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# Concerning *ka-*, an Overlooked Marker of Verbal Derivation in Formosan Languages<sup>1</sup>

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Blust (1999) shows that in Pazeh, a moribund Formosan language, causativized dynamic verbs are morphologically marked by *pa-*, while stative verbs are prefixed by *paka-*. He argues that this language provides “critical evidence” for distinguishing the two grammatically conditioned variants \**pa-* and \**paka-* in PAN. Blust’s reconstruction overshadows, however, a morphological pattern found across many Formosan languages. We demonstrate that (i) in many Formosan languages where the causative *pa-/paka-* alternation is found, *paka-* is better analyzed as a bimorphemic prefix, whereby *pa-* indicates causativity and *ka-* stativity, and that (ii) the reanalysis of \**pa-ka-* as *paka-* and/or the replacement of this form in stative verbs must have taken place at a later stage in the history of the Austronesian languages. This analysis accounts for the synchronic variation across the Austronesian languages, and the Formosan languages in particular, with respect to this matter.

**1. INTRODUCTION.** In a recent paper, Blust (1999) shows that, when causativized, dynamic verbs in Pazeh are morphologically marked by *pa-*, while stative verbs are prefixed by *paka-*.<sup>2</sup> This contrast is illustrated in (1a) and (1b) respectively.

- (1) Pazeh (Blust 1999:347–348)<sup>3</sup>
- |    |                   |                      |                     |                  |
|----|-------------------|----------------------|---------------------|------------------|
| a. | <u>mu</u> -dader  | ‘choke on something’ | <u>pa</u> -dader    | ‘cause to choke’ |
| b. | <u>ma</u> -ngesen | ‘afraid’             | <u>paka</u> -ngesen | ‘to frighten’    |

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1. The present paper, which was partly written in reaction against Blust’s reconstruction of *paka-*, provides partial results on a project that was carried from 1997 to 1999 on “Verb classification in some Formosan languages: A typological perspective” with the generous support of a two-year National Science Council grant (NSC 87-2411-H-003-003 and NSC 88-2411-H-003-003). Thanks are due to Robert Blust, Ying-chin Lin, Byron Bender, Stanley Starosta, Bethwyn Evans, Tien-hsin Hsin, and an anonymous reviewer for comments on earlier versions of this paper.
  2. Pazeh is a moribund language, on which the first author spent just five hours of fieldwork on June 16–17, 2000. Therefore, in reanalyzing Blust’s data, we also made use of material provided in Ferrell (1970), Li (1978, 1997, and 1998), Lin (1999 and 2000). Orthographic and analytic discrepancies among these studies are discussed in Blust (1999:324ff).

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Blust argues that Pazeh provides “critical evidence” for distinguishing the two grammatically conditioned variants \*pa- and \*paka- in PAN:<sup>4</sup> “\*pa- formed the causative of dynamic verbs and \*paka- the causative of stative verbs” (Blust 1999:356–357). He further supports his claim by showing that these two prefixes are widely distributed across the Austronesian languages. Table 1, taken from Blust (1999:357), gives examples that reflect the \*pa-/paka- alternation.

In our view, Blust’s (1999) reconstruction overshadows a morphological pattern found across many Formosan and extra-Formosan languages, where dynamic and stative verbs differ from one another morphologically, depending on whether they occur in their “finite” forms or “nonfinite” forms. It is the contention of this paper that in most Formosan languages where the causative *pa-/paka-* alternation is found, there is reason to believe that *paka-* should be analyzed as a bimorphemic prefix whereby *pa-* indicates causativity and *ka-* stativity.<sup>5</sup> It is shown that *ka-*

TABLE 1. SAMPLE REFLEXES OF PAN \*PA- AND \*PAKA- ‘CAUSATIVE’ IN AUSTRONESIAN LANGUAGES\*

	*PA-	*PAKA-		*PA-	*PAKA-
Taiwan			Sumatra		
Atayal	p-		Toba Batak	pa-	
Pazeh	pa-	paka-	Mainland S.E. Asia		
Thao	pa-	(pia-)	Jarai	pe-	
Saisiyat	pa-	pak-	Sulawesi		
Philippines			Makasarese	pa-	paka-
Itbayaten	pa-		Wolio	pa-	
Bontok	pa-		Muna	fo-	feka-
Kapampangan	pa-		Pacific		
Hanunóo	pa-		Lakalai	va-, vai-	
Cebuano	pa-	paka-	Roviana	va-	
Borneo			Arosi		ha’a
Bintulu	pa-		Fijian		vaka-
Kayan		pek-†	PPN		*faka-

\* From Blust 1999:357

† But note the Kayan relic form *pakan* (PAN \*pa-kaen) ‘feed’, where *pa-* (or *pe-*) is no longer found as an active affix in the language.

- The following orthographic conventions were adopted after Blust (1999) and Li (1992): e = ə, ae = æ, oe = œ, ng = ŋ, ‘ = ʔ, g = ɣ, L = ʟ, tj = c, dj = ɟ, lj = ʎ; b = β (Atayal and Saisiyat), ʙ (Tsou), or b (other languages); D = ɖ, c = ʈ (Thao); z = ʒ (Rukai and Saisiyat); s = θ (Saisiyat). Abbreviations used in this paper include: 1, 1st person; 2, 2nd person; 3, 3rd person; ACT, active voice; AF, Agent focus; ACC, accusative; ASP, aspect; AUX, auxiliary verb; CAUS, causative; EXCL, exclusive; GEN, genitive; INCL, inclusive; IMP, imperative; IRR, irrealis; LIG, ligature; NOM, nominative; NAF, Non-Agent focus; OBL, oblique; PL, plural; PRET, preterite; PERF, perfective; PF, Patient focus; PPN, Proto-Polynesian; REAL, realis; RED, reduplication; RF, Referential focus; SG, singular; STAT, stative; TNS, tense; TOP, topic.
- Along with \*pa- and \*paka-, Blust also reconstructs another causative form \*ka-, but mentions that this latter form exhibits “the most restricted distribution [of the three], being found in some languages of the central Moluccas, such as Soboyo, and in the Nuclear Micronesian languages” (Blust 1999:356). Thus, Blust observes that the reconstruction of this prefix in PAN is not well-founded. As far as we are concerned, we are not aware of any Formosan language making use of *ka-* as a causative prefix.

represents the counterpart of (stative) *ma-* (~Ø). Both are stem-forming affixes that appear on stative verbs: *ka-* occurs exclusively in nonfinite verb stems, *ma-* (~Ø) in finite verb stems. It is further suggested that (i) \**pa-* and \**ka-*,<sup>6</sup> along with (stative) \**ma-*, should be reconstructed as distinct morphemes in PAN, and (ii) the reanalysis of \**pa-ka-* as *paka-* and/or the replacement of this form in stative verbs must have taken place at a later stage of the history of the Austronesian languages. This analysis accounts for the synchronic variations across the Austronesian and the Formosan languages in particular.

