The History of *=a

Contact and Reconstruction in Northeast New Guinea

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Abstract

This paper discusses the historical borrowing of an enclitic across unrelated Papuan languages spoken along the lower Sogeram River in the Middle Ramu region of present-day Madang Province, Papua New Guinea. The enclitic *=a, which attached to the right edge of a prosodic unit, was borrowed from the Ramu family into the ancestor of three modern Sogeram languages. Both morphological and prosodic substance were borrowed, as was the dual functionality of the enclitic – as a pragmatic marker in independent utterances and a linking device on dependent domains. We discuss the clitic's formal and functional properties as evidence for its contact-induced origin and subsequent historical development in western Sogeram, as well as the implications of these developments for our understanding of morphological and pragmatic borrowing. The complexities of this borrowing event highlight the potential for theories of language contact to benefit from collaborative research on previously unstudied contact areas.

Keywords

morphological borrowing – pragmatic borrowing – comparative reconstruction – Papuan languages – Ramu languages – Sogeram languages

1 Introduction

This paper presents the first study of language contact between two of the largest Papuan language families, the Ramu family and the Trans New Guinea family. We present evidence that an enclitic *=a*, along with its prosodic properties and functions, was borrowed from a Ramu language into the ancestor of three Trans New Guinea languages: Mand, Nend, and Manat, which belong to the Sogeram subgroup of Trans New Guinea. In the modern languages, this clitic has two primary functions. Its pragmatic function is to add exclamative force to independent utterances, and its other function is to link dependent or otherwise non-final utterances such as coordinated noun phrases and medial clauses. The enclitic occurs in multiple Ramu languages (including some well outside the Middle Ramu region). It was borrowed into the ancestor of the three western Sogeram languages in which it is found today, but not into the eastern Sogeram languages which have no contact with Ramu (see map in Fig. 1).

We also discuss how this borrowing event then triggered a peculiar sound change in the recipient Sogeram languages: word-final **a* was lost from verbs and pronouns, but not from other parts of speech. This unusual distribution is due to the grammatical and prosodic properties of Sogeram languages, in which verbs and pronouns tend to occur at the right edges of prosodic units but other parts of speech, like nouns and adjectives, do not. Word-final **a* was reanalyzed in verbs and pronouns as the new enclitic and then lost. Word-final **a* in other word classes, however, did not usually occur at the end of a prosodic unit and so was not reanalyzed.

The way in which this postulated borrowing event explains an otherwise unsolvable reconstruction problem in Sogeram is itself strong evidence for the directionality of the borrowed construction from Ramu into Sogeram. It also suggests that the pragmatic and related prosodic prominence of the morpheme *=a* facilitated its borrowability. This study therefore contributes to broader theoretical questions about morphological and pragmatic borrowing at a time when morphological borrowing and to an even greater extent pragmatic borrowing remain understudied and under-theorized relative to lexical borrowing (see, respectively Gardani, 2015 and Andersen, 2014). In other words, this paper contributes to our understanding of a little-discussed topic in a little-discussed region.

The paper has the following structure. In the rest of the introduction we discuss previous work on morphological and pragmatic borrowing and then introduce the languages involved in our study. In §2 we present the modern reflexes of the enclitic *=a* in each language for which we have data. In §3 we present the historical evidence for reconstruction, and in §4 we offer some concluding remarks.

FIGURE 1 Map of the languages under discussion

1.1 *Morphological and Pragmatic Borrowing*

We refer readers to Gardani (2015) for more detailed discussion of morphological borrowing, and to recent work by Treffers-Daller (2010) and Andersen (2014) for pragmatic borrowing. Work on morphological borrowing has primarily focused on questions pertaining to the frequency of the borrowing of morphological patterns versus substance, and on the relative borrowability of inflectional versus derivational morphology (Gardani, 2015; Weinreich, 1953). The primary concern in work on pragmatic borrowing has been two-fold. First, to determine what can be borrowed – or rather, on the assumption that in the right circumstances anything can be borrowed, to determine what can be borrowed *most easily*. Second, to catalogue the different kinds of linguistic forms that have been observed to be borrowed. Thus there are many papers documenting the borrowing of various elements of donor language structure, such as intonation patterns (Colantoni & Gurlekian, 2004), discourse markers (Hlavac, 2006), focus markers (Prince, 1988), and so on.

An additional fact to bear in mind is that languages often change the functions of items that they borrow, even if only slightly. It is important, when studying pragmatic borrowing, to carefully examine the functions of the item in question in both the source language and the recipient language (Andersen, 2014). While this is obviously not directly possible in the present case, we nevertheless examine all the modern reflexes that are available to us so as to arrive at the best reconstruction possible of the prehistoric meaning of *=a.

Some studies relating issues of pragmatic and morphological borrowability have found that the items that are most easily borrowed are those with more interactional meanings. Matras, for example, surveyed utterance modifiers in language contact situations and found that the most borrowable are those which serve primarily discourse-regulating functions, particularly when their meaning is “detachable from the propositional content or message of the utterance” (Matras, 1998: 308). Fuller (2001) drew similar conclusions in her study of English-origin discourse markers in Pennsylvania German: English-origin discourse markers that are “nonlexical and turn-related” are “used with great frequency” in Pennsylvania German, while those German discourse markers that remain in use are not clearly turn-related. In this study, we find that these contributions shed light on the pragmatic borrowing of the exclamative =a construction. By the standards of every survey we have found, in its function as an exclamative marker, the enclitic =a is reasonably if not highly borrowable. Our claim that it was borrowed is thus not a surprising one, since it is exactly the kind of morpheme that one would expect a language to borrow in a situation of language contact. It is phonologically simple, and its meaning, though nonlexical, is detachable from the utterance in which it occurs. But our story is somewhat more complex, because =a has a second

function in the source and target languages as a linking device, and because both constructions, despite their functional difference, share elements of prosodic prominence.

Other studies of morphological borrowing have pointed out that there are no hard and fast universal rules about what types of morphemes can be borrowed, since the motivation for borrowing may be found in something other than universal principles of borrowability. Thomason (2015) argues that the borrowability of the structures involved depends on linguistic and social factors but does so according to locally-defined principles which may seem surprising in light of what might happen elsewhere. Mithun (2013) makes a similar point about the borrowing of morphology in Northern Iroquoian, while elsewhere she discusses whole constructions in their structural, prosodic, and pragmatic richness as the locus of contact-induced change (Mithun, 2008). The morphological, pragmatic, syntactic, and prosodic components involved in the borrowing event at issue in this paper may differ in crucial ways from the areas of investigation in these other studies. But like these other studies, the structural complexities discussed here suggest that understanding what structures and use patterns get borrowed requires close attention to the local historical and linguistic situation (to the extent that that is possible) rather than to presupposed cross-linguistic hierarchies of borrowability.

