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When Synthetic Meets Analytic: A Note on Structural Borrowing in Kaxabu Pazeh

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There has been a consensus in the literature that *pa-* and *pa-ka-* can be traced back to Proto-Austronesian as the causative prefix of dynamic and stative verbs, respectively. This paper investigates an apparently aberrant use of *pa-ka-* found in Kaxabu Pazeh, where the causative affix freely alternates between its canonical usage as a prefix and an applicative-like free morpheme with a word order parallel to the *ka*-construction in Taiwanese Southern Min. With consistent evidence from Kaxabu causatives and ditransitives, I demonstrate that the unexpected restructuring of the affix can be straightforwardly accounted for as a contact-induced change driven by both phonological and structural triggers from the dominant language.

1. INTRODUCTION.[1] It is uncontroversial that the affixes *pa-* and *pa-ka-* can be reconstructed to Proto-Austronesian as the causative prefix of dynamic and stative verbs, respectively (Brandstetter 1916; Reid 1994; Blust 1999a, 2003; Zeitoun and Huang 2000). The canonical usage of *pa-ka-* as a causative prefix attached to stative roots is exemplified in the following data from Puyuma (1) and Rukai (2), two Formosan languages from different primary branches of the Austronesian family (see, for example, Blust 1999b; Ross 2009).[2]

(1) PUYUMA

a. ma-puni na patraka. [Stative]
STAT-rotten DF.NOM meat
'The meat is rotten.'

1. This paper is based on fieldwork conducted in 2014 and 2015 with an 80-year-old Kaxabu speaker, Mr. Pan Yung-li, who is considered one of the last speakers of the language. Mr. Pan is bilingual in Kaxabu and Taiwanese Southern Min (TSM), and has intermediate competency in Mandarin Chinese. The data presented in the paper were collected in four separate field trips via both grammaticality judgments and Mandarin–Kaxabu/TSM–Kaxabu elicitations. My sincere thanks to Mr. Pan for sharing his language with me, and to Hong-rui Lin and Yen-zhuang Chen for introducing me to Kaxabu. I am grateful to Robert Blust, Elizabeth Zeitoun, Raleigh Ferrel, and Ying-chin Lin for comments and feedback on this paper, and to Academia Sinica and the Linguistics Department of the University of Hawaiʻi at Mānoa for fieldwork funds. Any errors are my own.
2. As is conventional, sentences and proper nouns do not begin with capital letters in Formosan languages. Abbreviations used in this paper are: APPL, applicative; AV, actor voice; CAU, causative; DF, definite; GEN, genitive; ID, indefinite; LK, linker; NFIN, nonfinite; NOM, nominative; OBL, oblique; P, preposition; PRF, perfective; PV, patient voice, RED, reduplication; RST, resultative; SG, singular; STAT, stative; TOP, topic

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b. bias na wari i, **pa-ka**-puni kana patraka. [Causative of stative]
hot LK day TOP **CAU-STAT.NFIN**-rotten DF.OBL meat
'Hot weather made the meat rotten.' (primary data)

(2) RUKAI

a. ma-taaði?i ana va⟨ova⟨o. [Stative]
STAT-beautiful that young.woman
'That young woman is beautiful.'

b. **pa-ka**-taaði?i-⟨a-inə pa-?i-mo⟨amo⟨aə. [Causative of stative]
CAU-STAT.NFIN-good-1SG.NOM-3SG.OBL CAU-wear-RED.clothes
'I made him/her dress beautifully.' (Zeitoun 2000:419)

While the canonical use of *pa-ka-* in (1) and (2) is attested in various Austronesian languages, a peculiar construction is found in Kaxabu Pazeh, where the causative morpheme diverges from its common usage as a prefix and surfaces to the left of the causee, as in (3a,b).

(3) a. mu-payak laladan. [Stative]
AV-wet desk
'The desk is wet.'

b. adunu **paka** laladan mu-payak. [Causative of stative]
Adunu **PAKA** desk AV-wet
'Adunu made the desk wet.'

Additional evidence suggests that *paka* in Kaxabu Pazeh functions as a free morpheme rather than a bound affix, as evidenced in its availability to precede a noun phrase (4) or a *wh*-pronoun (5).

