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AFLA 21

The Proceedings of the 21st Meeting of the
Austronesian Formal Linguistics Association

edited by

Amber Camp, Yuko Otsuka, Claire Stable and Nozomi Tanaka

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The Austronesian Formal Linguistics Association (AFLA) is an organization which promotes the study of Austronesian languages from a formal perspective. The 21st annual meeting of the Austronesian Formal Linguistics Association (AFLA 21) was held at the University of Hawai'i at Mānoa on 23-25 May, 2014. Of the 28 papers presented at the conference, 17 are included in this volume. The contributions include studies in the syntax, semantics, phonetics, phonology, morphology, processing, and acquisition of Austronesian languages.



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This collection is dedicated to Professor Robert Blust, University of Hawai‘i at Mānoa, both in recognition of his high quality scholarship in Austronesian languages and for his support for AFLA over the years.

Edward L. Keenan
Sandra Chung

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Preface

The 21st annual meeting of the Austronesian Formal Linguistics Association (AFLA 21) was held on 23-25 May, 2014 at the University of Hawai‘i at Mānoa. The program consisted of 28 presentations, including three plenary talks by Diane Massam, Yuko Otsuka, and Kie Zuraw. This volume includes 17 papers presented at the conference.

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Amber Camp, Claire Stabile, Nozomi Tanaka, and Yuko Otsuka

PERSON-BASED ORDERING OF PRONOMINAL CLITICS
IN RIKAVUNG PUYUMA: AN INVERSE ANALYSIS*

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This study argues that in Rikavung Puyuma pronominal clitics' variations in form are best accounted for by means of their linear position with respect to either other clausal elements or each other. Not only do these pronouns exhibit no case distinctions, and thus constitute just a single paradigm, they also demonstrate ordering relative to each other based only on grammatical person. Given that a first-person clitic pronoun *always* precedes a second-person one, and that the clitic /ta(w)/ is added specifically in front of both clitic pronouns to indicate second person acting upon first person, we also argue that /ta(w)/ is an inverse marker and that there are thus no overt third-person clitic pronouns.

Many Austronesian languages of Taiwan and the Philippines attest two sets of pronominal clausal clitics. If these co-occur (i.e., in a transitive clause), then they can cluster in several patterns.¹ The most common is for the Actor (usually bearing ERG case) to be first (Lee and Billings 2008:195–197; Yen and Billings 2014). Far less frequent is the opposite ordering, at least in those languages where the transitive Actor is never the subject (Quakenbush and Ruch 2008). In accusatively aligned Mantauran Rukai (southern Taiwan) both active and passive clauses require the subject to be initial within the clitic-pronoun cluster (Yen and Billings 2011). Seediq (northwestern Taiwan) also orders its clitic pronouns with the subject first (as Holmer and Billings 2014 argue). As another type, most Central Philippine languages (Bloomfield 1917; Kaufmann 1916; Lee and Billings 2008) also order a monosyllabic pronoun first in the clitic cluster. These languages thus utilize prosodic weight as their primary pronoun-ordering criterion. As yet another type, the current study discusses cluster-internal ordering based only on grammatical person: previously found in most Danao and Manobo languages, both subgroups spoken primarily in the southern

* The first author thanks the Chiang Ching-kuo Foundation for International Scholarly Exchange for a research fellowship. The second author acknowledges Taiwan's Ministry of Science and Technology (formerly the National Science Council) for a travel grant to present our talk. We are both grateful to Sihwei Chen, Celeste Lee, Malcolm Ross, Chris Sundita, Stacy Teng, and Hiroto Uchihara for various assistance along the way with this ongoing undertaking.

¹ It is also possible for the pronominal clitics *not* to form a cluster. That other type is found elsewhere in Puyuma as well as in neighboring Paiwan, where the Actor immediately precedes the lexical verb and the Undergoer (if overt) follows right after it (Huang et al. 1999:186, 188).

Philippines, and one dialect of Atayal, spoken in north-central Taiwan (Chang 2012; Holmer and Billings 2014:122–123; Hung and Billings 2009/2010; Kaufman 2010; Peng and Billings 2008). In each of the aforementioned languages with person-based ordering, through various means, the two pronouns in the morphosyntactic-clitic cluster are unambiguously differentiated as to their forms so that the ordering does not obscure the two pronouns' respective (semantic) roles or (syntactic) relations. In all the known languages of the area that order two speech-act participants (hereafter abbreviated as *SAPs*) using grammatical person as the primary ordering criterion, the first-person pronoun precedes the second-person form. In addition, in all such languages an *SAP* pronoun precedes any third-person form. Languages can also use a mixture of ordering criteria. For instance, all known Atayalic languages order an *SAP* before a third-person pronoun but two dialects (of Atayal proper) order clusters of *SAP* clitic pronouns based only on prosodic weight (Billings and Kaufman 2004:17; Li 1995:40/2004:403, citing “Mei (p.c.)”; Liao 2004:285–296, 2005).

Rikavung, a subdialect of Puyuma (spoken in southeastern Taiwan), also utilizes grammatical person in ordering its first- and second-person clitic pronouns relative to each other. (In our analysis, there are no overt third-person clitic pronouns.) Despite extensive variation in Rikavung's various clitic-pronominal forms, we argue that none of these forms encodes a case distinction. Rather, we demonstrate in this paper that the variation is positionally defined allomorphy, along the lines of the analysis of Mantauran Rukai in Zeitoun (2007) and developed further in Yen & Billings (2011). Each of the variant forms in (1)—whether between parentheses, indicating optionality, as in (1a–b, e), or not, as in (1d), where each 2SG form is required in at least certain environments—can be used for both semantic roles/syntactic relations.²

- (1) Clitic-pronoun inventory
- a. ku (~ ka)
1SG
 - b. mi (~ niam)
EXCL1PL
 - c. ta
INCL1PL
 - d. u ~ nu
2SG
 - e. mu (~ nmu)
2PL

² Compare (1) with the pronominal inventory in Tamalakaw Puyuma (Tsuchida 1980:196, 1992:744, 1995:795). That neighboring subdialect is discussed further in section 2 below. To our knowledge, the only publication to date reporting sentential Rikavung data is by Suenari (1969), who spells the name as *Rikavong*. All sentential data in this study from Rikavung, shown in the International Phonetic Association's transcription, come from our own field notes.