To the extent that linguists have investigated morphological and pragmatic borrowing, most studies have, for reasons of data availability, focused on contact phenomena that are directly observable in modern language use or discoverable in part through archival materials. We, however, are discussing a prehistoric borrowing event which requires careful application of the principles discussed in previous literature, careful application of the comparative method, and also a certain amount of methodological innovation. The fact that we present a case of pragmatic borrowing that took place in prehistoric times allows us to evaluate the effect the borrowed form has had on the recipient language and its daughter languages, which is not possible when discussing borrowing in the present or the recent past.

1.2 *The Ramu and Sogeram Languages*

The modern languages that we discuss here are all spoken in Madang Province, Papua New Guinea. We are primarily concerned with the Ramu language Chini and the Sogeram languages Mand, Nend, and Manat; these are shown in the map in Fig. 1. Another Ramu language, Bore, will feature to some extent. It is spoken at the mouth of the Ramu River, some 90 km north of Chini.¹

1 For more detailed analysis of the synchronic grammatical structures of the Sogeram languages and Chini, we refer the reader to Daniels (2015) and Brooks (2018), respectively.

FIGURE 2 Family tree of the Sogeram languages

The case for the genetic cohesiveness of the Ramu language family, consisting of at least 21 languages spoken along the lower and middle stretches of the Ramu River and in adjacent areas of inland Madang Province, was first made by Capell (1951) and then laid out more extensively by Z'graggen (1971). More recently, Foley (2005) has proposed certain cognate bound nominal morphemes as evidence for an older genetic affiliation primarily between the Lower Ramu subgroup of Ramu and the Lower Sepik family, although that does not concern us here. Additional discussion of Ramu historical linguistics can be found in Foley (2018) and also Barlow (2018). However, as with the other languages that he surveyed and classified, Z'graggen notes that his Ramu-internal subgrouping should be interpreted as a preliminary classification (1971: 6). Brooks (2018) argues that while different subgrouping schemas for the Ramu languages have been proposed, the evidence is too questionable to support any particular arrangement of subgroups for the family at this time. It is nevertheless abundantly clear that Chini, Bore, and other languages which belong to the purported Ramu family have no genetic relationship to the Sogeram languages Mand, Nend, and Manat, which belong to Trans New Guinea as discussed in Daniels (2015).

The Sogeram languages, a group of ten related languages spoken in inland Madang, belong to the Madang subgroup of Trans New Guinea (Daniels 2015; Pawley, 2005, 2006; Ross, 2005; Z'graggen, 1975). In contrast to the Ramu languages, their internal subgrouping has been worked out quite well (Daniels et al. 2019). The relationships among Sogeram languages are represented by the family tree in Fig. 2.

However, historical linguists know that every family tree is somewhat of an idealization, as different linguistic innovations often spread differently throughout a diversifying language community (Pawley, 1999; François, 2014). Thus we can also model the relationships among the Sogeram languages as the outcome of a prehistoric dialect network, as shown in Fig. 3. This is a glottometric diagram, created using a method called historical glottometry (François, 2014; Kalyan & François, 2018). The placement of languages loosely represents geography. Each line represents a set of shared innovations from

FIGURE 3 Sogeram glottometric diagram

Proto-Sogeram, and the thickness of the line represents the strength of that set, as measured by a formula that takes into account innovations that both confirm and contradict the subgroup in question. This diagram is taken from Daniels et al. (2019), and the family tree in Fig. 2 is based on it.

The three Greater West Sogeram languages – Mand, Nend, and Manat – are the three that have borrowed the enclitic $=a$ from Ramu languages. We now turn to a discussion of the distribution and function of this enclitic in the languages in our study.

2 The Pragmatic Enclitic $=a$

In this section we present the enclitic $=a$ in all of the languages for which we have data. We begin with the Ramu languages Chini and Bore, and then proceed to the Sogeram languages. In all these languages we observe striking similarities in both function and distribution, which are summarized at the end of this section.

2.1 *Chini (Ramu)*

In Chini, the enclitic $=a$ attaches to the ends of prosodic units as part of an exclamative construction and it also functions as a linking morpheme in certain dependent clauses and to add emphasis in coordinated noun phrases. In its exclamative function, it can attach to a wide range of constituent and clause

types, and speakers use it to convey a range of attitudes toward a state of affairs. The exclamative is used most commonly with the imperative and other modal constructions to express the speaker's frustration (1) or to strengthen the force of a directive toward the addressee (2).²

- Chini
- (1) *Av-ini mi=nd-ari=a!*
 rain-PC DIST=stop-IMP=EXCL
 'The rain needs to stop!'
- Chini
- (2) *Mbari ñi-ŋi=ndati mi=agi-gi ni=agi=a!*
 canoe get-MOD.PC=SEQ.IRR DIST=paddle~NMLZ GER=go/come_upriver.IMP=EXCL
 'Once you get the canoe, head upriver paddling!'

The exclamative also occurs in interrogative clauses. In a recording about how the Chini women of Andamang were supposed to trade breadfruit for sago with the Rao women of Dibú, Dorothy Paul tells how the Rao showed up empty-handed. Paraphrasing her own reaction to the situation, she makes use of a rhetorical question to exclaim in (3) that it was not such a big deal to give them the breadfruit without receiving the sago in exchange. After all, breadfruit is something the Chini plant with little trouble and eat in abundance when in season.

- Chini
- (3) *"Mi=ñji-ch-i=a, nu apari ni=aki-ga-yi=anggi=p-i=a!?"*
 DIST=MID-exist-IRR=EXCL 2SG hand INS=plant-R.PL-REL=LH.PC=COP-Q.IRR=EXCL
 "It's no matter! Did you not plant them by hand (lit. Was it not that which you planted by hand?)?"

2 Glosses follow the Leipzig conventions, adding the following abbreviations: CF = counterfactual, CONT = continuous, DIM = diminutive, DS = different-subject switch reference, EMPH = emphatic, EX = exclusive, EXCL = exclamative, FAR = far tense, FD = far deictic distance, FPST = far past tense, GER = gerund, HAB = habitual aspect, HIS = historic tense, HPST = historic past tense, INT = intensifier, IPST = immediate past tense, LH = light-head, LNK = linker, MD = middle deictic distance, MOD = modal stem, ND = near deictic distance, NMPT = nominalizer/participle, PC = paucal, R = realis, RPST = recent past, SEQ = medial clause linker indicating temporal succession, SS = same-subject switch reference, TLOC = translocative, TPST = today past tense, VPM = verb prominence marker.

It may also attach to the apodosis in a counterfactual conditional clause combinations. In (4) the speaker expresses her relief that the event did not occur:

- Chini
- (4) *Av-ini ka-kyi aki-ga-ambia,*
 rain-PC PROX.DEF=way put-R.PL-CF
- añi ri-ga-ambia-nd-i=a!*
 1PL go/come_downriver-R.PL-CF-PFV-IRR=EXCL
 'If it had rained like this yesterday, we wouldn't've been able to come downriver!'