In section 2, we first review the evidence put forward by Blust (1999) for distinguishing two causative forms (cf. *pa-* vs. *paka-*) in Paze. In section 3, we argue that *paka-* should be treated as a bimorphemic prefix in Paze and provide external evidence to support this claim. The languages<sup>7</sup> on which our analysis is founded include Atayal (Mayrinax), Seediq (Paran and Truku), Rukai (Mantauran) and (Southern) Paiwan.<sup>8</sup> In the last section, we present data on (extra-) Formosan languages in which *pa-ka-* has been reanalyzed (Saisiyat), replaced (Bunun and Thao), or neutralized (Yami) or where the dynamic/stative distinction is not overtly marked on the morphological level (Tsou) and we hypothesize that in many such languages, *pa-ka-* must have later been reanalyzed as *paka-*.

**2. REVIEW OF BLUST'S (1999) ANALYSIS.** Blust shows that dynamic verbs are prefixed with different focus AF affixes, *mu-*, *me-*, *mi-*, *ma-*, and *m-*, but that the occurrence of these affixes is conditioned by two factors. The first is phonological; the second, semantic. Phonologically, *me-* can be treated as an allomorph of *mu-*, the *u~e* alternation resulting from vowel harmony. Semantically, *mu-* and *me-* are

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5. Different treatments of *ka-* have been advanced in earlier studies. *ka-* is perceived as an "inchoative" prefix in Li (1973:212ff), Starosta (1974), Ferrell (1982), Lin (1992), and Yeh 2000c. It is treated as an "activizing" prefix in Chang and Tsao (1995) and subsequent M.A. theses (see, for instance, Chen 1996) and as an "adjective verbalizing derivation prefix" in Holmer (1996:51). Though the terminology differs, it is repeatedly argued that to undergo such syntactic processes as causativization, imperativization, or voice/focus alternations, a stative verb must be rendered semantically "more" transitive. Pecoraro (1979:58) mentions, on the other hand, that *k-* (or its phonological variants) is nearly always prefixed to a stative verb base in imperative and (certain) negative sentences. It is analyzed as the counterpart of *ma-* that is prefixed to most stative verbs (finite form) unless they are unmarked (cf. *uxai mbulax (bulax) ka lukus mo* 'No, they are not new, my clothes.' vs. *ini kbulax ka lukus mo* 'my clothes are not new.' and *paro ko* 'I am tall' vs. *ini ko kparo* 'I am not tall.'). Entries in his dictionary (cf. 1977b:173) confirm that *k-* can also surface in stative verbs that undergo causativization, e.g., *pkparo* 'make tall(er), develop, give importance to'. This is the position that is adopted in this paper.
  6. Blust reconstructs no less than four \**ka-* prefixes in PAN, but in this paper, only the second usage is of interest for us: "At least four distinct \**ka-* prefixes are widely reflected outside Taiwan: (1) an ordinal marker on numerals, (2) a verbal formative marking achieved states (broken, spilled, etc.), sometimes described in the sources as a 'past participle', but perhaps better viewed as an active counterpart of \**ma-* statives, (3) a formative of abstract nouns, and (4) a variant of the causative prefix" (pers. comm. 14 February 2000). Blust's understanding of *ka-* as a verbal formative marking *achieved* states departs from ours, though.
  7. Unless mentioned otherwise, the data provided in this paper come from the first author's fieldnotes.
  8. Lack of relevant data prevents us from including other Formosan languages such as Amis, Kavalan, and Saaroa, where this distinction seems also to hold.

prefixed to verbs of higher transitivity, *ma<sub>1</sub>-*, *m<sub>1</sub>-*, and *mi-* to verbs of lower transitivity. When causativized, dynamic verb roots are usually prefixed with *pa-*.

(2) Pazeh (Blust 1999:348)

<u>mu</u> -lizax	'to shine, of the sun'	<u>pa</u> -lizax	'to put s.t. in the sun, dry'
<u>me</u> -depex	'to read, to study'	<u>pa</u> -depex	'to make s.o. read, make s.o. study'
<u>mi</u> -kita	'to see, to look at'	<u>pa</u> -kita	'to give to s.o. to see, show to s.o.'
<u>ma</u> <sub>1</sub> -dawan	'to bathe (oneself)'	<u>pa</u> -dawan	'to bathe (s.o. else)'
<u>mi</u> -idem	'sleep'	<u>pa</u> -idem	'to put to bed, as children'

Blust further demonstrates that *ma<sub>1</sub>-* and *m<sub>1</sub>-* are homophonous with two other prefixes, *ma<sub>2</sub>-* and *m<sub>2</sub>-*,<sup>9</sup> which are attached to stative verbs, the distinction between these two sets of prefixes being made transparent when verbs undergo causativization: as shown in (2) and (3), dynamic verbs are prefixed by *pa-*, stative verbs by *paka-*. Aside from *ma<sub>2</sub>-* and *m<sub>2</sub>-* (*m<sub>2</sub>-* being treated as an allomorph of *ma<sub>2</sub>-*), Blust mentions that many stative verbs are zero-marked and a few are prefixed by *tu-* (e.g., *tu-babaw* 'tall', *babaw* 'above, on top of'; *tu-hais* 'to have armpit odor', *hais* 'armpit odor'). In (3), examples extracted from Blust (1999:348) are rearranged to show the  $\emptyset$ , *m<sub>2</sub>-*, *ma<sub>2</sub>-*, *tu-* ~ *paka-* alternation. In (3a–f), *paka-* is prefixed to the verb base. In (3g–h), *paka-* occurs simultaneously with *ma<sub>2</sub>-*, and in (3i) with *tu-*. Examples (3g–h)—but not (3i)—are treated as problematic exceptions by Blust,<sup>10</sup> in comparison to examples where *paka-* is prefixed to “bare” verb bases.