(4) ubah paka [mini a babizu] / [naki a siatu] mu-payak.
Ubah PAKA this LK book / 1SG.GEN LK clothes AV-wet
'Ubah made this book/my shirt wet.'

(5) isiw paka axay axay mu-azat lia?
2SG.NOM PAKA what AV-broken PRF
'What did you break?' (lit. 'What did you make broken?')

Pazeh is a moribund Formosan language spoken in the Puli township, central Taiwan, with most of its speakers bilingual in the areal lingua franca Taiwanese Southern Min and having different degrees of exposure to Mandarin Chinese. Sinitic influence is clearly seen in Pazeh's flexibility in word order: while the language still preserves the main traits of a Philippine-type language, including a four-way distinction in its focus system, *wh*-constructions in pseudo-clefts, and rich affixation processes, it allows both an SVO and a predicate-initial word order due to massive contact with Taiwanese Southern Min and Mandarin Chinese (both of which have SVO word order), as shown in examples (6) and (7).

(6) a. mini a tulala me-lapax lia. [Actor-voice clause: SVO]
this LK flower AV-bloom PRF
'This flower has bloomed.'

b. me-lapax ki tulala. [Actor-voice clause: predicate-initial]
AV-bloom NOM flower
'The flowers have bloomed.'

(7) a. adunu tuting ima? [Wh-question: SVO]
Adunu beat.AV who
'Who did Adunu beat?'

b. ima ka tuting-en ni adunu? [Wh-question: pseudo cleft]
who NOM beat-PV GEN Adunu
'Who did Adunu beat?'

Pazeh is generally agreed to consist of two dialects, Pazeh and Kaxabu (Ferrell 1970; Lin 1989, 2000; Blust 1999a; Li and Tsuchida 2001). While the last fluent speaker of the Pazeh dialect passed away in 2010, the Kaxabu dialect survives, but with fewer than ten remaining speakers (Lin, pers. comm.), all over the age of 80. This paper investigates the peculiar *paka*-construction attested in Kaxabu and exemplified in (3) above, and explores the motivation of this structural reanalysis. As will be shown in the following discussion, similar to the case of word order shift, the aberrant use of *pa-ka-* is a product of Taiwanese Southern Min influence, which demonstrates an intriguing consequence of a highly agglutinating language that has come into contact with a dominant analytic language.

2. THE CORE DATA. According to comparative data, Proto-Austronesian *pa-ka- was a prefix attached to stative verbs that created the causative counterpart of a simple clause. As shown in examples (1) and (2) above, when this affix was present, the causer is introduced as the subject of the clause, with the causee serving as the object. In nonclitic circumstances, both the causer and the causee are separated from the verb complex, as schematized in (8).

(8) Canonical pattern of *pa-ka-* in predicate-initial Austronesian languages
pa-ka-√STATIVE NP_1 NP_2

Surprisingly, in Kaxabu Pazeh, this canonical structure freely alternates with the peculiar construction, as schematized in (9) and referred to as the "*paka*-NP construction." The flexibility between the two constructions is shown in (10) and (11).

(9) *Paka*-NP construction in Kaxabu
NP_{Causer} *paka* NP_{Causee} V√STATIVE

(10) a. yaku ini **pa-ka**-ma-bini gunugun. [Canonical usage]
1SG.NOM NEG **CAU-STAT.NFIN**-STAT-full bucket
'I did not fill the bucket.' (lit. 'I did not make the bucket full.')

b. yaku ini **paka** gunugun ma-bini. [*paka*-NP construction]
1SG.NOM NEG **PAKA** bucket STAT-full
'I did not fill the bucket.' (lit. 'I did not make the bucket full.')

(11) a. adunu **pa-ka**-mu-azat paypay (lia).[3] [Canonical usage]
Adunu **CAU-STAT.NFIN**-AV-broken car PRF
'Adunu broke the car.' (lit. 'Adunu made the car broken.')