It also occurs on nominalized (5) and insubordinated clauses (6). In (5), the speaker expresses a craving to eat the delicious meat of a crocodile's tail:

- Chini
- (5) *Mi=ampmu ami-ami=angi=a!*
 DIST=reptilian_tail ingest~NMLZ=LH.PC=EXCL
 '(So nice) to eat its (a crocodile's) tail!' (lit. 'Of eating its reptilian tail!')

In (6), the speaker expresses his annoyance after a make-shift smoking rack crashed loudly into the fire below. His brother had been using the front cage of an electric fan held up by string tied to the ceiling instead of a proper smoking rack. The attachment of the exclamation *=a* to *chinichi*, a nominalized form of the existential verb, is often used as it is used here to criticize something done improperly or insufficiently.

- Chini
- (6) *Ayandmi ch-i-ni-i-chi=a!*
 fishrack exist-IRR-IPFV-IRR-NMLZ=EXCL
 'Would that there had been a (proper) fishrack! (lit. 'There being no fishrack!')

In its linking function in clause chains, *=a* attaches to two medial clause linkers that indicate semantic independence from the subsequent clause, *=ndaki* (R) and *=ndati* (IRR). When either linker occurs in prosodic-unit final position, as they nearly always do, *=a* attaches to the right edge of the linker as in (7) and (8). (Infrequent tokens of these two linkers that occur prosodic-unit internally but without the connective *=a*, as observable in (2), suggest the morphological distinctiveness of *=a* from the medial linking morphemes).

Chini

- (7) *Añi Arañginim-ηgi pirk-apa=ndaki=a,*
 1PL Arañginim-village sit.PL-R=SEQ.R=LNK

añi Yuvungu ti mi=ch-a
 1PL Yuvungu path ALL=ascend-R

'Having stayed in Arañginim, we came up via the Yuvungu path.'

Chini

- (8) *Ñi chindata gavigi.*
 ñi chi=ndati=a ga=avi-gi
 PL ascend.MOD=SEQ.IRR=LNK return=descend-IMP
 'You guys go up and then come back down afterwards.'

There is also an infrequent use of =a that can be seen as functionally intermediate between an exclamative and a linker. When a speaker wishes to add dramatic flair in a clause with coordinated noun phrases, each noun phrase occurs in its own prosodic unit with =a attached. In the example from a Chini folk tale in (9), the speaker conveys the magnitude of the wind and rain that chased off the protagonists:

Chini

- (9) *Avina, ñjimiña, ñjiñorviga...*
 av-ini=a ñjim-iñi=a ñji=ñor-vi-ga
 rain-PC=EXCL wind-PC=EXCL PL.DAT=chase-TLOC-R
 'Oh the rain!, and oh the wind!, did chase them off...'

We have seen that the enclitic =a attaches primarily to various types of main clauses and to certain medial clauses. What these clause types have in common is semantic independence from surrounding material. This is conveyed by a further property common to both constructions, their prosodic salience with respect to lengthening, a rise in amplitude, and the fact that they are always followed by a pause. The lengthening of final =a can be seen in Fig. 4 below, which shows the pitch contour of example (2) above.

In its function as a linker, =a is additionally characterized by more or less level pitch during the articulation of the morpheme. This can be seen in 'Fig. 5 and Fig. 6', which show the pitch contours of the first parts of examples (7) and (8).

FIGURE 4 Pitch contour for example (2)

FIGURE 5 Pitch contour for part of example (7)

FIGURE 6 Pitch contour for part of example (8)

2.2 *Bore and Other Ramu Languages*

In his sketch grammar of Bore, Parrish (1989) discusses a functionally and formally comparable construction involving an enclitic *=a* that appears to be just as pervasive in Bore as its homologue in Chini. Parrish describes *=a* as a ‘focal morpheme’ when it attaches to noun phrases, and as ‘focal linkage’ when it attaches to medial clauses. Parrish also notices a connection between the ‘focal’ and ‘linking’ constructions in Bore, just as we saw in Chini. When discussing the linking function, he notes: “The connective morpheme given here may in fact be the same morpheme which I have called focus when it occurs on noun phrases [...]. Its function is similar to that of the focus morpheme when it connects topic and comment phrases in non-verbal clauses. When the morpheme occurs affixed to a verb [...], it functions to conjoin two clauses” (1989: 103).

Much like the Chini example in (9), when Bore *=a* attaches to a noun phrase it signals a separation of sorts: “*=a* indicates the boundary of a phrase and so highlights its separation from that which follows” (Parrish, 1989: 68–69). It appears furthermore to be unrestricted with respect to the grammatical roles or types of noun phrase to which it may attach. And when *=a* cliticizes to a noun phrase, it always attaches to the far right edge (10).

Bore³

- (10) *Mi-n=a ma-mo or ap=a par mbuy=a wiŋ-ri-na.*
 3PL-EX=LNK 3SG-VPM leg ACC=LNK hand INS=FOC pull-PST.IND
 ‘They pulled it with leg and hand.’ (Parrish, 1989: 69)

Bore =a can also attach to pronouns (11), although this function is not well understood.

Bore

- (11) *Ai=a paru-re-na.*
 1PL=LNK lie-PRS-IND
 ‘We lie.’ (Parrish, 1989: 69)

The second function of Bore =a, its function as a linker on medial clauses, is restricted to clause sequences that represent events in temporal succession (Parrish, 1989: 47, 103). In (12), for example, it occurs on the first two noun phrases and additionally on the non-finite form of the verb ‘make’:

Bore

- (12) *Wat=a kak=a mo=a, ma kapu irik-ri-na.*
 wind=LNK house=LNK make=LNK 3SG fall.over go.down-PST-IND
 ‘The wind made the house fall down.’ (Parrish, 1989: 103)

In (13), it attaches to multiple medial clauses that are additionally marked as completive:

Bore

- (13) *Ma ruŋg paur laget-k=a patim-k=a*
 3SG coconut.PL four husk-COMPL=LNK break-COMPL=LNK
runki-k=a ut-ri-na.
 pour-COMPL=LNK scrape-PST-IND
 ‘He husked and broke and poured out and scraped
 four coconuts.’ (Parrish, 1989: 104)

3 Note that Parrish identifies the morpheme as a suffix and not an enclitic. Due to the fact that it attaches to both nouns and verbs, and also the very similar distribution of the cognate morpheme in Chini, we gloss Bore =a as a clitic. Parris glosses =a as FOC for ‘focus’ when it attaches to noun phrases and as CON when it attaches to a clause; we gloss both as LNK, which is not intended as an analytical statement but merely as a more convenient and simpler gloss and identical to how we have glossed the analogous function of the morpheme in the other languages we discuss. Other, smaller changes have been made to some of his glosses in order to comply with the Leipzig Glossing Conventions.