(3) Pazeh (Blust 1999:348)

a. asikis	'painful'	<u>paka</u> -asikis	'to cause pain, hurt'
b. baged	'fat, obese'	<u>paka</u> -baged	'to fatten, as a pig'
c. <u>m<sub>2</sub></u> -akux	'hot'	<u>paka</u> -akux	'to heat, warm up'
d. <u>m<sub>2</sub></u> -azih	'ripe'	<u>paka</u> -azih	'to ripen something, leave something to get ripe'
e. <u>ma</u> <sub>2</sub> -kelem	'salty'	<u>paka</u> -kelem	'to salt, to put salt on'
f. <u>ma</u> <sub>2</sub> -kuris	'thin, skinny'	<u>paka</u> -kuris	'to make slimmer, to go on diet'
g. <u>ma</u> <sub>2</sub> -bini	'full, as a container'	<u>paka</u> - <u>ma</u> -bini	'to fill, as a container'
h. <u>ma</u> <sub>2</sub> -busuk	'drunk'	<u>paka</u> - <u>ma</u> -busuk	'to make someone drunk'
i. <u>tu</u> -babaw	'high, tall'	<u>paka</u> - <u>tu</u> -babaw	'make higher, taller'

Based on the above data, Blust reaches two conclusions: first, that “there is an almost perfect correlation of *pa-* with dynamic verbs and of *paka-* with statives” (see table 2, Blust 1999:347), and second, that the *pa-/paka-* alternation should be reconstructed for PAN, as it is widely reflected across the AN languages (see table 1).

9. Blust distinguishes a third *ma<sub>3</sub>-* ‘reciprocal’ (as in *ma-kita* ‘look at each other’ < *mi-kita* ‘to look, to see’), which will not be further discussed in connection with the Pazeh data.

10. In some languages such as Mayrinax Atayal, *ma* is part of the verb root: *maskiyung* ‘hungry’, *mamati* ‘expensive/hard’ (for details, see Huang 2000). Reanalysis of the base by the Pazeh informant might tentatively explain the occurrence of *ma-* in these examples.

TABLE 2. CORRELATION OF PAZEH *PA-* AND *PAKA-* CAUSATIVES  
WITH DYNAMIC AND STATIVE VERBS \*

m-:p(a)	ma <sub>(1)</sub> -:pa-	me-:pa-	mu-:pa-	ma <sub>(2)</sub> -:paka-
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\* Partially reproduced from Blust (1999:347). In the view of an anonymous reviewer, the two *ma*-s in this table should be indexed—they were not in Blust’s original—and we have elected to follow that advice.

3. AN OVERLOOKED PATTERN. A careful reexamination of the data at hand reveals that dynamic and stative verbs exhibit different morphological alternations depending on whether they appear in their finite or nonfinite forms. A comparison of Pazeh with other Formosan languages (Mayrinax Atayal, Parau Seediq, Paiwan, Mantauran Rukai)—which, however, exhibit extreme variation in terms of syntactic structures—provides additional evidence for singling out *ka-* as a distinct morpheme.

As a first approximation, though, certain anomalies in the Pazeh data might lead to the rejection of this hypothesis: (i) the occurrence of the prefix *ma-* in *paka-ma-busuk* ‘make s.o. drunk’, which invalidates the recognition of *pa-ka-* as a bimorphemic prefix; (ii) the occurrence of *ma-* in the irrealis form *ma-karid-ay* ‘will be dry’ instead of *ka-karid-ay* (as in *ka-lamik-ay* ‘will be cold’), which raises doubts concerning the function of *ka-*; and (iii) the nonoccurrence of *ka-* in *sa-pa-karid-en* ‘dryer’, while the expected form is: *sa-pa-ka-karid-en*. However, as first suggested by Blust (1999:348), Mrs. Pan—the last good Pazeh informant—often provides free phonological (e.g., *-r ~ -n*) and syntactic variants (e.g., *ma- ~ ka-*), accepting related forms as long as these are not aberrant.<sup>11</sup> Thus, we were able to elicit forms like: *pa-ka-busuk* (vs. *pa-ka-ma-busuk*) ‘make s.o. drunk’<sup>12</sup> and *ka-karid-ay* (vs. *ma-karid-ay*) ‘will be hot’<sup>13</sup> (while *ka-ma-karid-ay* ‘will be dry’ was not accepted as a grammatical form), and along with the variants *sa-pa-karid-en/sa-pa-ka-karid-en* ‘dryer’, we got *sa-pa-lamik-en* as an equivalent form of *sa-pa-ka-lamik-en* ‘fridge’.

Data on the morphological marking of finite verbs (3.1) and a study of the constructions using a nonfinite verb form (3.2) tend also to confirm our analysis.

3.1 FINITE VERB FORMS. As in Pazeh, most Formosan languages distinguish between dynamic verbs and stative verbs. In AF constructions, dynamic verbs are marked by different focus affixes, as shown in tables 3 and 4 and examples (4–8).<sup>14</sup>

11. Mrs. Pan categorically rejected, for instance, forms such as: *\*m-idem-i* instead of *idem-i* ‘Sleep!’.

12. As in: *pa-ka-busuk-i* ! ‘Make him drunk!’ vs. *paka-ma-busuk-i* ! ‘Make him drunk’.

13. As in Pazeh:

- a.

pa-lizax-i

nisiw

a

siatu

ka

ka-karid-ay

CAUS-dry-IMP

your

LIG

clothes

TOP

STAT-dry-IRR

‘Let your clothes dry (in the sun) and they will be dry.’
- b’

pa-lizax-i

nisiw

a

siatu

ka

ma-karid-ay

CAUS-dry-IMP

your

LIG

clothes

TOP

AF. STAT-dry-IRR

‘Let your clothes dry (in the sun) and they will be dry.’

