possessor</sub> + AGR<sub>possessed</sub> + POSS]  
NP = [father + 1.sg] [1.sg.pro + 3.m.sg + poss]  
'my father' = [father - of.me] [my - him]
- 18) a. *ma'mw - ei*      *ei' - əkw - i*  
mother - 1.sg      1.sg.pro - 3.f.sg - poss  
'my mother'
- b. *ma'm - n*      *ənən - i'kw - i*  
mother - 3.m.sg      3.m.sg.pro - 3.f.sg - poss  
'his mother'
- c. *aham - ei*      *ei' - ene - i*  
father - 1.sg      1.sg.pro - 3.m.sg - poss  
'my father'
- d. *aham - o'*      *əkwə' - une - i*  
father - 3.f.sg      3.f.sg.pro - 3.m.sg - poss  
'her father'

<sup>10</sup> An immediate question arises with the recognition of such chiastically agreeing structures: which noun if either is the head of the phrase? The issue resolves itself, of course, if we assume that possessed kinship nouns are not in fact inflected in the syntax, as they appear to be by virtue of the analogy with other nouns, but instead have the various possessor suffixes "pre-attached" in their lexical entries. It is this analysis that I believe to be the correct one, as I will discuss below.

- 19) a. *inganom - iə ei' - er - i*  
 son - 1.sg 1.sg.pro - 3.m.sg - poss  
 'my son'
- b. *ingamum - o' o'w - eh - i*  
 sons - 3.f.sg 3.sg.pro - 3.m.pl - poss  
 'her sons'
- c. *wahrop - iə ei - h - i*  
 uncles - 1.sg 1.sg.pro - 3.m.pl - poss  
 'my mother's brothers'
- d. *wahronom - o' o'w - ei'er - i*  
 uncle - 3.f.sg 3.f.sg.pro - 3.m.sg - poss  
 'her mother's brother'

It should be emphasized that it is specifically kinship terms that are possessed according to this pattern, and not all terms referring to humans. This can be seen from (20) below, which lists terms that refer to humans but are not kinship terms. Such nouns can be uttered without expressing a possessor, as can be seen from the Weri data in (21). The human noun *naumbih* 'enemy' is not inherently possessed, and possession of the term is expressed only by syntagmatic association with a pronoun inflected to agree with it in noun class and number.

(20)	Noun	Gloss
a. Balif Muhian:	<i>emen</i>	'man'
	<i>nematə'</i>	'woman'
	<i>awani</i>	'child'
b. Weri:	<i>emen</i>	'man'
	<i>opondu'</i>	'woman'
	<i>oneni</i>	'child'
	<i>ingan</i>	'child'

- 21) a. *naumbih ei' - er - i*  
 enemy 1.sg.pro - 3.m.sg - poss  
 'my enemy'
- b. *naumbih sa'ahitasi ei - s - i*  
 enemy many.mix.pl 1.sg.pro - 3.mix.pl - poss  
 'my enemies'

Nouns referring to body parts are possessed according to the unmarked pattern; see the Weri data in (22).

- 22) a. *huri'aW ei' - er - i*  
 leg 1.sg.pro - 3.nonhuman.sg - poss  
 'my leg'
- b. *huri'a - rəh eses - eim - i*  
 leg - pl 3.pl.pro - 3.nonhuman.pl - poss  
 'their legs'

The semantically defined category of kinship nouns has some of the hallmarks of an inflectional paradigm. There are two main arguments favoring an analysis involving morphosyntactic inflection, though neither of them are particularly strong. (We support these arguments with data from Weri, which is the more complete set in the author's notes.) First, the possessor-agreement markers formally resemble inflectional suffixes that are found elsewhere in the grammar, such as in object inflection. For example, the word corresponding to English 'and' is morphologically a verb in Buki languages. In the sentences in (23) we see it inflected for the second conjunct with a series of pronominal suffixes.

- 23) a. *ei' and - ənə m - a - mbi ərup*  
 1.sg.pro and - 3.m.sg 1.pl - realis - go jungle  
 'He and I went to the jungle'
- b. *ei' and - o'u' m - a - mbi ərup*  
 1.sg.pro and - 3.f.sg 1.pl - realis - go jungle  
 'She and I went to the jungle'
- c. *ei and - eis m - a - mbi ərup*  
 1.sg.pro and - 3.mix.pl 1.pl - realis - go jungle  
 'I went to the bush with jungle'

As can be seen by comparing these pronominal forms with the inherent possessive markers on Weri kinship nouns listed in below (24), the similarities are quite obvious.

- 24) a. *onum-ənə* 'his father'  
*onum-o'u'* 'her father'  
*onum-os* 'their father'
- b. *sosim-ənə* 'his younger sibling'  
*sosim-o'* 'her younger sibling'  
*sosim-os* 'their younger sibling'

A second argument for a morphosyntactic analysis of the agreement markers on possessed kinship nouns in Weri is the fact that formal irregularities collect primarily in one cell of the paradigm, namely in the third person singular feminine. Unlike all other person/number/gender categories, which are highly regular, there are at least five clearly



related but slightly and irreducibly distinct patterns found in the third person singular feminine cell; these are shown in (25).