3. It is noteworthy that the verbal morphology in (10a) and (11a) shows a unique phenomenon in Pazeh, with the nonfinite stative prefix *ka-* and the Actor-voice/stative affix *mu-*/*ma-* cooccurring in the same verb complex. Such phenomena have been discussed in previous studies (Zeitoun and Huang 2000:394; Blust 2003:464), and are considered either as free variants or as a sign that *pa-ka-* in Pazeh has become monomorphemic. As this phenomenon is not relevant to the main focus of this paper, however, I will not discuss this issue further here.

b. adunu **paka** paypay mu-azat (lia). [*paka*-NP construction]
Adunu **PAKA** car AV-broken PRF
'Adunu broke the car.' (lit. 'Adunu made the car broken.')

According to my field data, the structural alternation between the (a) and (b) sentences in (10) and (11) applies primarily to stative and change-of-state verbs (for example, *mu-'amex* 'melt', *mu-hula* 'boil', *mu-payak* 'wet', *dakien* 'dirty', *ma-sezaw* 'clean', *mu-azat* 'be broken', *lubahing* 'red').[4] Crucially, despite the full interchangeability between the canonical and the *paka*-NP construction, a parallel restructuring of the *pa*-prefix is not attested in causatives with dynamic verbs, and is considered marginal in grammaticality judgment tests, as in (12) and (13).

(12) a. mini a saw pa-talubik bun. [Causative of dynamic verb]
this LK person CAU-fall mango
'This person made the mangoes fall.'

b. ?mini a saw **pa** bun talubik. [Intended: *pa*-NP construction]
this LK person **PA** mango AV.fall
Intended: 'The person made the mangoes fall.'

(13) a. yaku pa-tuting mini a wazu ubah. [Causative of dynamic verb]
1SG CAU-beat this LK dog Ubah
'I made Ubah beat this dog.'

b. ?yaku **pa** ubah tuting mini a wazu [Intended: *pa*-NP construction]
1SG **PA** Ubah beat.AV this LK dog
Intended: 'I made Ubah beat this dog.'

The asymmetry in *pa*-'s and *pa-ka*-'s accessibility to restructuring is accompanied by yet another special phenomenon in Kaxabu. Despite the dynamic nature of transfer verbs, a *pa-ka*-NP construction parallel to that observed in stative causatives is attested in ditransitives, as in (14a), (15a), and (16a). Such constructions freely alternate with canonical ditransitives without a *pa-ka-* affix, as shown in (14b), (15b) and (16b). On the other hand, the causative prefix *pa-*, although presumably compatible with dynamic transfer verbs, cannot replace *pa-ka-* and participate in (a)-type ditransitives.

(14) a. yaku **paka /*pa amulu** baxa lia atun. [*paka*-NP ditransitive]
1SG.NOM **PAKA / PA orange** give.AV PRF Atun
'I gave oranges to Atun.'

b. yaku baxa di ubah amulu. [Canonical ditransitive]
1SG.NOM give.AV P Ubah orange
'I gave oranges to Ubah.'

(15) a. yaku **paka /*pa bizu** pasusu lia ali. [*paka*-NP ditransitive]
1SG.NOM **PAKA / PA lette** send.AV PRF Ali
'I sent a letter to Ali.'

4. Other than typical stative and change-of-state verbs, the *paka*-NP construction is also found with adjectival color terms, as exemplified in (i).
(i) ahut dali paka daxa 'abax zazumu lubahing.
autumn PAKA maple leaf dye red
'Autumn made the maple leaves red.'

b. yaku pasusu di ali bizu. [Canonical ditransitive]
1SG.NOM send.AV P Ali letter
'I sent a letter to Ali.'

(16) a. yaku **paka /*pa tukun** bajuwen adunu. [*paka*-NP construction]
1SG.NOM **PAKA / PA taro** sell.AV Adunu
'I sold taros to Adunu.'

b. yaku bajuwen adunu tukun. [Canonical ditransitive]
1SG.NOM sell.AV Adunu taro
'I sold taros to Adunu.'

The structures related to the aberrant use of *pa-ka-* discussed so far are summarized in (17) and (18).