- (4) Pazeh  
*mi-tuku* taxabahal ka ma-ngesen yaku  
AF-sit plane TOP AF.STAT-afraid ISG.NOM  
'(Whenever) I take the plane, I am afraid.'
- (5) Mayrinax Atayal (Huang 1995:21)  
*h<um>ihip* cku' 'ulaqi' 'i' limuy  
kiss<AF> ACC child NOM Limuy  
'Limuy is kissing the child.'
- (6) Parani Seediq (Chen 1996:54)  
*k<um>eruc* wawa (ka) bubu  
cut<AF> meat (NOM) mother  
'Mother cut(s) meat.'
- (7) Southern Paiwan  
na-*k<em>esa* ti kivi tua qavay  
PERF-cook<AF> NOM Kivi OBL rice.cake  
'Kivi cooked rice cake(s).'
- (8) Mantaaran Rukai  
*o'-ongolo* vavaa tamatama  
ACT.REAL-drink wine father  
'Father drinks wine.'

Stative verbs are usually marked by *ma-* or  $\emptyset$ , as shown in tables 5 and 6, and examples (9–13).

TABLE 3. MORPHOLOGICAL MARKING OF DYNAMIC VERBS  
IN SOME FORMOSAN LANGUAGES

PAZEH	ATAYAL	SEEDIQ	PAIWAN	RUKAI
mu-, me-, m-, mi-, ma <sub>1</sub> -	<um>, m-, ma <sub>1</sub> -, $\emptyset$ <sub>1</sub>	<um>, m <sub>1</sub> -, $\emptyset$ <sub>1</sub>	<em>, <en>, m-, $\emptyset$ <sub>1</sub>	o-, om-, m-*

\* The *m-* and *om-* prefixes in Mantaaran Rukai occur in very few verbs (for details, see Zeitoun 2000b).

TABLE 4. SAMPLE OF DYNAMIC VERBS  
IN SOME FORMOSAN LANGUAGES

PAZEH	ATAYAL	SEEDIQ	PAIWAN	RUKAI	
mu-daux	m-nubuwag	m-imah	t<em>ekeL	o-'ongolo	'drink'
me-ken	m-anig	m-ekan	k<em>an	o-kane	'eat'
mi-kita	m-itaal, k<um>itaal	q<um>ita	$\emptyset$ -pacun	o-cengele	'see'
ma-tanga	g<um>awah	l<um>uwah	s<em>uqelev	—*	'open (door)'
m-idem	ma-qilaap	t<um>aqi	$\emptyset$ -taqed	o-'apece	'sleep'

\* In Mantaaran, another stem-forming affix is used instead of *o-*, cf. *'o-'eleve* 'open (door)' (<'o-'open, take off')

14. Two facts must be noted. First, there is not a one-to-one correspondence between which types of verbs take which types of AF affixes in these languages. The same verb (e.g., eat) might be marked by <um> in one language and by *m-* in another (cf. Paiwan *k-em-an* vs. Seediq *m-ekan* 'eat'). Second, these languages also exhibit other sets of verbal affixes that form denominal verbs (e.g., 'build a house', 'wear a hat', 'give birth' etc.). These will not be discussed further in this paper.

- (9) Pazeh  
ma-kelem ka Ø-haziak kakanen  
AF.STAT-salty TOP AF.STAT-bad edible  
'It is salty (and) bad to eat.'
- (10) Mayrinax Atayal (Huang 1995:246)  
ma-sibniing ku' nabakis, asi kina'ga' Ø-aqih hayhay  
AF.STAT-rich NOM old.man but TOP AF.STAT-bad a.little  
a' kisiliq=nia'  
NOM heart=3SG.GEN  
'The old man is rich, but he is a little greedy.'
- (11) Paran Seediq (Chen 1996)  
a. Ø-pbaro riyung qhuni nii  
AF.STAT-high very tree this  
'This tree is very high.' (p. 47)  
b. m-sipus riyung mudu nii  
AF.STAT-sweet very orange this  
'This orange is very sweet.' (p. 63)
- (12) Southern Paiwan  
a. Ø-tjengeLay ti paDang tai kivi  
AF.STAT-love NOM Padang OBL Kivi  
'Padang loves Kivi.'  
b. ma-Leva ti kalalu  
AF.STAT-happy NOM Kalalu  
'Kalalu is happy.'
- (13) Mantauran Rukai  
a. ma-taazi'i zipolo  
STAT-beautiful Zipolo  
'Zipolo is beautiful.'  
b. taotao 'a ma-zalam-ine zipolo  
Taotao TOP STAT-love-3SG.OBL Zipolo  
'As for Taotao, (he) loves Zipolo.'

TABLE 5. MORPHOLOGICAL MARKING OF STATIVE VERBS  
IN SOME FORMOSAN LANGUAGES

PAZEH	ATAYAL	SEEDIQ	PAIWAN	RUKAI
Ø-, ma <sub>2</sub> -	Ø <sub>2</sub> -, ma <sub>2</sub> -	m(u)-, Ø <sub>2</sub>	ma-, Ø <sub>2</sub> -	ma-, (Ø-)*

\* The status of zero-marked stative verbs in Mantauran Rukai is more difficult to establish on the morphosyntactic level, as their behaviors differ from both dynamic and *ma*-marked stative verbs.