More specifically, the clitic pronouns' *forms* display neither ergative nor accusative alignment. Elsewhere in the grammar of Rikavung (but not in the clitic-pronominal system), there is clear ergative alignment.³ We demonstrate that syntactic relations do not play a role in any of the variations in (1a–b, d–e).

This study consists of just two body sections. The first of these lays out the argument alignment in Rikavung based on the pronouns' positioning and forms, demonstrating that there is just a single, case-neutral paradigm of clitic pronouns. The latter section then presents and justifies our inverse analysis of Rikavung, where we show that it is grammatical person that determines the order of two pronouns relative to each other within the clitic cluster.

1. Argument Alignment and Variation in Pronominal Clitics

This section argues that there is only one paradigm of clitic pronouns in Rikavung. As such, none of the variation found in four out of the five pronominal forms listed in (1a–e) above is used to encode morphological case. Each instance of variation is positionally determined allomorphy. As such, the pronominal *forms* do not contribute to argument alignment. However, their *positioning* does reveal a relatively marked kind of alignment.

1.1. Pronominal Positioning within the Rest of the Clause

Here we address the ordering of bound pronouns relative to free elements. This then establishes that these morphemes are clitics rather than affixes. The clitic pronouns' *positioning* exhibits neither accusative nor ergative but rather horizontal alignment, where both of a transitive verb's arguments behave differently from an intransitive verb's only argument (Comrie 2013:29).

The sole pronoun of an intransitive clause can be analyzed as having Wackernagel positioning, after some clause-initial element (and thus it is clearly a clitic). For example, compare the positioning of the INCL1PL pronoun after the verb, in (2a), with its positioning between Neg and the verb, as (2b) shows.

³ Only SG-personal *nouns* show clear ergative alignment, as to their case-markers' forms:

- | | |
|---|---|
| <p>(i) <u>ta=</u> sukun-anaj i misak
 INCL1PL= push-TR ABS (name)
 'Let's push Misak.'</p> | <p>(iii) ta(w)= ta= sukun-anaj <u>ni</u> <u>misak</u>
 INV= INCL1PL= push-TR ERG (name)
 'Misak pushed us.'</p> |
| <p>(ii) s<əm>ukun i misak
 <INTR>push ABS (name)
 'Misak pushed {someone/something}.'</p> | <p>(iv) s<əm>ukun =ta kani misak
 <INTR>push =INCL1PL OBL (name)
 'We pushed Misak.'</p> |

In (i) the INCL1PL Actor adds a cohortative reading. With both PL-personal and definite-common nouns, the ABS and ERG cases are neutralized (distinct from OBL case), whereas with indefinite-common nouns, the ERG and OBL cases are neutralized (distinct from ABS case). See Jiang (2013) re these markers in Rikavung and Teng (2009:827) for those in three other varieties.

- (2) a. s<əm>ənaj =ta
 <INTR>sing =INCL1PL
 ‘Did we sing?’
 b. ɦa(z̥i) =ta s<əm>ənaj
 NEG =INCL1PL <INTR>sing
 ‘Didn’t we sing?’

Because in both of (2a–b) the clitic is adjacent to the verb, albeit not phonologically affiliated with it in (2b), we cannot eliminate the possibility that the pronoun is of the head-adjacent type rather than merely after the first element of the clause. The important point here, however, is that the pronoun is a clitic (rather than an affix), not exactly which specific type of clitic it is.

By contrast, both of a transitive verb’s pronouns immediately precede the lexical verb regardless of whether Neg is present. The pair in (3a–b) shows transitive clauses with only the Actor realized as a pronoun (and the Undergoer unexpressed); the data in (4a–b) show both arguments as pronominal clitics.⁴

- (3) a. ta= sukun-anaj
 INCL1PL= push-TR
 ‘Did we push {her/him/them}?’
 b. ɦa(z̥i) =ta sukun-an
 NEG =INCL1PL push-TR.DEP
 ‘Didn’t we push {her/him/them}?’
- (4) a. {ku/ka}= {***u/nu**}= sukun-anaj
 1SG= 2SG= push-TR
 ‘I pushed you.’
 b. ɦa(z̥i) ={ku/ka} ={***u/nu**} sukun-an
 NEG =1SG =2SG push-TR.DEP
 ‘I didn’t push you.’

⁴ Transitive data in which only the Undergoer clitic pronoun is overt are listed in (14) through (18), in §2 below. Transitive imperative (including prohibitive) clauses, though paradigmatically attesting transitive verbal morphology, nonetheless position a lone overt first-person Undergoer clitic pronoun *after* the lexical verb (with the second-person Actor unexpressed): for example, /sukun-anaj={**ku**/***ka**}/ (push-TR=1SG) ‘Push me.’ In this syntagmatic sense, imperative clauses behave intransitively. For the current purposes, the variation in only the 1SG pronoun here and in (4), discussed further below in §1, can be ignored. In addition, all of our data’s transitive verbs are from one of the three transitive subtypes (not labeled as such in the glosses). Our glossing of the two transitive affixes as ‘-TR’ and ‘-TR.DEP(endent)’ is in the spirit of a recent analysis of Nanwang Puyuma (Ross 2009:299); cf. also *connegative* verbs in Seediq (Holmer and Billings 2014:111 fn. 1, and the sources cited there). In our transitive examples, Actors are underlined; Undergoers, in **bold** type. For pragmatic reasons (that are for the most part irrelevant to this study), where it is odd to tell one’s addressee(s) what {she/he/they} did, data involving [+you] pronouns – if transitive, with a [+you] Actor – were often elicited as yes/no interrogatives.