The Chini and Bore enclitics are formally identical, both consisting of a simple $=a$. They also exhibit significant semantic and distributional parallels. Clitics like this are apparently fairly common among the Ramu languages spoken around the mouth of the Ramu River (William Foley, p.c.). Given the wide geographic and genetic distribution of $=a$ throughout the Ramu family, as well as the significant similarities in both form and function we observe between the Bore and Chini forms, we surmise that this enclitic has some antiquity in the Ramu family. We turn now to a discussion of $=a$ in the Sogeram languages, where the evidence suggests that it is a more recent arrival there.

2.3 *Mand (Sogeram)*

The enclitic $=a$ in Mand usually serves as a linker, indicating that the prosodic unit to which it attaches is non-final and that the speaker intends to continue talking. It is always followed by a pause. Its linking function is easily seen on the coordinated noun phrases in (14).

- Mand
- (14) *Tihuz=a, away=a, ahrai-c ar-i.*
 yam.sp=LNK sago=LNK bring-DS say-IPST
 ‘‘Bring yams and sago, and then,’’ he says.’

However, the clitic is not a coordinator; it does not attach to a syntactic constituent but rather a prosodic one. As such it can be found on non-coordinated noun phrases (15), pronouns (16), medial verbs (17), and sentential adverbs (18) – essentially anything that is followed by a pause.

- Mand
- (15) *Akac kur ka-g=a, uhra~hir vivi ci-rd.*
 intestine 3PL.POSS FD-NOM=LNK grow~NMPT pain be-FPST
 ‘‘Their guts would swell up and hurt.’’

- Mand
- (16) *Uravi na-n ac arhw=a, gahir aka-ŋar-inhw ar.*
 village ND-ACC FOC 1PL=LNK lift chop-FUT-1PL QUOT
 ‘‘We will build a village right here,’’ they said.’

Mand

- (17) *Iran* *hir* *akug-i* *ada* *ja-c=a,* *Ø-zen*
 younger.sib.3.POSS 3SG.POSS descend-ss water eat-DS=LNK 3.POSS-older.sib
hir, *vis* *min* *na-k* *wa-rd.*
 3SG.POSS ground hole ND-LOC go-FPST
 'The younger brother went down and drank water, and the older brother went into a hole in the ground.'

Mand

- (18) *Watim=a,* *plesbalus* *ka-n,* *mi=gahir* *ak-e-m.*
 after=LNK airstrip FD-ACC NEG=lift chop-PL-NEG
 'They hadn't built the airstrip yet.'

The linking *=a* in Mand is usually prosodically lengthened. The intonation contour associated with it can be either level or falling, and there does not appear to be a difference in function between these two contours. Rather, speaker preference appears to play the largest role in determining which intonation contour is used. A level contour was used in (19) and is shown in Fig. 7; a falling contour was used in (20) and is shown in Fig. 8. Note, however, that in both examples *=a* is lengthened significantly.

FIGURE 7 Pitch contour for part of example (19)

FIGURE 8 Pitch contour for part of example (20)

Mand

- (19) *Pikim hir ka-g uhr-e=a, kukwam dahri, miyam akwer-i...*
 guts 3SG.POSS FD-NOM grow-SS=LNK ball like well go.up-SS
 'His guts swelled up, like a ball, and went way up and ...'

Mand

- (20) *Kuram-iñ ka-g=a, ikud=an gyah-i...*
 man-DIM FD-NOM=LNK morning=very get.up-SS
 'The young man got up early in the morning and ...'

The clitic =*a* can also be used as an exclamative when it occurs at the end of a final clause, as illustrated in (21) and (22). In this function it generally has level intonation; the pitch contour for example (22) is shown in Fig. 9.

Mand

- (21) *A-cañ adu na-g kaj-i ka-rd, mad=a!*
 1/2.POSS-grandfather 1SG.POSS ND-NOM sit.SG-SS talk-FPST no=EXCL
 'My ancestor sat down and said, "No way!"'

FIGURE 9 Pitch contour for example (22)

Mand

- (22) *Yo=a, iku-ḡar-in=a.*
 yes=EXCL give-FUT-1SG=EXCL
 ‘Yes, I’ll give (it to you).’

When =a occurs at the end of a clause, however, it can also still have its linking function. This is particularly common when a verb of speech introduces a quote, as shown in (23) and Fig. 10.

Mand

- (23) *Ñac hir ka-rd=a. Ñam ar=a.*
 daughter 3SG.POSS talk-FPST=LNK mother.1/2.POSS QUOT=LNK
 ‘Her daughter spoke. “Mother,” (she) said.’

When clause-final =a serves as a linker, it can also occur with falling intonation, as shown in (24) and Fig. 11. This is similar to the falling intonation that can be found on clause-medial linking =a. Note also that final linking =a as illustrated in this example and also in Fig. 10 above, is shorter than it is elsewhere.

FIGURE 10 Pitch contour for example (23)

FIGURE 11 Pitch contour for part of example (24).

Mand

- (24) *Api dar diḥ ku~dikw-in ar=a. Abi adu ar.*
 1SG 2SG.OBJ COMPL see~TPST-1SG QUOT=LNK 2 1SG.POSS QUOT
 ‘I’ve seen (through) you,’ he said. ‘You’re mine,’ he said.’

2.4 Nend (Sogeram)

The functions of =a are more difficult to describe for Nend because the available data are limited to a grammar sketch (Harris, 1990) and a collection of transcribed and glossed texts (Harris, n.d.). In the sketch Harris briefly describes a vocative suffix that “is used only with proper names and kinship terms” (Harris, 1990: 98), as shown in (25).

Nend

- (25) *Caw=a, ke-n w-in ha-n avizay-v.*
 brother.i.l.=VOC FD-ACC see-1SG.1PST MD-ACC throw.towards-2SG.IMP
 ‘Brother-in-law, throw the ones I see there here.’ (Harris, 1990: 98)

In addition, the text collection contains two enclitics that are not mentioned in the sketch. One is a linking enclitic that he glosses ‘CNJ’, presumably meaning ‘conjunction’. It appears to link elements with what follows, much like the linking function of =a in Mand; it is found on different-subject medial verbs (26), same-subject medial verbs (27), and (apparently) coordinated nouns (28).

Nend

- (26) *O-e-m mira ikṇi-z=a nti na-ma-r.*
 go-SS-CONT pig shoot-3SG.DS=LNK blood eat-HPST-3SG
 ‘He went and shot a pig and it drank the blood.’ (Harris, n.d.)

Nend

- (27) *Aṅgir ivij ṇam ivij ṇam ikṇ-i=a ay-mg-i ekwang.*
 taro taro.type only taro.type only shoot-SS=LNK come-PL-3.1PST again
 ‘They just dug the *ivij* taro and they came back.’

Nend

- (28) *Mbi orimanz ṇaṇ mbanimb-on ṇkañ-i zṇiṇ=a apa nor=a ha-n*
 3.SBJ tree.type high ND.LOC-INT sit-SS leaf=LNK bird son=LNK MD-ACC
nanḡam-an-j.
 eat.all-HPST.HAB-3SG
 ‘There high in the *orimanz* tree he sat and ate all the leaves and baby birds.’