TABLE 6. SAMPLE OF STATIVE VERBS  
IN SOME FORMOSAN LANGUAGES

PAZEH	ATAYAL	SEEDIQ	PAIWAN	RUKAI	
m-akux	ma-kiluh	m-tilux	ma-culu	ma-Lapa'a	'hot'
ma-busuk	Ø-businuq	Ø-busukan	ma-puLaw	ma-vosoko	'drunk'
Ø-pazid	ma-ngihu'	m-ngihun	Ø-qadid	ma-palili	'bitter'
ma-baged	Ø-kithu'	—	Ø-qaLuman	ma-votolo'o	'fat'

**3.2 NONFINITE VERB FORMS.** A verb must occur in its nonfinite form in various constructions, four of which (causative, imperative, irrealis, and NAF)<sup>15</sup> are examined in this paper to insure a full comparison with the data on Pazeh provided by Blust (1999). We show that the distinction between dynamic and stative verbs is not only morphologically marked on finite verbs but also on nonfinite verbs as well. Finite dynamic verbs are marked by <um> (or its related variants); nonfinite dynamic verbs are marked by Ø (3.2.1.1). Finite stative verbs, on the other hand, are marked by *ma-* (or Ø); nonfinite stative verbs are marked by *ka-* (section 3.2.1.2). These generalizations are displayed in table 7.

**3.2.1 Morphological Alternations of Dynamic Verbs in Constructions Using a Nonfinite Verb Form.** In Pazeh, Atayal, Rukai, Seediq, and Paiwan, dynamic verbs appear in their nonfinite forms (marked as Ø- in the following examples) in causative and/or imperative constructions. In all these languages except Paiwan, dynamic verbs also occur in their nonfinite forms when marked as “irrealis.” These constructions are examined in turn below, with lists of verbs followed by an illustrative example for each language.

**3.2.1.1 Causative.** Causative verbs are usually prefixed by *pa-* (or *p-*).

(14) Pazeh

DECLARATIVE (REALIS)			CAUSATIVE	
mu-hizib	‘cut (meat)’		pa-Ø-hizib	‘let s.o. cut’
me-depex	‘read, study’		pa-Ø-depex	‘let s.o. read, study’
mi-kita	‘see’		pa-Ø-kita	‘let s.o. see’
ma-siatu	‘dress’		pa-Ø-siatu	‘dress s.o.’
m-idem	‘sleep’		pa-Ø-idem	‘put to bed’

TABLE 7. MORPHOLOGICAL MARKING OF DYNAMIC AND STATIVE VERBS IN SOME FORMOSAN LANGUAGES

PAZEH	ATAYAL	SEEDIQ	PAIWAN	RUKAI	PAZEH	ATAYAL	RUKAI	PAIWAN	SEEDIQ
DYNAMIC FINITE					STATIVE FINITE				
mu-,	<um>,	<um>,	<em>,	o-,	Ø, ma- <sub>2</sub>	Ø <sub>2</sub> , ma- <sub>2</sub>	ma-, Ø	ma-, Ø	m- <sub>2</sub> , Ø <sub>2</sub>
me-,	m-,	m- <sub>1</sub> ,	<en>,	om-,					
m-,	ma- <sub>1</sub> ,	Ø <sub>1</sub>	m-,	m-					
mi-,	Ø <sub>1</sub>		Ø <sub>1</sub>						
ma- <sub>1</sub>									
DYNAMIC NONFINITE					STATIVE NONFINITE				
Ø	Ø	Ø	Ø	Ø	ka-	ka-	ka-	‘a- (< ka-)	k(u)-
PAZEH	ATAYAL	SEEDIQ	PAIWAN	RUKAI	PAZEH	ATAYAL	RUKAI	PAIWAN	SEEDIQ

15. In many languages, the same morphological alternation holds true in other constructions, e.g., declarative/imperative, negative, reciprocal, and reflexive constructions (see Zeitoun 2000b and Huang 2000). Also, it should be noted that our usage of the finite-nonfinite distinction departs from the more traditional usage having to do with whether or not the verb is tensed.

## (15) Pazeh

a. yaku mi-kita isiw  
 1SG.NOM AF-see 2SG.ACC  
 'I see you.'

b. kaakuxan ka asikis a punu mausay pa-kita takarad  
 have.a.heatstroke TOP painful head go CAUS-see doctor  
 'I have (had) a heatstroke, I have a headache (and) I go to the doctor.'

## (16) Mayrinax Atayal

DECLARATIVE, AFFIRMATIVE (REALIS)		CAUSATIVE	
g<um>hahapuy	'cook'	pa-Ø-ghahapuy	'let s.o. cook'
l<um>anguy	'swim'	pa-Ø-languy	'let s.o. swim'
m-aiq	'give'	pa-Ø-baiq	'let s.o. give'
m-aniq	'eat'	pa-Ø-qaniq	'let s.o. eat'
ma-bahuq	'wash'	pa-Ø-bahuq	'let s.o. wash'
ma-haag	'chase'	pa-Ø-haag	'let s.o. chase'
Ø-panaip	'fish'	pa-Ø-panaip	'let s.o. fish'

## (17) Mayrinax Atayal

a. m-aniq cku' bunga' ku' 'ulaqi'  
 AF-eat ACC sweet.potato NOM child  
 'The child is eating the sweet potato.'

b. pa-Ø-qaniq cku' 'ulaqi' 'i' yaya'  
 CAUS-Ø-eat ACC child NOM mother  
 'Mother is feeding the child' (Huang 2000)

## (18) Mantauran Rukai

DECLARATIVE (REALIS)		CAUSATIVE	
o-coroko	'jump'	pa-Ø-coroko	'let s.o. jump'
o-heceLe	'pinch'	pa-Ø-heceLe	'let s.o. pinch'
o-Liho'o	'know'	pa-Ø-Liho'o	'let s.o. know'
o-poLavo	'plant millet'	pa-Ø-poLavo	'let s.o. plant millet'
om-iki	'exist'	p-Ø-iki	'put'
m-aava'i	'come'	pa-Ø-kaava'i	'let s.o. come'

## (19) Mantauran Rukai

a. o-'ongolo vavaa aamae  
 ACT.REAL-drink wine Dad  
 'Dad drinks wine.'

b. taotao 'a pa-Ø-'ongol-ine aamae vavaa  
 Taotao TOP CAUS-Ø-drink-3SG.OBL Dad wine  
 'Taotao, (he) makes Dad drink wine.'