The pronouns in a transitive clause do not alternate as to their positioning and thus are less obviously recognizable as clitics. We therefore utilize two other tests to show that these pronouns too are clitics. To begin, short /*ħa*/ ‘NEG’ is allowed only if at least one clitic follows right after it, as in (2b), (3b), and (4b) above. Otherwise, long /*ħazi*/ ‘NEG’ is required.⁵ We have not detected any semantic difference between these two Neg forms. For the current purposes, we show only that /*ħa*/ is phonologically deficient, requiring at least one more syllable in its prosodic word. Additional evidence comes from an accentual test, where the lexical pitch of Neg is shifted to the last of any following clitics. Thus, the only pitch in the first prosodic word in (2a–b) and (3b) is on the only clitic pronoun, and in (4b) it appears on the latter of two clitic pronouns. In each of (20b) and (21b) below there are three clitics; the high pitch is realized on the third clitic in each.⁶ Thus, preverbal pronouns are also clitics. We preliminarily analyze this paradigm of pronominal forms as arguments: merged and moved in the syntax. For instance, these clitic pronouns can be cross-referenced to free SAP pronouns that are in apparent A-bar positions (not exemplified here).

This subsection has demonstrated that the pronominal forms in Rikavung Puyuma are clitics. In an intransitive clause, the lone pronominal clitic follows the initial affirmative verb, whereas in a negated clause it follows Neg and precedes the verb. In both of these environments, the pronoun is phonologically enclitic. In a transitive clause, up to two clitic pronouns precede the lexical verb.

⁵ For instance, (ii) is the negated counterpart of (i), itself repeated from a preceding footnote:

- | | | | | | | | | |
|-----|-------------------------------------|---|------------|------|--|------------|---|------------|
| (i) | s<əm>ukun | i | misak | (ii) | {ħazi/*ħa} | s<əm>ukun | i | misak |
| | <INTR>push | | ABS (name) | | NEG | <INTR>push | | ABS (name) |
| | ‘Misak pushed {someone/something}.’ | | | | ‘Misak didn’t push {anyone/anything}.’ | | | |

⁶ The situation with negation in Rikavung is strikingly similar to the properties of *ne* ‘NEG’ in the Slavic language Bulgarian, as described in Rudin et al. (1999:553–566). Namely, *ne* is accented but doesn’t itself bear stress. If no clitic immediately follows *ne*, then it is unstressed, as in (i).

- | | | | | | | | | | |
|------|-----------------------|--------------|--------------|--------------------------------|------------------------------|-------------|--------------|-------------|------------|
| (i) | ne= | vaLI | (iii) | ne | =MI | se= | STRUva | [...] | |
| | NEG= | rain;PRS.3SG | | NEG | =1SG.IO | REFL= | seem;PRS.3SG | | |
| | ‘It isn’t raining.’ | | | ‘It doesn’t seem to me [...].’ | | | | | |
| (ii) | ne | =ME | boLI | (iv) | ne | =SÂM | ti= | go= | DALa |
| | NEG | =1SG.DO | hurt;PRS.3SG | | NEG | =be;PRS.1SG | 2SG.IO= | M/N.3SG.DO= | given;F.SG |
| | ‘It doesn’t hurt me.’ | | | | ‘I haven’t given it to you.’ | | | | |

If at least one clitic follows immediately, as in (ii) through (iv), then only the first clitic after *ne* is stressed. These data are all from Rudin et al. (1999:562), where transliterated Bulgarian spelling is used—with any clitics italicized, stressed syllables in majuscule, and the glosses modified slightly. We have inserted the equals signs showing the directions of phonological affiliation, though Rudin et al. (1999:566) actually remain noncommittal as to the proclitic status of the reflexive clitic in (iii) and of the two object-agreement clitics in (iv). One difference between the languages is that whereas Rikavung attests a disyllabic Neg option (i.e., /*ħazi*/), Bulgarian has available only monosyllabic *ne*. Thus, if no clitic follows Neg, as in (i), then the accent of Neg is not realized as stress on any syllable. Our own alternative view of (i) is that if no clitics follow it, *ne* cannot form a prosodic word of its own and must procliticize to the verb.

Returning to the variation in form found in most of the clitic pronouns, (4) above already shows an environment that permits variation in one of the pronouns (i.e., 1SG) but not in the other pronoun (2SG). Two quite distinct kinds of variation in form are found, as signified by the parentheses above only in (1a–b, e) but not in (1d). In the former type, dubbed *facultative* variation, one of the variant forms is allowed in all environments but the other variant is allowed only in a subset thereof. In the latter type, called *obligatory* variation, certain environments require one form to the exclusion of the other. We start with the latter type, in (1d), where each variant is required at least in some environments.

1.2. Obligatory Variation: 2SG

As (4) above already shows, in a 1SG>2SG transitive clause only the /nu/ 2SG variant is allowed.⁷ The 2SG pronoun in (4) would be defined as ABS and ACC under ergative and accusative alignments, respectively. Next, we show an intransitive clause, where negation affects the 2SG variation in two distinct ways. In an affirmative intransitive clause, /u/ is required, as (5a) shows.