(17) The structure of the *paka*-NP construction in causatives and ditransitives
a. Causatives: NP_{Causer} paka NP_{Causee} $V\sqrt{}_{STATIVE}$
b. Ditransitives: NP_{Agent} paka NP_{Theme} $V\sqrt{}_{TRANSFER}$ $NP_{Recipient}$

(18) Main observations:
a. In Kaxabu, the Austronesian causative prefix *pa-ka-* may function as a free morpheme. In causatives, it precedes the causee; in ditransitives, it precedes the transported theme.
b. However, in both constructions, the noncanonical structure does not apply to the causative affix *pa-*.
c. In ditransitives, *pa-ka-* shows an unexpected functional extension and occurs with dynamic transfer verbs.

3. ANALYSIS. A unitary account for the peculiar use of *pa-ka-* is supported by a structural parallelism between the *paka*-NP structure and the *ka*-construction in Taiwanese Southern Min (TSM). In both TSM and Mandarin Chinese (MC), causativization can be expressed through a special applicative/light verb construction that introduces the causee as an applied object in a marked SOV word order (for example, Sybesma 1992; Huang, Li, and Li 2009; Jheng 2012 for MC; Hung 1995; B. Yang 2006; Chen 2008; C.-J. Yang 2011 for TSM).[5] In TSM, the applicative marker has the phonetic form ka^7 (20), while in MC, it has the form ba^3 (21). Both constructions share structural similarities with the *paka-NP* construction, as shown in (19)–(21), where *ka*, *pa*, and *paka* all function as a free morpheme that precedes the causee. Crucially, both *ka* and *ba* share phonetic similarities with the causative prefix *pa-ka-*. The structural parallel among the three constructions is illustrated in (22).

(19) TAIWANESE SOUTHERN MIN
Adi **ka**^{7} gua^2 e^0 sã^2 chong^4-tam^5 a^0.
Adi **KA** 1SG GEN shirt CAU-wet PRF
'Adi made my shirt wet.'

5. It is noteworthy that the SOV order in TSM's *ka*-construction and MC's *ba*-construction is also a noncanonical word order in both languages.

(20) MANDARIN CHINESE
Adi **ba**^{3} wo^{3} de^{0} yi^{1}fu^{2} nong^{4}-shi^{1} le^{0}.
Adi **BA** 1SG GEN shirt CAU-wet PRF
'Adi made my shirt wet.'

(21) KAXABU
adi **paka** naki a siatu mu-payak.
Adi **PAKA** 1SG.GEN LK clothes AV-wet
'Adi made my shirt wet.'

(22) Causatives in Kaxabu, TSM, and MC
a. paka-construction (Kaxabu): NP_{Causer} paka/*pa NP_{Causee} $V\sqrt{}_{STATIVE}$
b. ka-construction (TSM): NP_{Causer} ka NP_{Causee} $V\sqrt{}_{STATIVE/RESELTATIVE}$
c. ba-construction (MC): NP_{Causer} ba NP_{Causee} $V\sqrt{}_{STATIVE/RESELTATIVE}$

Given the structural similarity between the *ka-* and *ba*-construction, a natural question arises as to which, if either, construction is the trigger of the *pa-ka*-NP construction. A primary clue to the question lies in the asymmetry in *pa-*'s and *pa-ka-*'s accessibility to restructuring. Under a hypothesis that the MC *ba*-construction is the trigger of the reanalysis, the inability of *pa-* to restructure is unexpected, given the shared phonetic properties between the MC morpheme *ba* with both *pa-* and *pa-ka-*. Under the alternative hypothesis that the TSM *ka*-construction is the main cause, *pa-*'s inaccessibility to restructuring is straightforwardly accounted for.

The *ka*-construction as the main source of the structural change is additionally supported by the unexpected presence of *pa-ka-* in Kaxabu ditransitives. As shown in (23b) and (24b), *ka* is obligatorily used in TSM ditransitives, providing structural motivation for *pa-ka-*'s reanalysis in corresponding constructions. The use of *ba* in MC ditransitives (23c) and (24c) on the one hand, and the inability of Kaxabu *pa-* to participate in the reanalysis on the other, provides additional support to the present analysis.