(20) Paran Seediq (Holmer 1996:101)<sup>16</sup>

wada p-smalu sapah awi ka pawan  
 PRET.AUX CAUS:build house Awi NOM Pawan  
 'Pawan made Awi build a house.'

## (21) Southern Paiwan

DECLARATIVE (REALIS)		CAUSATIVE	
k<em>esa	'cook'	pa-Ø-kesa	'let s.o. cook'
k<em>an	'eat'	pa-Ø-kan	'let s.o. eat, feed s.o.'
p<en>angul	'hit'	pa-Ø-pangul	'let s.o. hit'
m-aLap	'take'	pa-Ø-aLap	'let s.o. take'

## (22) Southern Paiwan

- a. na-p<en>angul tjay kivi ti kapi  
PERF-beat<AF> OBL Kivi NOM Kapi  
 'Kapi beat Kivi.'
- a'. na-pa-p<Ø>angul ti kapi tjay kivi  
PERF-CAUS-Ø-beat NOM Kapi OBL Kivi  
 'Kapi asked s.o. to beat Kivi.'

**3.2.1.2 Imperative.** The morphological marking of the imperative form varies from language to language. In some (e.g., Pazeh and Paiwan) a suffix (-i and/or -u) is attached to the verb base. In Atayal and Seediq, the verb base is unaffixed (in AF constructions).

## (23) Pazeh

DECLARATIVE (REALIS)		IMPERATIVE	
mu-tamak	'chop (wood)'	Ø-tamak-i	'chop!'
me-depex	'read, study'	Ø-depex-i	'read, study!'
mi-kita	'see'	Ø-kita-i	'look!'
ma-tanga	'open (door)'	Ø-tanga-i	'open (door)!'
m-angid	'cry'	Ø-'angid-i	'cry!'

## (24) Pazeh

- a. kinaakuxan yaku ini mu-sutun yaku siatu  
have.a.heatstroke ISG.NOM NEG AF-take.off ISG.NOM clothes  
 'I've had a heatstroke (because) I did not take off (my) clothes.'
- b. Ø-sutun-i siatu, ini ka-akux-ay  
Ø-take.off-IMP clothes NEG STAT-hot-IRR  
 'Take off your clothes (and) you will not be/(feel) hot.'

## (25) Mayrinax Atayal

DECLARATIVE, AFFIRMATIVE (REALIS)		IMPERATIVE	
c<um>ubu	'wrap'	Ø-cubu	'wrap!'
h<um>ihip	'kiss'	Ø-hihip	'kiss!'
m-ingilis	'cry'	Ø-ingilis	'cry!'

16. Only a few causative constructions were found in Holmer (1996) and Chen (1996). Causative examples are numerous in Pecoraro (1977), but the Seediq dialect (Taroko) investigated in his work is different:

## (i) Taroko Seediq (Pecoraro 1977)

DECLARATIVE, AFFIRMATIVE (REALIS)		CAUSATIVE	
m-lukus	'dress'	p-Ø-lukus	'dress s.o.' (p. 156)
m-axo	'wash'	p-baxo	'make s.o. wash' (p. 16)
d-m-ayao	'help'	p-dayao	'make s.o. help' (p. 47)

m-uwah	'come'	Ø-uwah	'come!'
ma-bahuq	'wash'	Ø-bahuq	'wash (clothes)!'
ma-qilaap	'sleep'	Ø-qilaap	'sleep!'
Ø-panaip	'fish'	Ø-panaip	'fish!'

## (26) Mayrinax Atayal (Huang 1995)

- a. ma-qilaap=ci' la  
 AF-sleep=1SG.NOM PART  
 'I was sleeping (just now).' (p. 40)

- b. Ø-qilaap!  
 Ø-sleep:IMP  
 'Sleep!' (p. 61)

## (27) Paran Seediq

DECLARATIVE, AFFIRMATIVE (REALIS)	IMPERATIVE
q<um>uti 'defecate'	Ø-quti 'defecate!'
m-imah 'drink'	Ø-mah 'drink!'
m-eluk 'close (door)'	Ø-leb 'close (door)!'
mo-buh 'bake in stones'	Ø-boh 'bake in stones!'
Ø-dehuq 'arrive'	Ø-dehuq 'arrive!'

## (28) Paran Seediq (Chen 1996)

- a. Ø-beebu huling-mu ka pihu  
 Ø-beat dog-my NOM Pihu  
 'Pihu beat my dog.' (p. 10)

- b. Ø-beebu pawan  
 Ø-beat Pawan  
 'Beat Pawan!' (p. 30)

## (29) Southern Paiwan

DECLARATIVE (REALIS)	IMPERATIVE
D<em>ukuL 'beat'	Ø-DukuL-u 'beat!'
t<em>ekeL 'drink'	Ø-tekeL-u 'drink!'
v<en>eli 'buy'	Ø-veli-u 'buy!'
Ø-vaik 'go'	Ø-vaik-u 'go!'

## (30) Southern Paiwan

- a. na-t<em>ekeL ti kapi tua zalum  
 PERF-drink<AF> NOM Kapi OBL water  
 'Kapi drank water.'

- b. t<Ø>ekeL-u tua zalum  
 drink<Ø>-IMP OBL water  
 'Drink water!'

Mantauran Rukai differs from these languages in that a verb occurring in an (affirmative) imperative sentence does not appear in its nonfinite form. It undergoes another type of conjugation and occurs in the "subjunctive" form, so called because this form also characterizes verbs occurring in conditional clauses and embedded verbs (for details, see Zeitoun 2000b). Verbs marked as causative/imperative, on the other hand, occur in their nonfinite forms.

## (31) Mantauran Rukai

DECLARATIVE (REALIS)		CAUSATIVE/IMPERATIVE	
o-tipitipi	'beat'	pa-Ø-tipitip-a	'beat!'
o-keLakeLange	'kick'	pa-Ø-keLakeLang-a	'kick!'
o-kane	'eat'	pa-Ø-kan-a	'eat!'