- (5) a. s<ə̃m>ə̃naj = {u/*nu}
 <INTR>sing =2SG
 ‘Did you sing?’
 b. ɦa = {*u/nu} s<ə̃m>ə̃naj
 NEG =2SG <INTR>sing
 ‘Didn’t you sing?’
 c. ɦazi = {u/*nu} s<ə̃m>ə̃naj
 NEG =2SG <INTR>sing
 ‘Didn’t you sing?’

The negated counterparts of (5a) are shown in (5b–c). As mentioned above, there are two Neg variants. Short Neg, in (5b), requires /nu/; long Neg, in (5c), allows only /u/. Under ergative alignment, in all three examples the 2SG pronoun would by definition be ABS case; under accusative alignment, all of these 2SG pronouns would be labeled as NOM. Nonetheless, in (5a, c) the form must be /u/, whereas in (5b) it can only be /nu/. The distribution of 2SG pronouns in an intransitive clause therefore correlates with neither purported alignment type.

Even at this point, it is already clear that the distinction between /u/ and /nu/ is not one of morphological cases. Corroborating evidence comes from 2SG>3 clauses. In an affirmative context only /nu/ is allowed, as shown in (6a). The negated counterparts of (6a) are shown in (6b–c). As in (5b–c) above, short and long Neg in (6b–c) require only /nu/ and /u/, respectively. Under ergative alignment, the 2SG pronouns in (6a–c) would all be predicted to be ERG; under accusative alignment, the same pronouns would all be defined as NOM.

⁷ The symbol > abbreviates the preceding person/number features ‘acting upon’ the latter ones.

- (6) a. {*u/nu}= sukun-anaj
 2SG= push-TR
 ‘Did you push {her/him/them}?’
 b. ħa ={*u/nu} sukun-an
 NEG =2SG push-TR.DEP
 ‘Didn’t you push {her/him/them}?’
 c. ħazi ={u/*nu} sukun-an
 NEG =2SG push-TR.DEP
 ‘Didn’t you push {her/him/them}?’

Table 1 summarizes how the 2SG forms correlate with the cases under each purported alignment type. For completeness, it also covers (17), (20), and (22d, g) in section 2 below. The table’s middle row shows that /nu/ is consistent with neither alignment, whereas in the table’s upper row /u/ is inconsistent with ergative but at least consistent with accusative alignment. However, accusative alignment overall would fail to account for how, in the NOM column of table 1, /u/ is required in (5a, c) and (6c) but /nu/ is obligatory in (5b) and (6a–b). As the bottom row of table 1 also shows, there are two environments in which both 2SG forms are allowed, also posing problems for ergative alignment. Instead of the two 2SG variants encoding distinct case forms (as has been proposed in the literature on the Nanwang dialect of Puyuma—quite plausibly, in our view—by Ross and Teng 2005:756, e.g.), the 2SG variation in Rikavung is allomorphic, based only on positioning, not on semantic roles, syntactic relations, or morphological cases. Namely, immediately following either a(n intransitive) verb or long Neg, /u/ is obligatory; clause-initially or right after either short Neg or another pronoun, /nu/ is required. (And as we show in section 2 below, there is a choice between the 2SG allomorphs right after a nonpronominal clitic.)

Table 1: Summary of Variation in 2SG Pronominal Clitics’ Forms

Form \ Alignment	Ergative		Accusative	
	ERG	ABS	NOM	ACC
/u/ required	(6c)	(5a, c)	(5a, c), (6c)	
/nu/ required	(6a–b), (20a–b), (22g)	(4a–b), (5b)	(5b), (6a–b), (20a–b), (22g)	(4a–b)
Variation		(17a–b), (22d)		(17a–b), (22d)

1.3. Facultative Variation: 2PL, EXCL1PL, and 1SG

The preceding discussion of the 2SG pronominal forms' variation has shown that each variant is required to the exclusion of the other in at least one environment. In the remaining three person/number combinations (in which pronominal variation is also observed), one of the pronominal variants is always possible, whereas the other variant form is restricted to specified environments.

Moving first to the 2PL variation, listed in (1e) above, a pattern similar to that of the 2SG is found. Starting with intransitive clauses, both of (7a–b) show that the /mu/ pronominal variant is required. Unlike the 2SG data above, however, here short and long Neg do not select distinct 2PL variants.

- (7) a. s<əm>ənaj = {mu/*nmu}
 <INTR>sing =2PL
 'Did you sing?'
 b. ɦa(z̥i) = {mu/*nmu} s<əm>ənaj
 NEG =2PL <INTR>sing
 'Didn't you sing?'

Next, with 2PL>3 clauses, /mu/ is also required—once again, regardless of polarity (or, if negated, the choice of the short or long form of Neg):

- (8) a. {mu/*nmu} = sukun-anaj
 2PL = push-TR
 'Did you push {her/him/them}?'
 b. ɦa(z̥i) = {mu/*nmu} sukun-an
 NEG =2PL push-TR.DEP
 'Didn't you push {her/him/them}?'

All remaining environments—including (18), (21), and (22e, h)—allow either 2PL variant.⁸ For example, in (9a–b), encoding 1SG>2PL, there is no restriction.

- (9) a. {ku/ka} = {**mu**/**nmu**} = sukun-anaj
 1SG = 2PL = push-TR
 'I pushed you.'
 b. ɦa(z̥i) = {ku/ka} = {**mu**/**nmu**} sukun-an
 NEG =1SG =2PL push-TR.DEP
 'I didn't push you.'

Table 2 sums up the data where /mu/ is required (and /nmu/ is disallowed), on the upper row, and where both are allowed, on the lower one.

⁸ The choice of non-1SG clitic-pronominal allomorphs is free right after nonpronominal clitics.