It also seems that, like the Mand linking enclitic, Nend =*a* can occur on a final verb of speech to link it to the quote that follows (29).

- Nend
- (29) *Emg-emga-v ka-mg-i=a emg-emga ha-mb ui kivah*
 another-another-SBJ talk-PL-3.IPST=LNK another-another MD-SBJ place bad
r-i.
 do-3SG.IPST
 'Other [sic] said, "This is a bad time."

Lastly there is the interrogative function. Harris glosses this function 'INTERR' and it occurs only twice in his texts, but they both appear to have some individuating focus, as in (30).

- Nend
- (30) *Mijir mbirama~m k-an-j yar mba-n uti=a?*
 mother show~NMLZ talk-HPST.HAB-3SG mother ND-ACC what=Q
 'He would show (his) mother and say, "Mother, what is this?" (Harris, n.d.)

2.5 *Manat (Sogeram)*

In Manat, as in Mand and Nend, the enclitic =*a* serves both as a linker and as an exclamative. In both capacities it can occur on constituents of essentially any grammatical type. Exclamative =*a* usually attaches to assertions, vocative exclamations, and commands, while linking =*a* attaches to utterances that are non-final. Three examples of exclamative =*a* are given in (31) and another in (32).

- Manat
- (31) *Manat=a amiη=a, ηar-in ai-s=a,*
 no=EXCL mother.1.POSS=EXCL speak-2SG.DS come-3SG.IMP=EXCL
ara-ma-g.
 say-PST-3SG.FAR
 "No way Mom! Tell it to come back!" he said.'
- Manat
- (32) *Upas ini-n ñi-bak=a?*
 banana ND-ACC who-POSS=EXCL
 'Whose is this banana?'

The linking =*a* is most commonly hosted by a medial verb, as illustrated with same-subject and different-subject forms in (33).

Manat

- (33) *Vu-n migra-n=a, tri-s=a, manat tika hipa*
 go-2/3.SS cut-2/3.SS=LNK pull-3SG.DS=LNK no strong very
ñi-ma-g.
 stay-PST-3SG.FAR
 'He went and cut it, and pulled it, but alas it was very strong.'

But the linking =a can also occur on, for example, non-verbal predicates (34) and any sentence-internal element that is followed by a pause (35).

Manat

- (34) *Yaba ka-b viha tas=a, ñi-r-m-id, ayaga ka-b.*
 water MD-NOM ripe enough=LNK stay-HAB-PST-3SG.HIS sago MD-NOM
 'When the water was gone (lit. "ripe"), the sago would be there.'

Manat

- (35) *Arid arum hava ka-b=a, ini-n aviha-rh-ura-m-id.*
 1PL.POSS big group MD-NOM=LNK ND-ACC tie-HAB-PL-PST-3.HIS
 'Our ancestors used to tie this on.'

The linking =a in Manat usually has level intonation and exclamative =a usually has falling intonation, although there are exceptions to both tendencies. A typical example of the linking =a is shown in (36) and Fig. 12. The =a here is

FIGURE 12 Pitch contour for example (36)

lengthened which makes the steadiness of its pitch easy to see, and the final clause into which it transitions occurs with gradually falling pitch.

Manat

- (36) *Ruk-ura-s* *ɲar ka-b* *ɲavezire-s=a,* *him=ik* *hra-rat-ur-id.*
 see-PL-3.DS sun MD-NOM sag-3SG.DS=LNK grass.type=ACC roast-HAB-PL-3
 ‘They look and (when) the sun starts to go down they burn the *him* grass.’

The linking *=a* sometimes has falling intonation, though, especially when the speaker wishes to highlight the boundary between the event of an *a*-marked clause and the following clause. This can be seen with the two tokens of the linking *=a* in (37), illustrated in Fig. 13.

Manat

- (37) *Ki-s=a,* *Don-ib* *ai-s=a,* *zi* *ɲara-ɲin.*
 do.thus-3SG.DS=LNK Don-NOM come-3SG.DS=LNK 1SG speak-1SG.RPST
 ‘Therefore, Don came, and I spoke.’

Here the first token is on *kis* ‘s/he did thus’, which is used as a discourse marker that signals that the speech that is to come follows from the speech that has

FIGURE 13 Pitch contour for part of example (37)

gone before; it essentially means ‘therefore’. The =a has a marked fall in pitch which serves to mark a boundary in the speaker’s discussion, which we can call a paragraph boundary. The speaker had been talking about the state of village life and the value of the ancestors’ customs, and in this utterance he pivots to discussing the implications of the first author’s fieldwork visit. The second =a, however, does not sit between paragraphs, but only marks the boundary between two closely related ideas within the same paragraph: Don came and (so) I spoke.

Final =a, as mentioned, usually has falling intonation. The two examples in (38), illustrated in Fig. 14, show this particularly well: each is attached to a declaration (in the first case a vocative declaration, but a declaration nonetheless), and each ends that declaration with a marked fall in pitch.

- Manat
- (38) A, *amiŋ=a.* *Ini-n* *pi* *kris=a.*
 ah mother.I.POSS=EXCL ND-ACC house bad=EXCL
 ‘Ah, Mom! This is a bad house!’

However, as mentioned, when =a attaches to the end of an utterance it sometimes has level intonation. An example of this is the two tokens of =a in (39), illustrated in Fig. 15. Note the parallels with example (38): both consist of a

FIGURE 14 Pitch contour for example (38)

FIGURE 15 Pitch contour for example (39)

vocative with *=a* followed by an indicative assertion, also marked with *=a*. But in (39) *=a* has level intonation, while in (38) it is falling. This intonation serves to indicate that the speaker is not actually done, and he intends to continue. Indeed, (39) is actually the beginning of a series of several imperatives directed at the first author, each of which is tagged with an *=a* that has level intonation. That means that these tokens of *=a*, although they occur on the end of utterances that are well-formed on their own, are in a sense not actually final *=a* but linking *=a*.

Manat

- (39) *Ki-s* *ŋar-in* *Don=a*, *vu-min* *ar-in=a*.
 do.thus-3SG.DS speak-1SG.IPST Don=EXCL go-2SG.PROH say-1SG.IPST=EXCL
 'Therefore I talk; "Don, don't go," I say.'

2.6 Summary

Each of the five languages discussed above has an enclitic *=a* that serves both an exclamative function and a linking function. Their respective semantic, distributional, and intonational properties are summarized in Table 1. (For the prosodic facts about Bore and Nend, a '–' indicates that data are lacking.) The level of concord among these five languages is quite striking: each language has both final and medial *=a*, with essentially the same meaning in each case.