## (32) Mantauran Rukai

- a. o-tipitipi-La-ine                      zipolo  
 ACT.REAL-beat-1S.NOM-3SG.OBL   Zipolo  
 'I beat Zipolo.'
- b. pa-Ø-tipitip-a  
 CAUS-Ø-beat-IMP  
 'Make (him/her) beat (him/her)!'
- b'. pa-Ø-tipitip-ine                      zipolo  
 CAUS-Ø-beat(IMP)-3SG.OBL   Zipolo  
 'Make (him/her) beat Zipolo!'

**3.2.1.3 Irrealis.** We showed in Zeitoun et al. (1996 and 1997) that most Formosan languages exhibit a realis/irrealis dichotomy. In the four of the five languages reported here (Pazeh, Mayrinax Atayal, Mantauran Rukai, and Paran Seediq), the irrealis is marked on the morphological level through two processes: affixation and/or reduplication.<sup>17</sup>

In Pazeh, the stem of the verb is suffixed by *-ay*, while the first syllable of the verb undergoes *Ca-* reduplication.

## (33) Pazeh

DECLARATIVE (REALIS)		IRREALIS	
mu-baked	'fight'	Ø-ba-baked-ay	'will fight'
me-ken	'eat'	Ø-ka-kan-ay	'will eat'
mi-kita	'see'	Ø-ka-kita-ay	'will see'
ma-dawan	'bathe'	Ø-da-dawan-ay	'will bathe'

## (34) Pazeh

- a. ana me-ken daxfu  
 NEG AF-eat much  
 'Don't eat (too) much.'
- b. m<in>e-ken laisiw? mayaw, Ø-ka-kan-ay yaku  
 AF<PERF>-eat you not.yet Ø-RED-eat-IRR IS.NOM  
 'Have you eaten? Not yet, I am about to eat.'

In Mayrinax Atayal, the irrealis is marked through the prefixation of *pa-* (identical in form with the causative *pa-*) to the verb base (for details, see Huang 1995).

17. Note, in passing, that in some languages, the irrealis might be marked differently in AF vs. NAF constructions or for different types of verbs. In Mayrinax Atayal, for instance, an AF verb is prefixed by *pa-*. A NAF verb undergoes *Ca-* reduplication. Compare: *pa-tuting* 'will beat (AF)' vs. *ta-tuting-in* 'will beat (PF)' (for details, see Huang 1995). In Pazeh, on the other hand, both dynamic and stative verbs are suffixed by *-ay* but dynamic verbs undergo *Ca-* reduplication, while stative verbs are not (instead, they are prefixed by *ka-*). Compare: *ba-baked-ay* 'will fight' vs. *ka-lamik-ay* 'will be cold'.

- (35) Mayrinax Atayal
- | DECLARATIVE, AFFIRMATIVE (REALIS) |          | IRREALIS      |               |
|-----------------------------------|----------|---------------|---------------|
| k<um>itaal                        | 'see'    | pa-Ø-kitaal   | 'will see'    |
| n<um>aga'                         | 'wait'   | pa-Ø-naga'    | 'will wait'   |
| m-hahapuy                         | 'cook'   | pa-Ø-ghahapuy | 'will cook'   |
| m-itaal                           | 'see'    | pa-Ø-kitaal   | 'will see'    |
| ma-panga'                         | 'carry'  | pa-Ø-panga'   | 'will carry'  |
| ma-'agal                          | 'take'   | pa-Ø-'agal    | 'will take'   |
| Ø-tayhok                          | 'arrive' | pa-Ø-tayhok   | 'will arrive' |
- (36) Mayrinax Atayal (Huang 1995)
- a. Ø-panaip 'i' yaba'  
fish NOM father  
'Father is fishing.' (p. 41)
- b. pa-Ø-panaip=cu  
IRR-Ø-fish=1SG.NOM  
'I will go fishing.' (p. 154)

In Mantauran Rukai, the verb is prefixed by *amo-*.

- (37) Mantauran Rukai
- | DECLARATIVE (REALIS) |                 | IRREALIS         |              |
|----------------------|-----------------|------------------|--------------|
| o-akame              | 'roast'         | amo-Ø-akame      | 'will roast' |
| o-zapele             | 'fish (poison)' | amo-Ø-zapele     | 'will fish'  |
| o-ringiringi         | 'fry'           | amo-Ø-ringiringi | 'will fry'   |
| om-aLa               | 'take'          | amo-Ø-aLa        | 'will take'  |
| m-aava'i             | 'come'          | amo-Ø-kaava'i    | 'will come'  |
- (38) Mantauran Rukai
- a. o-zako'isi-ng-imite olozo  
ACT.REAL-sweep.away-already-1PL.INCL.OBL overflow  
'We were swept away by the flood.'
- b. olo moa-ta zoona'i, alo oveLe-ni mazao acilai  
if go-1PL.INCL.GEN that.(far) if typhoon-3SG.GEN a.lot water  
amo-Ø-zako'is-imite olozo  
IRR-Ø-sweep.away-1PL.INCL.OBL overflow  
'If we go there, during the typhoon season, (if) there is a lot of water, we [our village] will be swept away by the flood.'

In Paran Seediq, the verb is usually prefixed by *mu-*.

- (39) Paran Seediq (Yang 1977:692–699)
- | DECLARATIVE, AFFIRMATIVE (REALIS) |        | IRREALIS      |             |
|-----------------------------------|--------|---------------|-------------|
| q<um>iyuc                         | 'bite' | mu-Ø-qiyuc    | 'will bite' |
| m-iki                             | 'bend' | mu-Ø-biki     | 'will bend' |
| m-iyuk                            | 'blow' | mu-Ø-piyuk    | 'will blow' |
| Ø-puhuling                        | 'hunt' | mu-Ø-puhuling | 'will hunt' |

## (40) Paran Seediq (Chang 2000:97)

mu-Ø-quyox kusun  
 IRR-Ø-rain tomorrow  
 'It will rain tomorrow.'