Table 2: Summary of Variation in 2PL Pronominal Clitics' Forms

Form \ Alignment	Ergative		Accusative	
	ERG	ABS	NOM	ACC
/mu/ required	(8a–b)	(7a–b)	(7a–b), (8a–b)	
/nmu/ optional	(21a–b), (22h)	(9a–b), (18a–b), (22e)	(21a–b), (22h)	(9a–b), (18a–b), (22e)

As the bottom row of this table shows, the environments where both forms are allowed are inconsistent with either purported alignment. As the upper row demonstrates, ergative alignment is untenable for the /mu/ variant. However, the pattern is at least consistent with accusative alignment. As in the NOM column of table 1 above, under an accusative alignment in table 2 there would still be no way to predict, on the basis of morphological cases, the environments in which /nmu/ is optional. Therefore, we also analyze the 2PL variation as positional allomorphy: /nmu/ is allowed only immediately after another clitic.⁹ As (18a–b) and (22e) below show, the clitic right before /nmu/ need not be pronominal.

We turn next to the EXCL1PL variation, shown in (1b) above. Here the data are considerably more limited even than those of the 2PL (primarily because the EXCL1PL pronoun does not co-occur with any other clitic pronoun, a phenomenon we discuss separately below). First, in an intransitive clause, only /mi/ is found (regardless of polarity or whether Neg is short or long):

- (10) a. s<əm>ənaj = {mi/*niam}
 <INTR>sing = EXCL1PL
 ‘We sang.’
 b. ħa(zj) = {mi/*niam} s<əm>ənaj
 NEG = EXCL1PL <INTR>sing
 ‘We didn’t sing.’

⁹ Both variations in second-person clitic pronouns in Rikavung involve one /n/-initial variant (with their counterparts consisting only of every segment after this /n/). From comparing the Puyuma dialects, we’ve argued (separately, as Jiang and Billings 2015) that this boundary *n in Proto Puyuma appeared at boundaries between various morphophonologically bound elements. Billings (1996) discusses a similar phenomenon in Russian involving a boundary *n (between a preposition and either a possessive or a personal pronoun). This prehistoric situation continues to be relevant in Rikavung in the second-person clitic pronouns to differing degrees: 2SG /nu/ required only clause-initially or after either another clitic pronoun (invariably 1SG) or short Neg, but 2PL /nmu/ permitted only immediately after any other clitic (not clause-initially or after short Neg). As (17), (18), and (22d–e) below also show, /nu/ and /nmu/ are in free variation (with /u/ and /mu/, respectively) immediately after the nonpronominal clitics /ta(w)/ ‘INV’ and /a/ ‘IRR’.

In an affirmative EXCL1PL>3 clause, there is an option. However, in its negated counterpart only /mi/ is allowed (once again, regardless of the length of Neg):

- (11)a. {mi/niam}= sukun-anaj
 EXCL1PL= push-TR
 ‘We pushed {her/him/them}.’
 b. ħa(zj) ={mi/*niam} sukun-an
 NEG =EXCL1PL push-TR.DEP
 ‘We didn’t push {her/him/them}.’

As with the 2PL situation above, *no* environment prohibits one of the EXCL1PL variants: /mi/. Rather, those listed in (10a–b) and (11b) merely prohibit the /niam/ variant. The distribution of only /mi/, shown in the upper row of table 3, is incompatible with ergative alignment but is consistent (probably due merely to the dearth of data) with accusative alignment. As the same table’s lower row of data shows, also including (15) and (22b) below, the environments where both variants are possible cannot be explained by either purported alignment type.¹⁰ As in the preceding two tables, there would be no way to account for the combined distribution of NOM forms under a purported accusative alignment.

Table 3: Summary of Variation in EXCL1PL Pronominal Clitics’ Forms

Form \ Alignment	Ergative		Accusative	
	ERG	ABS	NOM	ACC
/mi/ required	(11b)	(10a–b)	(10a–b), (11b)	
/niam/ optional	(11a)	(15a–b), (22b)	(11a)	(15a–b), (22b)

As alluded to above, neither of the EXCL1PL forms co-occurs with any other clitic pronoun. (At this point we offer no explanation for this fact.) In order to encode either EXCL1PL>2SG or EXCL1PL>2PL, a work-around strategy is employed: initial /iniam mu/ (where /iniam/ is a case-neutral EXCL1PL nonclitic pronoun and /mu/ ‘TOP’ is homophonous with but distinct from the 2PL clitic pronoun), followed by a pause, then by the rest of the sentence, as in (4) and (9) above, in which the 1SG clitic-pronoun form stands in for any EXCL1PL pronoun.

The final instance of variation in form among the clitic pronouns is with the 1SG, in (1a) above. Like the preceding 2PL and EXCL1PL situations, the /ku/ variant is possible in all environments, whereas the /ka/ form is allowed only in certain pronominal combinations. We also show that the distribution of /ka/ is inconsistent with both ergative and accusative alignments. To begin, (4) and (9) above both exemplify the 1SG pronoun in 1SG>2SG and 1SG>2PL transitive

¹⁰ As a preceding footnote mentions, right after a nonpronominal clitic there is a choice in forms.

clauses, respectively, in both of which 1SG variation does occur. By contrast, there are environments that prohibit /ka/. For example, intransitive clauses do not allow /ka/ (regardless of polarity or the form of Neg used):

- (12) a. s<əm>ənaj = {ku/*ka}
 <INTR>sing = 1SG
 ‘I sang.’
 b. ha(zi) = {ku/*ka} s<əm>ənaj
 NEG = 1SG <INTR>sing
 ‘I didn’t sing.’

Another environment prohibiting the /ka/ variant is 1SG>3 transitive clauses:

- (13) a. {ku/*ka} = sukun-anaj
 1SG = push-TR
 ‘I pushed {her/him/them}.’
 b. ha(zi) = {ku/*ka} sukun-an
 NEG = 1SG push-TR.DEP
 ‘I didn’t push {her/him/them}.’