TABLE 1 Properties of =a in Ramu and Sogeram languages

	Chini	Bore	Mand	Nend	Manat
Final =a	yes	yes	yes	yes	yes
<i>exclamative focus</i>	yes	yes	yes	yes	yes
<i>syntactically free placement</i>	yes	no	yes	yes?	yes
<i>prosodic lengthening</i>	yes	–	yes	–	yes
<i>usually followed by pause</i>	yes	–	yes	–	yes
<i>usually falling pitch</i>	yes	–	no	–	yes
Linking =a	yes	yes	yes	yes	yes
<i>links nouns</i>	yes	yes	yes	yes	no
<i>links medial clauses</i>	yes	yes	yes	yes	yes
<i>prosodic lengthening</i>	yes	–	yes	–	yes
<i>usually followed by pause</i>	yes	–	yes	–	yes
<i>usually level pitch</i>	yes	–	yes?	–	yes

The distribution of final =a in Bore appears to differ from its distribution in the other languages, as in Bore final =a is primarily (or perhaps exclusively) found on noun phrases. The intonational facts for Chini, Mand, and Manat, however, match up well. Mand prefers level pitch on final =a, but falling pitch is also found, and otherwise the languages pattern identically.

The linking =a is found in essentially the same environments in every language, although in Manat it does not link coordinated nouns as easily as in other languages. In every language, though, =a is found on medial clauses as a chaining device. It also has the same intonational properties – lengthening and level pitch – in every language for which we have data, although in Mand level pitch and falling pitch appear to occur with approximately equal frequency.

Taken together, these shared features strongly suggest that these enclitics have a common origin. In the following section we discuss what this common origin probably was, how it spread from one family into the other, and what its effects have been on the languages into which it was borrowed, to the extent to which the data appear in support of these claims.

3 Reconstruction

The formal, functional, and distributional resemblances between the Sogeram and Ramu enclitics are too extensive to be due to chance. Given that the

Ramu and Sogeram languages are unrelated, we can be reasonably certain the similarity cannot be due to inheritance. We thus conclude that the clitic must have spread through borrowing. The geographic distribution of the languages strongly suggests that it was borrowed from Ramu into Sogeram and not vice versa: it is widespread in the Ramu family, occurring in geographically very distant languages like Chini and Bore for which there is no evidence of contact between them. But it is found in only three geographically adjacent Sogeram languages: Mand, Nend, and Manat, all of which border on Ramu languages. Importantly, *=a* is also known to be absent from the other Sogeram languages (cf. descriptions in Wade, 1989; Daniels, 2015; and Sweeney, 1994, n.d.). Moreover, the history of the Sogeram languages is fairly well understood (Daniels, 2015) and *=a* cannot be reconstructed to Proto-Sogeram. We conclude that a clitic **=a* was borrowed from an earlier Ramu language into an earlier Sogeram language—namely Proto-Greater West Sogeram—and, and that it was then inherited into Mand, Nend, and Manat.

Certain historical changes that occurred in the Sogeram languages lend this hypothesis even more credibility. Word-final **a* was lost fairly regularly in Mand. This change may plausibly be related to the borrowing of the enclitic **=a*, but it does not have to be; it is the sort of sound change that commonly happens in the languages of the world, and may very well have occurred in Mand without influence from the borrowed enclitic **=a*.

The more peculiar change took place in Nend and Manat. In those languages, word-final **a* was also lost, but only from pronouns and verb suffixes. This odd innovation would ordinarily be quite difficult to account for, but in this case the borrowing of the clitic **=a* offers a plausible explanation. If we accept that **=a* was borrowed into the ancestor of Mand, Nend, and Manat, and that its grammatical distribution at the time of borrowing was similar to the distribution it exhibits now, we can explain this odd phenomenon as reanalysis that took place after **=a* was borrowed. Words that ended in **a* were sometimes reanalyzed as containing the pragmatic enclitic **=a*, and after this reanalysis took place they could occur without word-final **a*. But words that ended in the vowel **a* were only reanalyzed as containing the enclitic **=a* if they usually occurred in the context where the enclitic was found: at the end of a prosodic unit. Because the Sogeram languages have verb-final word order, and because pronouns are more likely than other parts of speech to receive focal stress, the borrowing hypothesis explains both why final **a* was lost from verbs and pronouns, and why it was not lost from nouns, adjectives, and adverbs. We describe the comparative-historical facts in this section, beginning with verb suffixes.

Final verbs in the Sogeram languages generally consist of a root followed by a TAM suffix and then a subject agreement suffix. In some TAM categories the TAM and subject agreement suffixes are combined into one form that has both meanings, as with the Manat 1SG immediate past suffix *-in* in (39) above. But every verb ends in a subject agreement suffix, which means that when examining word-final phonological processes, these are the morphemes that concern us.⁴

Table 2 shows every combination of TAM suffix and subject agreement suffix that had final **a* in Proto-Sogeram and also has a reflex in Nend or Manat. These all involve one of the Proto-Sogeram agreement suffixes **-na* ‘2SG’ or **-ra* ‘2PL’, although those morphemes are not synchronically separable in all modern forms. The meaning of some of these forms has also changed since the Proto-Sogeram stage; where this is the case, the innovative meaning is given. Finally, an archaic form of each suffix is given on the right to illustrate that final **a* was present in Proto-Sogeram, although readers interested in the details of reconstruction and more reflexes for each individual suffix should consult Daniels (2015).

TABLE 2 Proto-Sogeram verb suffixes with final **a*

PSOG	Gloss	Nend	Manat	Innovative meaning	Archaic example
<i>*-na</i>	-2SG.IPST	<i>-n</i>			Mum, Kursav <i>-na</i>
<i>*-iami-na</i>	-TPST-2SG	<i>-em-an</i>			Apali <i>-iemi-naŋ</i>
<i>*-itia-na</i>	-HAB-2SG	<i>-ri-n</i>			Apali <i>-ila-naŋ</i>
<i>*-iva-ra</i>	-CF-2PL	<i>-var</i>		imperative	Gants <i>-pi-naŋ</i>
<i>*-imi-na</i>	-PROH-2SG	<i>-min</i>	<i>-imin</i>		Apali <i>-im-inanŋ</i>
<i>*-imi-ra</i>	-PROH-2PL		<i>-imir</i>		Apali <i>-im-ilanŋ</i>
<i>*-it-na</i>	-IRR-2SG	<i>-n</i>	<i>-in</i>	different-subject	Mum, Gants <i>-ina</i>
<i>*-it-ra</i>	-IRR-2PL		<i>-ir</i>	different-subject	Mum <i>-itra</i>

4 There are actually a handful of non-agreement suffixes that can be word-final: the same-subject suffixes *-n* and *-z*; the habitual suffix *-rat*, which appears in the habitual infinitive on its own; and the far future tense suffix *-itaka*, which appears in the future infinitive as *-itak*. None of the first three show evidence of having had final **a*, so we ignore them in this discussion. The future suffix *-itaka* loses final *a* word-finally as expected, but it is difficult to interpret this fact because the etymology of the suffix is not known.