(23) a. KAXABU
yaku **paka** tulala baxa lia atun.
1SG **PAKA** flower give.AV PRF Atun
'I gave the flowers to Atun.'

b. TAIWANESE SOUTHERN MIN
gua^{2} *(**ka**^{7}) xuei^{2} theh^{8} hoo^{7} Atun.
1SG **KA** flower send P Atun
'I gave the flowers to Atun.'

c. MANDARIN CHINESE
wo^{3} *(**ba**^{3}) xua^{1} na^{2} gei^{3} Atun.
1SG **BA** flower give P Atun
'I gave the flowers to Atun.'

(24) a. KAXABU
yaku **paka** siatu bajuwen lia adunu.
1SG **PAKA** shirt sell.AV PRF Adunu
'I sold the shirt to Adunu.

b. TAIWANESE SOUTHERN MIN
gua^{2} *(**ka**^{7}) sã^{2} be^{7} hoo^{7} Adunu.
1SG **KA** shirt sell P Adunu
'I sold the shirt to Adunu.'

c. MANDARIN CHINESE
wo^{3} *(**ba**^{3}) yi^{1}fu^{2} mai^{3} gei^{3} Adunu.
1SG **BA** shirt sell P Adunu
'I sold the shirt to Adunu.'

The structures of the three constructions under discussion are summarized in (25).

(25) Ditransitive constructions observed in Kaxabu (K.), TSM, and MC

a. paka-construction (K.): NP_{Agent} paka/*pa NP_{Theme} $V\sqrt{}_{TRANSFER}$ $NP_{Recipient}$

b. ka-construction (TSM): NP_{Agent} ka NP_{Theme} $V\sqrt{}_{TRANSFER}$ P $NP_{Recipient}$

c. ba-construction (MC): NP_{Agent} ba NP_{Theme} $V\sqrt{}_{TRANSFER}$ P $NP_{Recipient}$

4. CONCLUSION AND IMPLICATIONS. Being an aboriginal language spoken in the western plains of Taiwan, Pazeh is known to have been in contact with TSM for more than one hundred and fifty years. Considering this background, the proposed structural reanalysis in Kaxabu as due to massive Sinitic influence can be viewed as an instance of *Grammatical replacement* (26) or *Type III structural change* (27) discussed in the relevant literature.[6]

(26) Grammatical replacement (Thomason 2001:232)

In this linguistic route to language death, the original grammar of one language is gradually replaced by the grammar of anther.

(27) Structural effect of contact-induced grammaticalization, Type III (Heine and Kuteva 2005:124)

The new and the old categories coexist side by side, but the structure of the old category is redefined as a result of the presence of the new category (differentiation).

Given the limited amount of lexical borrowing between TSM and Kaxabu (see Lin 2000; Li and Tsuchida 2001), the reanalysis of *pa-ka-* presents an intriguing counterexample to the common assumption that, in contact situations, structural borrowing presumes extensive lexical borrowing from the same language (for example, Thomason 2001; Heine and Kuteva 2005; Aikhenvald 2006; Matras 2009).[7]

This paper has described and analyzed an atypical construction associated with the Austronesian causative prefix *pa-ka-* in Kaxabu Pazeh, where the morpheme freely alternates between its conventional usage and an applicative-like free morpheme that occurs in a word order parallel to both the *ka*-construction in Taiwanese Southern Min and the *ba*-construction in Mandarin Chinese. Based on the distributions of the morpheme in Kaxabu causatives and ditransitives, it is concluded that the *ka*-construction in TSM is the main trigger of this contact-induced structural change.

6. It is noteworthy that the same reanalysis of *pa-ka-* is not attested in previous literature (Lin 2000; Li and Tsuchida 2001), which was based primarily on the Pazeh dialect. Whether this reanalysis is a Kaxabu-specific innovation or a generation-specific phenomenon awaits further investigation.

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7. See, for example, the borrowing hierarchies discussed in Matras (2009:155) and listed here as (ii):

   (ii) Constraints on borrowing
   a. lexical > non-lexical (such as linear word order)
   b. free morphemes > bound morphemes
   c. nouns > nonnouns
   d. derivational morphology > inflectional morphology
   e. the rules of linear ordering which apply in the donor language will accompany grammatical elements borrowed from that language
   f. a lexical items whose meaning is verbal cannot be borrowed

   The structural reinterpretation of *pa-ka-* is an apparent counterexample to generalizations (a) and (f).

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