Table 4: Summary of Variation in 1SG Pronominal Clitics’ Forms

Form \ Alignment	Ergative		Accusative	
	ERG	ABS	NOM	ACC
/ku/ required	(13a–b)	(12a–b), (14a–b), (22a)	(12a–b), (13a–b)	(14a–b), (22a)
/ka/ optional	(4a–b), (9a–b)	(20a–b), (21a–b), (22g–h)	(4a–b), (9a–b)	(20a–b), (21a–b), (22g–h)

As this final table shows (so long as additional examples from section 2 are also considered), the environments where the /ku/ variant is required are compatible with neither ergative nor accusative alignment. The same goes for the environments where /ka/ is permitted. The only tenable observation is that /ka/ is a 1SG variant found only immediately before another clitic pronoun. (And this following clitic pronoun invariably encodes only either 2SG or 2PL.)

This concludes our discussion of pronouns’ variation as to their *form*. Only one of these does not vary in this way: INCL1PL /ta/, in (1c). Still, this form varies in its *function*. It encodes INCL1PL, as in footnote 3, (2), and (3) above, as well as (16) below.¹¹ It is also possible to use /ta/, instead of the 1SG forms

¹¹ In the spirit of the formal person/number features proposed by McKaughan (1959), 1SG and EXCL1PL are each [+me, –you], INCL1PL is [+me, +you], 2SG and 2PL are each [–me, +you],

mentioned so far, /ku/ or /ka/, to encode 1SG (possibly even EXCL1PL) under restricted conditions. Before discussing that variation in function, however, it is necessary to present the facts about this paper's subtitle: *An inverse analysis*.

The variations in form above in (1a–b, d–e) have now all been accounted for positionally. The 2SG pronoun is realized as /u/ immediately following the (intransitive) verb or long Neg but as /nu/ clause-initially or after either short Neg or another clitic pronoun. The 2PL pronoun allows /mu/ in all environments but /nmu/ only after another clitic. Similarly, the EXCL1PL pronoun must be realized as /mi/ after the (intransitive) verb or Neg but is allowed to be /niam/ only elsewhere. Finally, the /ka/ 1SG variant is found only right before another clitic pronoun, whereas its /ku/ counterpart is allowed in all environments.

2. The Remaining Combinations: Inverse

If none of the forms in (1a–e) above encodes case, then in Rikavung there is but a single paradigm of clitic pronouns. How, then, do these pronouns convey their syntactic relations, especially if they co-occur (i.e., in a transitive clause)? Various examples above have shown that in an SAP>3 clause only the SAP pronoun is overt: (3), (6), (8), (11), and (13). If both pronouns are SAPs, as so far (4) and (9) have shown, the 1SG clitic pronoun precedes the second-person form.¹² Still not discussed are the eight clitic-pronominal combinations in which the Undergoer is at least as person-prominent as the Actor—where the *lower* the ordinal numeral of the grammatical person, the *greater* its person-prominence.

In 3>SAP environments, an overt SAP pronoun immediately follows the inverse (INV) clitic, as each of (14) through (18) show. (The INV clitic can be pronounced without its final labiovelar glide but see further discussion below.)

- (14)a. ta(w)= {**ku/*ka**}= sukun-anaj
 INV= 1SG= push-TR
 ‘{She/He/They} pushed me.’
 b. ha(zi) =ta(w) ={**ku/*ka**} sukun-an
 NEG =INV =1SG push-TR.DEP
 ‘{She/He/They} didn’t push me.’

Because the 1SG pronoun does not precede any clitic pronoun in (14), /ka/ is not acceptable. The other 3>SAP examples, where the SAP clitic pronouns do show

and 3 is [–me, –you]. Two pronouns sharing either [+me] or [+you] cannot co-occur (or at least not as a clitic cluster). This restriction entails that /ta/ functioning as an INCL1PL pronoun cannot co-occur with any other SAP clitic pronoun. As such, the only transitive combinations involving a functionally INCL1PL pronoun are INCL1PL>3, above in (3), and 3>INCL1PL, below in (16).

¹² As has been mentioned above, neither the EXCL1PL nor the INCL1PL pronoun co-occurs with any overt clitic pronoun. Namely, INCL1PL>2 is semantically anomalous (footnote 11) and (as has been mentioned in §1.3) EXCL1PL>2 is prohibited. As such, 1SG>2SG (4) and 1SG>2PL (9) are the only overt pronominal combinations encoding first person acting upon second person.

a variation in form—namely, only (15), (17), and (18) but not (16)—allow either variant of the SAP clitic pronoun immediately after the INV clitic.

- (15) a. ta(w)= {**mi/niam**}= sukun-anaj
 INV= EXCL1PL= push-TR
 ‘{She/He/They} pushed us.’
 b. ħa(zɪ) =ta(w) ={**mi/niam**} sukun-an
 NEG =INV =EXCL1PL push-TR.DEP
 ‘{She/He/They} didn’t push us.’
- (16) a. ta(w)= **ta**= sukun-anaj
 INV= INCL1PL= push-TR
 ‘{She/He/They} pushed us.’
 b. ħa(zɪ) =ta(w) =**ta** sukun-an
 NEG =INV =INCL1PL push-TR.DEP
 ‘{She/He/They} didn’t push us.’
- (17) a. ta(w)= {**u/nu**}= sukun-anaj
 INV= 2SG= push-TR
 ‘{She/He/They} pushed you.’
 b. ħa(zɪ) =ta(w) ={**u/nu**} sukun-an
 NEG =INV =2SG push-TR.DEP
 ‘{She/He/They} didn’t push you.’
- (18) a. ta(w)= {**mu/nmu**}= sukun-anaj
 INV= 2PL= push-TR
 ‘{She/He/They} pushed you.’
 b. ħa(zɪ) =ta(w) ={**mu/nmu**} sukun-an
 NEG =INV =2PL push-TR.DEP
 ‘{She/He/They} didn’t push you.’