The pattern shown in Table 2 is consistent: final *a was lost from these verb suffixes in every instance. The process of reanalysis can be illustrated by the Manat 2SG prohibitive form, which underwent no semantic or phonological changes other than the loss of final *a (although it has undergone a morphological change in that the suffix is no longer synchronically separable into a prohibitive morpheme and an agreement morpheme). Initially, the suffix was simply *-imina. After *=a was borrowed into the language, however, the word-final *a was reanalyzed as the exclamative enclitic: *-imin=a*. This combination, in fact, is still quite common today (40).

- Manat
 (40) *Pitivra-n* *bat-imin=a*.
 squat-2/3.SS sit-2SG.PROH=EXCL
 'Don't squat.'

After this reanalysis took place, however, the suffix could appear without the =a enclitic (41), and in this way word-final *a was lost.

- Manat
 (41) *Ey* *tasay* *ar-imin*, *manat*.
 hey brother.1.POSS say-2SG.PROH no
 'Hey, don't say "My brother," no way.'

The same change has taken place with pronouns. The relevant forms are summarized in Table 3. Again, where Nend and Manat have changed the meaning of the form, the innovative meaning is given, and archaic examples that retain Proto-Sogeram final *a are shown on the right.

The change that the 1PL pronoun underwent is straightforward: *ara > *ar=a > *ar*. The other three forms require a little more explanation. The 2SG

TABLE 3 Proto-Sogeram pronouns with final *a

PSOG	Gloss	Nend	Manat	Innovative meaning	Archaic example
*ara	1 PL.SBJ	<i>ar</i>	<i>ar</i>		Mum, Sirva <i>ara</i>
*na=ŋ	2 SG=OBJ		<i>ni</i>		Mum, Sirva, Aisi <i>nay</i>
*na-mpa	2 SG-EMPH	<i>am</i>	<i>am</i>	2.SBJ	Kursav, Gants <i>naba</i>
*ni-mpa	3 SG-EMPH	<i>mbi</i>	<i>bi</i>	3.SBJ	Kursav, Gants <i>niba</i>

object pronoun *na=ŋ first underwent word-final nasal loss in Manat (Daniels, 2015:81), becoming *na. Normally this would have created homophony with the 2SG subject pronoun *na, but, as we explain below, the erstwhile emphatic pronouns replaced the Proto-Sogeram subject pronouns in these languages. After the 2SG object pronoun became *na, then, it underwent reanalysis with *=a to become *ni*.

The Proto-Sogeram subject pronouns were replaced with emphatic pronouns in Mand, Nend, and Manat (Daniels, 2015: 260–265). This change occurred in every person–number combination except 1PL, and the 1SG emphatic pronoun did not end in *a, so we do not discuss the first person forms. The process of innovation involved several changes, most of which cannot be ordered with respect to one another. One change was that the forms *na-mpa ‘2SG-EMPH’ and *ni-mpa ‘3SG-EMPH’ lost their initial consonants in a regular phonological process that affected all polysyllabic words (Daniels, 2015: 68), yielding *ampa and *mpa. These forms also lost their singular meaning and became pronouns for all second and third person referents, singular and plural.⁵ The second person form *ampa also lost *p, becoming *ama. This was an irregular development and must be explained as the kind of sporadic phonological attrition that sometimes affects high-frequency grammatical morphemes. The *mp cluster in the third person form *mpa was also voiced to prenasalized *b*, which was a regular change in Manat and an irregular one in Nend.

At some point while all this was happening, the final *a of these pronouns was lost in the same kind of reanalysis that affected the verb suffixes. It must have happened after word-initial consonant loss, since that change did not affect monosyllabic words, but we cannot order this change with more precision than that. However, the Manat examples below illustrate how it took place: pronouns that ended in *a, like third person *ba, were reanalyzed as containing the enclitic (42).

Manat			
(42) <i>B=a,</i>	<i>mis=ik</i>	<i>varva-rh-ur-id</i>	<i>nid.</i>
3.NOM=LNK	sweetness=ACC	bear-HAB-PL-3.PRS	2/3DU
‘They are sweet (lit. ‘bear sweetness’), those two.’			

5 Another possibility is that the erstwhile plural forms, *nar-mpa ‘2PL-EMPH’ and *nir-mpa ‘3PL-EMPH’ irregularly lost *r, which then merged them phonologically with their singular counterparts. Whichever analysis one prefers, the result is the same: second and third person subject pronouns in Nend and Manat no longer distinguish singular from plural.

After reanalysis of the final vowel was complete, the pronouns could appear without it (43).

Manat

- (43) *Yadama-s=a, as bi humin ka-n ig-ura-ma-g.*
 mock-3SG.DS=LNK so 3.NOM wild.sugar MD-ACC give-PL-PST-3.FAR
 ‘She mocked them, so they gave (her) wild sugar.’

We see in these eight verb suffixes and four pronouns that word-final *a was lost regularly from verbs and pronouns in Nend and Manat. It was, however, retained on other word classes. There are 22 Proto-Sogeram etyma that had word-final *a and that have reflexes in Manat: two adverbs, two adjectives, and 18 nouns. All 22 tokens of word-final *a are preserved. For Nend, there are 18 Proto-Sogeram etyma that have modern reflexes: one adjective and 17 nouns. The adjective and 12 nouns keep final *a, while five nouns lose it. Thus word-final *a, when it does not occur on a verb or a pronoun, is preserved 72% of the time in Nend and 100% of the time in Manat. The relevant forms are given in Table 4.

However, as mentioned previously, word-final *a was lost much more consistently in Mand. Almost every polysyllabic word that ended in *a has lost it; the only exceptions are *kunsā ‘yam’ > *usa* ‘taro’ and *ina ‘sun’ > *ida*. Otherwise, final *a was lost from all twelve Proto-Sogeram reconstructions that have Mand reflexes. This can be interpreted as supporting the claim that the enclitic *=a was borrowed into an ancestor of Mand and that the presence of this enclitic has had a role in the loss of final *a from the Mand lexicon. But the loss of word-final *a in Mand could also simply be a normal sound change, of the kind that are observed frequently in languages all around the world. We thus do not interpret this innovation as either supporting or contradicting our claim that the enclitic *=a was borrowed into Proto-Greater West Sogeram.