25)	1.sg Possessor	3.f.sg Possessor	Root Gloss
a.	<i>wahrnom - i ə</i>	<i>wahrnom - o'</i>	'maternal uncle'
b.	<i>onum - i ə</i>	<i>onum - o'u'</i>	'father'
c.	<i>ingam - i ə</i>	<i>inga'um - o'</i>	'daughter'
d.	<i>sowrim - i ə</i>	<i>sowərum - o'</i>	'younger sisters'
e.	<i>mam - i ə</i>	<i>ma'um - o'u'</i>	'mother in law'

On the other hand, the inherent possession of kinship nouns is the only situation I am aware of in either Balif Muhian or Weri in which the root form of a noun cannot be expressed without additional morphological material, suggesting that kinship nouns in these languages may in fact be lexically possessed. One source of evidence that can be used to address this issue involves the odd chiasmatically agreeing structures that arise when kinship nouns are incorporated into syntactic possessive constructions. If each noun in the phrase obligatorily agrees with the other, then which if either noun is the head of the phrase? The problem is an uncomfortable one, since it implies that information is flowing in two directions simultaneously through the phrase. The problem resolves itself immediately, however, if we assume that possessed kinship nouns are not in fact inflected in the syntax, as they might appear to be on the surface, but instead have the various possessor suffixes "pre-attached" in their lexical entries. In that case, the head of the NP will be the possessed noun, the morphosyntactic features of which flow or 'percolate' up through the phrase, resulting in an agreement pattern that is perfectly unremarkable. I will therefore assume this to be the correct analysis, though we leave it to future research based on additional data to confirm.

## 6. Discussion

I would like to suggest that the three superficially disparate phenomena we have considered extreme formal irregularity in Mountain Arapesh, direct/indirect splitting in Mountain Arapesh, and inalienable possession in Balif Muhian and Weri are conceptually related in that they involve both (1) special patterning in the area of kinship vocabulary, and (2) the splitting among forms corresponding to what is notionally and for nouns in other areas of the vocabulary what would in fact be a single lexical entry, internally, into a set of corresponding forms.

As was shown in Section II above, there is a great deal of irregularity in the pluralization of Buki nouns, and though it is in many cases constrained, a fair number of plurals have to be listed alongside their corresponding singular forms in the lexicon. But because of the extreme degree of irregularity in the plurals of Mountain Arapesh kinship nouns, the plural of nearly every kinship noun must be listed in the lexicon. The

irregularity thus introduces a systematic split within lexical entries into singular and plural forms, as schematized in (26).

## 26) KINSHIP NOUN LEXEME

singular	plural
----------	--------

The direct/indirect distinction that is made throughout Mountain Arapesh kinship vocabulary similarly necessitates a large number of lexically listed forms, since neither the existence nor the precise form of an indirect counterpart to each direct kinship noun is predictable. In this case the split occurs within the singular cell, though as we saw from the preceding discussion, it is in many instances carried over into the plural as well. The resulting direct/indirect split is schematized in (27).

## 27) KINSHIP NOUN LEXEME

direct	plural <sub>dir</sub>
indirect	plural <sub>indir</sub>

Finally, and most dramatically, the inherent possession of kinship nouns in Balif Muhian and Weri produces a split among kinship noun forms corresponding to every cell in the person/number/gender paradigm. Although we will not represent it, the split in fact multiplies further still when we recognize that there are separate such paradigms for kinship noun plurals; i.e., in addition to 'my brother', 'our brother', etc., there are forms such as 'my brothers', 'our brothers', etc. A schematic representation of the inherent-possession split is given in (28).

## 28) KINSHIP NOUN LEXEME

1.sg.possessor	1.pl.possessor
2.sg.possessor	2.pl.possessor
3.m.sg.possessor	3.m.pl.possessor
3.f.sg.possessor	3.f.pl.possessor
	3.mix.pl.possessor

It appears that these splits are not complete; that is, they do not result in an increase in the number of lexemes as such, but rather occur at the level of formal representations alone. Whether or not this is the case, the fact of lexical splitting *at some level* is undeniable and invites an explanation. Without attempting to advance a complete theory, I suggest that we seek the conditions that give rise to such splitting in the semantic, as opposed to formal, basis of classification of kinship nouns in the Buki languages.

Unlike most other Buki nouns, which are associated with morphosyntactic agreement classes primarily by virtue of their phonological form, kinship nouns are the main set of nouns assigned to classes on the basis of rules referring to their semantic features. These rules, which refer to the human and gender features of their referents, are the glue that hold kinship and other human nouns in place; they provide them with their morphosyntactic values within the noun classification system, just as the form-sensitive rules provide non-human nouns with their morphosyntactic values. It is through the latter pervasive and elaborate form-sensitive classification rules that the Buki nominal lexicon is constituted as a structure, and not just as a list. And what it seems we are seeing in the splitting within the kinship vocabulary is expansion making use of the "wobble room", so to speak in those areas of the structure that are not systematized on the basis of their form. In effect, because it is their semantic features that are of morphosyntactic relevance, the Buki kinship nouns are less tightly constrained with respect to their form. Thus, the proliferation of lexical forms can take place with minimal disruption to the morphosyntactic system of noun classification.

Pursuing this explanation leads us to consider the perhaps counter-intuitive possibility that the irregularity that so often arises in the kinship vocabulary of languages throughout the world is not or is not only conditioned by the place kinship nouns hold at the intersection of language and culture, but may also be conditioned by the precedence given to semantic as opposed to formal features in the morphosyntactic structuring of such nouns. The priority of semantic noun-class- or gender-assignment rules over those based in morphological or phonological form is a well-established pattern across languages (see Corbett 1991), as is the commonness of semantic rules referring to nouns with human referents, sometimes called 'rational' nouns).

This paper therefore serves as a call to survey languages with highly irregular kinship terminology with an eye towards evaluating the role of that irregularity within the larger morphosyntactic system of each language. It remains, of course, to explain what motivates the irregularity in kinship forms in the first place; what it is about kinship relations in specific that makes them so vulnerable to variation in form, as we see in Buki in the phenomenon of splitting. Nevertheless, I believe we at least have a direction to turn in attempting to understand an area of grammatical typology that continues to be rather mysterious.

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