Moreover, in (19a–b), encoding 3>3, there is no overt clitic pronoun at all.¹³

- (19) a. taw= sukun-anaj
 INV= push-TR
 ‘{She/He/They}_i pushed {her/him/them}_j.’
 b. ħa(zɪ) =taw sukun-an
 NEG =INV push-TR.DEP
 ‘{She/He/They}_i didn’t push {her/him/them}_j.’

¹³ Somewhat surprisingly to us, optionally pronouncing (16a–b) without the labiovelar glide of the INV clitic results in an *acceptable* sequence of homophonous [ta] syllables (of the INV and INCL1PL clitics). However, in (19a–b) the same glide is obligatory. Without it, the only interpretation deemed acceptable by our consultant speakers is INCL1PL>3, as in (3a–b) above.

From the data so far, in (14) through (19), /ta(w)/ would appear to encode a third-person Actor. Indeed, this is Tsuchida’s analysis of /taw/ in Tamalakaw (1980:196), and Teng’s analysis of it in Tamalakaw, Ulivelivek, and Katripul (2009:824, 826, 834, 2015:410, 419), three closely related Puyuma varieties.

The crucial data in (20a–b) and (21a–b) don’t involve any third-person entity. The invariant semantics contributed by /ta(w)/ in all of (14) through (21) is that the Undergoer is at least as person-prominent as the Actor and that the first clitic pronoun immediately after /ta(w)/ encodes the Undergoer.¹⁴

- (20)a. ta(w)= {**ku/ka**}= {***u/nu**}= sukun-anaj
 INV= 1SG= 2SG= push-TR
 ‘Did you push me?’
 b. ha(z̥i) =ta(w) ={**ku/ka**} ={***u/nu**} sukun-an
 NEG =INV =1SG =2SG push-TR.DEP
 ‘Didn’t you push me?’
- (21)a. ta(w)= {**ku/ka**}= {**mu/nmu**}= sukun-anaj
 INV= 1SG= 2PL= push-TR
 ‘Did you push me?’
 b. ha(z̥i) =ta(w) ={**ku/ka**} ={**mu/nmu**} sukun-an
 NEG =INV =1SG =2PL push-TR.DEP
 ‘Didn’t you push me?’

In fact, Tsuchida reports a sentential 2SG>1SG example (1980:199) from Tamalakaw identical in the relevant respects to our Rikavung example in (20a), as well as diagrammatic data (1980:200) of only the clitic sequences similar to our (20) and (21). In order to maintain his analysis of /taw/ in Tamalakaw as a marker of only a third-person Actor, Tsuchida resorts to calling these sequences the result of morphological “fusion” (1980:199). Such fused forms are also known in the literature as *portmanteau* forms. Still in the spirit of Tsuchida (1980), Teng (2015:422–423) proposes a reduction to the list of portmanteaux to just the SAP>SAP pairs, /kunu/ ~ /kanu/ ‘1SG>2SG’, /kanmu/ ‘1SG>2PL’, /takunu/ ~ /takanu/ ‘2SG>1SG’, and /takanmu/ ‘2PL>1SG’—i.e., Tamalakaw’s counterparts to the clitic sequences in our Rikavung (4), (9), (20), and (21), respectively.¹⁵ We argue that there are no portmanteau pronouns in Rikavung.

¹⁴ Here we address issues about Rikavung in Teng (2008), the existence of which we learned about since our AFLA-21 talk. These portmanteaux are reported: /takunu/ ‘2SG>1SG’ and /taku(n)mu/ ‘2PL>1SG’, consistent with our (20) and (21), respectively. The addition of /ta-/ encodes “a reverse of roles between the two speech act participants.” Hence, for example, /kunu/ is used for 1SG>2SG, as in our (4), whereas /takunu/ is used, as in (20), “when the actor changes from first person to second person”: the essence of what is known in the linguistic literature as a morphosyntactic inverse. Teng (2008) uses /taw/ for 3.ERG but /ta-/ as part of the portmanteaux.

¹⁵ Whereas Tsuchida (1980:199–200) lists only /takanu/ as the 2SG>1SG portmanteau, Teng (2015:422) also lists a variant, /takunu/. In addition, whereas Tsuchida (1980:200) lists

Paradoxically, our primary evidence against Tsuchida’s and Teng’s portmanteau approaches is inspired by data elsewhere in their studies. Namely, Tsuchida (1980:200) reports that in Tamalakaw between /taw/ and an SAP pronoun—namely: 1SG /ku/, EXCL1PL /mi/, INCL1PL /ta/, 2SG /u/, or 2PL /mu/; cf. our Rikavung examples (14) through (18) above, respectively—it is possible to insert /a/, which is glossed there as a FUT marker. In addition, Tsuchida (1980:199) lists a sentential example in Tamalakaw with the sequence /taw a ku/; cf. our Rikavung example, identical in the relevant respects, in (22a) below. Similarly, Teng (2015:424) very effectively harnesses the insertion of PFV /=la/ to demonstrate that sequences of clitics in Katripul (another Puyuma dialect) are *not* portmanteaux. Using those two linguists’ ideas, we then verified that in Rikavung the clitic /a/, which we gloss as IRR, can immediately follow /ta(w)/ ‘INV’, as (22f) below shows. If there is at least one clitic pronoun after the INV clitic, then IRR /a/ can appear between the INV clitic and the pronoun, as (22a–e, g–h) also show. The fact that the IRR clitic can go between /ta(w)/ and the SAP clitic pronoun specifically as in (22a–e) demonstrates that the clitic sequences in (14) through (18) above must not be analyzed as portmanteaux. Rather, each of these sequences consists of two independent morphemes: INV and a pronoun. Of even more relevance to the current discussion, the fact that the IRR clitic can follow /taw/ but precede *both* clitic pronouns in (22g–h) demonstrates that the acceptable clitic sequences in (20) and (21) must also not be portmanteaux.¹⁶