To summarize: in Mand, word-final *a was lost consistently. In Nend and Manat, it was lost from verbs and pronouns, but usually not from other word classes. We do not expect phonological changes to be sensitive to word class, so this correlation requires an explanation. The most plausible one is as follows. Proto-Greater West Sogeram borrowed *=a from a neighboring Ramu language. This borrowing hypothesis is independently supported by formal and functional parallels between Sogeram and Ramu reflexes of the clitic, and by the modern-day geographic distribution of the clitic. After borrowing this clitic, which only occurred at the end of prosodic units, some words which had ended in *a were reanalyzed as ending in the clitic. This only happened

TABLE 4 Nend and Manat reflexes of final *a

PSOG	Gloss	pos	Nend	Manat	Notes
*akwasa	betelnut	n	<i>ahwas</i>	<i>ahusa</i>	
*ampita	sleep	n	<i>ampita</i>		
*ampra	place	n	<i>ampira</i>	<i>abra</i>	
*arika	middle	n	<i>ariha</i>		
*faŋka	leaf	n		<i>vaga</i>	
*ikakara	chicken	n		<i>akakara</i>	
*ina	sun	n		<i>ina</i>	
*kayampra	village	n	<i>ayampira</i>		
*kamura	betel pepper	n		<i>hamura</i>	
*kapa	bird	n	<i>apa</i>	<i>havagava</i>	Manat 'bird species'
*kia	speech	n	<i>ya</i>	<i>ya(dama)-</i>	Manat 'mock'
*kinakina	crooked	adj		<i>hinahina</i>	
*kira	fight	n	<i>era</i>		
*kukasa	frog	n	<i>ohas</i>		
*-kuna	sister	n		<i>-kina</i>	
*kunsa	yam	n	<i>unsa</i>	<i>huza</i>	
*kwimka	stomach	n	<i>mpi</i>		
*maŋka	egg	n	<i>aŋki</i>		
*mira	firelight	n	<i>era</i>	<i>mira</i>	
*minta	sword grass	n	<i>nta</i>		
*ña	son	n		<i>ña</i>	
*ñama	younger sibling	n	<i>nama</i>	<i>ñama(ŋ)</i>	1.POSS form
*ñaŋña	food	n		<i>ñaŋña</i>	
*paka	only	adv		<i>vaca</i>	
*pisa	skin	n		<i>visa</i>	
*pita	wet	adj	<i>(yabi)ta</i>	<i>vita</i>	
*-ra	younger sibling	n	<i>ra(nir)</i>	<i>-ra</i>	2/3.POSS form
*sura	forest	n		<i>ura</i>	
*tampa	stone	n	<i>(oman)ampi</i>		Nend 'fingernail'
*waka	maybe	adv		<i>aka(d)</i>	

to words that commonly occurred at the end of prosodic units: verbs and pronouns. Other parts of speech, such as nouns, adjectives, and adverbs, were (largely) unaffected in Nend and Manat.

4 Discussion

We have argued for the reconstruction of the following scenario. An enclitic **=a*, which attached to a prosodic unit and had both an exclamative and a linking function, has existed in the Ramu language family for a considerable time. This clitic and the constructions in which it occurred were then borrowed into Proto-Greater West Sogeram, the ancestor of Mand, Nend, and Manat. After it was borrowed, it caused certain changes in these languages. Words that occurred at the end of a prosodic unit lost final **a* because that vowel was reanalyzed as the linking/exclamative enclitic. Because this clitic only occurred at the end of prosodic units, the reanalysis also only occurred at the end of prosodic units. Word-final **a* was lost regularly from inflected verbs, which occur clause-finally, and pronouns, which are often focused and which therefore often occur under their own intonation contour. It was not lost from other word classes (nouns, adjectives, adverbs, etc.) because, for syntactic reasons, these word classes did not usually occur at the end of a prosodic unit. This results of this process can be most clearly seen in Nend and Manat, where the distribution of word-final *a* conforms to this story; the Mand data are inconclusive.

The fact that we can reconstruct the borrowing of **=a* from Ramu into Sogeram also allows us to reconstruct certain prosodic and grammatical facts about the Sogeram languages. The reanalysis that we see in Sogeram would only have been possible if the enclitic **=a* was associated with right-edge prosodic boundary cues. Since there is strong evidence that this reanalysis took place, then, we can deduce that **=a*, in the Sogeram language it was borrowed into, usually occurred with some number of these cues, such as a following pause. We can also deduce that pronouns and verbs, the word classes that were affected by this change, tended to occur at the right edge of prosodic units. This constitutes a case of what Round (2010) calls edge-aligned reconstruction: the reconstruction of distributional facts about proto-languages via the reconstruction of grammatical or phonological processes that affected domains larger than the word (such as the phrase or the prosodic unit).

Most literature on pragmatic borrowing has focused on modern-day contact situations (Brody, 1987; Fuller, 2001; Hlavac, 2006; Prince, 1988; Zavala, 2001). And most literature on prehistoric borrowing has focused on lexical rather than morphological or pragmatic borrowing (e.g. Lynch, 1981; Haarmann, 1996;

Sarvasy, 2013). Finally, much recent literature on morphological borrowing focuses on the borrowing of form versus structure and on the relative borrowability of derivation versus inflection (Gardani, 2015). This study contributes in a small but meaningful way to these discussions. It shows that with good documentation, descriptive analysis, and adequate reconstruction of proto-languages, it is possible to reconstruct prehistoric borrowing and to uncover a more nuanced picture of the interactions that languages may have had in the distant past. The study also shows that reconstructing a prehistoric borrowing event allows us to see the effects that borrowed items can have on the shape of the recipient languages. These changes can sometimes be quite unusual, as in the present case, where word-final vowels were lost from certain word classes but not from others. The pragmatic and structural details involved in the event also strongly suggest that pragmatic salience and prosodic prominence were instrumental in the borrowing of the enclitic *=a and its two distinct functions across unrelated languages. The pragmatic and structural complexities involved in the *=a borrowing event support the view put forth by Mithun (2008) that morphological and pragmatic borrowing are not *prima facie* extricable from related phenomena and from other levels of structure but instead constitute interrelated components originally borrowed as whole constructions.

This is also a first step in reconstructing the prehistoric relationship between Ramu speakers and Sogeram speakers, which has hitherto remained uninvestigated but for which there are some clues from archaeology. Archaeological findings link some Sogeram sites, such as the Mand-speaking village of Atemble (Kaspruś, 1940) with a network of mortars and pestles that extends westward and northward from the middle Ramu area, and *not* eastward, where the rest of the Madang languages – the linguistic relatives of the Sogeram family – are spoken (Swadling & Hide, 2005). So it is clear that there was once a relationship of some kind between people groups in the places where Sogeram and Ramu languages are now spoken, but it is not clear what that relationship was like. It is our hope that future fieldwork in this fascinating yet minimally researched region of New Guinea will shed light on the nature of that relationship, and that the study we have presented here brings us a little closer to a deeper understanding.

Acknowledgements

We would like to thank Marianne Mithun, an anonymous reviewer, and audiences at the 23rd International Conference on Historical Linguistics, the 47th Annual Meeting of the Australian Linguistics Society, and the (Australian)

University of Newcastle for helpful feedback on earlier versions of this paper. All errors are, of course, our own. The research for this paper occurred over several field trips, which were supported by a U.S. Department of Education Javits Fellowship, the Living Tongues Institute for Endangered Languages, the UCSB Department of Linguistics, the UC Pacific Rim Research Program, NSF Grant BCS-1264157, ELDP Grant IGS0221, and the ARC Centre of Excellence for the Dynamics of Language.

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