- (22) a. taw= a= {**ku/*ka**}= sukun-anaj [cf. (14a) above]
 INV= IRR= 1SG= push-TR
 ‘{She/He/They} would like to push me.’
- b. taw= a= {**mi/niam**}= sukun-anaj [cf. (15a) above]
 INV= IRR= EXCL1PL= push-TR
 ‘{She/He/They} would like to push us.’
- c. taw= a= **ta**= sukun-anaj [cf. (16a) above]
 INV= IRR= INCL1PL= push-TR
 ‘{She/He/They} would like to push us.’
- d. taw= a= {**u/nu**}= sukun-anaj [cf. (17a) above]
 INV= IRR= 2SG= push-TR
 ‘{She/He/They} would like to push you.’
- e. taw= a= {**mu/nmu**}= sukun-anaj [cf. (18a) above]
 INV= IRR= 2PL= push-TR
 ‘{She/He/They} would like to push you.’
- f. taw= a= sukun-anaj [cf. (19a) above]
 INV= IRR= push-TR
 ‘{She/He/They}_i would like to push {her/him/them}_j.’

/takanmu/ for the 2PL>1SG portmanteau, Teng (2015:422) shows the optional epenthetic vowel between the nasals (and reports that this form also allows a PL-Undergoer interpretation).

¹⁶ For phonological reasons, the INV clitic’s final glide in each of (22a–h) is all but obligatory.

- g. $\text{taw= a= \{ku/ka\}= \{*u/nu\}= \text{sukun-anaj}$ [cf. (20a) above]
 INV= IRR= 1SG= 2SG= push-TR
 ‘Would you push me.’
- h. $\text{taw= a= \{ku/ka\}= \{\underline{mu}/\underline{nmu}\}= \text{sukun-anaj}$ [cf. (21a) above]
 INV= IRR= 1SG= 2PL= push-TR
 ‘Would you push me.’

Another reason to favor our INV analysis of /ta(w)/ in Rikavung comes from the same two aforementioned studies. Tsuchida (1980:199) observes that in Tamalakaw whereas /a/ (which he glosses as FUT) can appear between /taw/ (considered to be a third-person pronoun there) and 1SG /ku/, as in our Rikavung example (22a) above, /a/ cannot interrupt a sequence of 1SG /ka/ and 2SG /nu/. The order in Tamalakaw, Tsuchida reports, must be /ka nu a/ followed by the verb. The same example also refutes Teng’s claim that in Tamalakaw /kanu/ is inseparable from the verb (2015:422). We have verified that in Rikavung (4a) and (9a) above, IRR /a/ also can be inserted between the 2SG or 2PL clitic pronoun and the verb. Teng (2015:422–424) also draws a distinction (in all of the Nanwang, Katripul, and Tamalakaw dialects) between various combinations consisting of only SAP pronouns (which she considers to be portmanteaux) and 3>SAP clitic clusters, where only in the latter can the two clitics be separated. Now, under both authors’ accounts of Tamalakaw, where what we consider to be the INV clitic is analyzed instead as a third-person pronoun, the inseparability of two pronouns only if they both encode SAPs would be a coincidence. Under our INV analysis of Rikavung, /ta(w)/ is not a pronoun. Therefore, the relevant restriction is that IRR /a/ cannot interrupt any cluster of *pronominal* clitics.

Even more support for our analysis comes from the fact that in all of (15) through (18), (20), and (21), under these two authors’ assumptions, the order would be third person *before* SAP. In every known clitic-ordering system based primarily on person in the Philippine-Formosan area, any SAP invariably *precedes* a third-person pronoun (Holmer and Billings 2014:122–124).

To be sure, there is quite a bit of additional allomorphy in Rikavung. For instance, there exists, in addition to /ta(w)/, another INV variant: /tu/. (It is unclear to us whether this form is a borrowing from other Puyuma dialects such as Nanwang.) Additionally, a 1SG Undergoer within a pronominal cluster can also be encoded using the INCL1PL clitic pronoun, /ta/, after the INV clitic and before a second-person pronoun. Namely, /ta/ can replace /ku/ or /ka/ in (20) and (21) without affecting the free translations there. This variation in the function of /ta/ resembles a mechanism also widely observed in Philippine languages. However, we find it peculiar that this use of /ta/ is apparently limited in Rikavung to 2>1 INV clauses. We have also verified that this special use of pronominal /ta/ is not part of a portmanteau (again, using the IRR-insertion test, not exemplified here).

To summarize section 2, we have shown that /ta(w)/ is not a pronoun. Rather, this clitic is added to indicate that the clitic pronoun right after it en-

codes the Undergoer. If two such pronouns follow /ta(w)/, then the latter one encodes the Actor. We have also shown that no pronominal combinations are portmanteaux. Finally, Rikavung attests no overt third-person clitic pronouns.

3. Conclusion

This paper has demonstrated that in Rikavung Puyuma there is a single paradigm of clitic pronouns. Despite plenty of variation, no case distinction can be made. Furthermore, if two clitic pronouns co-occur, their relative order is determined only by grammatical person. Finally, an INV clitic is employed to indicate that the Undergoer is at least as person-prominent as the Actor.

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