**3.2.2 Morphological Alternations of Stative Verbs in Constructions Calling for a Nonfinite Verb Form.** In certain constructions (causative/imperative and irrealis), stative verbs in Pazeh, Atayal, Rukai, Seediq, and Paiwan are prefixed with *ka-* (note the vocalic variation in Seediq *k(u)-*, and the sound change *k* > ' in Southern Paiwan whereby *ka-* > '*a-*').

**3.2.2.1 Causative (and Causative Imperative).** In the five languages investigated, stative verbs may undergo causativization. On the other hand, while we were able to elicit stative verbs in the imperative form in Pazeh, Seediq, and Paiwan (see 3.2.2.2), we were unable to find such verbs in Mayrinax Atayal (see Huang 2000).<sup>18</sup> To cope with this cross-linguistic discrepancy, we therefore provide in this section examples where verbs are marked as causative/imperative.

## (41) Pazeh

DECLARATIVE (REALIS)		CAUSATIVE	
ma-kuris	'slim'	pa-ka-kuris	'make thinner'
ma-kelem	'salty'	pa-ka-kelem	'put on salt'
m-azih	'ripe'	pa-ka-azih	'ripen s.t.'
m-akux	'hot'	pa-ka-akux	'warm up'
Ø-asikis	'painful'	pa-ka-asikis	'cause pain'

## (42) Pazeh

- a. Ø-b<in>aged yaku  
 AF.STAT-fat<PERF> 1SG.NOM  
 'I used to be fat.'
- b. ana pa-ka-baged  
 NEG CAUS-STAT-fat  
 'Don't let (him/her become) fat!'

## (43) Mayrinax Atayal

DECLARATIVE, AFFIRMATIVE (REALIS)		CAUSATIVE	
Ø-rahuwal	'big'	pa-ka-rahuwal	'make s.t. big'
Ø-tikay	'small'	pa-ka-tikay	'make s.t. small'
ma-hauq	'soft'	pa-ka-hauq	'make s.t. soft'
ma-tanah	'red/ripe'	pa-ka-tanah	'make s.t. red/ripe'

## (44) Mayrinax Atayal

- a. Ø-rahuwal ku' xuil  
 AF.STAT-big NOM dog  
 'The dog is big.' (Huang 1995:41)

18. That in some languages stative verbs cannot undergo imperativization is not unusual, as data from less exotic languages show: French *\*Sois stupide!*, English *\*Be stupid!* vs. French *Ne sois pas (si) stupide!*, English *Don't be stupid!*

- b. **pa-ka-rahuwal(-Ø)** tikay ku' kaii-su'!  
 CAUS-STAT-big:IMP(-PF) little NOM language-2SG.GEN  
 'Speak a little louder!' (Huang 2000)

## (45) Mantauran Rukai

DECLARATIVE (REALIS)		CAUSATIVE	
ma-raveravere	'happy'	pa-ka-raveravere	'let s.o. be happy'
ma-zalame	'love'	pa-ka-zalame	'make s.o. love'
ma-taazi'i	'good, beautiful'	pa-ka-taazi'i	'let s.o. be good, beautiful'

## (46) Mantauran Rukai

- a. **ma-takoLa** taotao ocao-ni  
 STAT-bad Taotao man-3SG.GEN  
 'Taotao is a bad (person).'

- b. **pa-ka-takoL-a!**  
 CAUS-STAT-bad-IMP  
 'Make it bad!'

(47) Paran Seediq<sup>19</sup>

- p(u)-k(u)-maru** seedaq  
 CAUS-STAT-good man  
 '... (one must) be good with people ...' (Chen 1996:102)

## (48) Southern Paiwan

DECLARATIVE (REALIS)		CAUSATIVE	
Ø-tjengeLay	'love'	pa-'a-tjengeLay <sup>20</sup>	'make s.o. love'
ma-tjalaw	'angry'	pa-'a-tjalaw	'make s.o. angry'
ma-Leva	'happy'	pa-'a-Leva	'make s.o. happy'

## (49) Southern Paiwan

- a. **ma-tjalatjalaw** ti kivi  
 AF.STAT-RED:angry NOM Kivi  
 'Kivi is angry.'
- b. **pa-'a-tjalaw-sun** tjay kivi?  
 CAUS-STAT-angry-2SG.NOM OBL Kivi  
 'Did you make Kivi angry?'

19. Cf. additional data from Pecoraro (1977):

## (i) Taroko Seediq

DECLAR/AFFIRMATIVE (REALIS)	CAUSATIVE
malu 'good'	p-k-malu 'cure, mend' (p. 165)
naqex 'bad'	p-k-naqex 'make ... bad, damage' (p. 177)
paro 'big'	p-k-paro 'make ... big(ger)/tall(er), develop, give importance to'

## (ii) Taroko Seediq (Pecoraro 1977:192–193)

- a. **Ø-paro** sapax kasapax-so  
 AF.STAT-big house house-2SG.GEN  
 'Your house is a big house.'
- b. ima bi ka **p-n-k-paro** sao knklaan-so  
 who CAUS-PERF-STAT-big as knowledge-2SG.GEN  
 'Who has enriched your knowledge?' (lit. Who is the one that made your knowledge grow?)

20. There is another prefix *pa-'a-* that prefixes to stative verbs of sensation, yielding a different meaning, e.g., *pa-'a-qaLuman* 'feel hot'.

## 3.2.2.2 Imperative

## (50) Pazeh

DECLARATIVE (REALIS)	IMPERATIVE <sup>21</sup>	
ma-ngesen 'afraid'	ka-ngesen-i	'frighten'
	~ pa-ka-ngesen-i	'frighten!' <sup>22</sup>
m-akux 'hot'	ka-(a)kux-i	'warm up, heat!'
	~ pa-ka-(a)kux-i	'warm up!' <sup>23</sup>
Ø-lamik 'cold'	ka-lamik-i	'cool (off)'
	~ pa-ka-lamik-i	'cool (off)'

## (51) Pazeh

- a. ma-bini salaman  
AF.STAT-full bowl  
'The bowl is full.'
- b. ka-bin-i di salaman<sup>24</sup>  
STAT-full-IMP bowl  
'Fill in the bowl!'

## (52) Paran Seediq (Chen 1996:47)

- a. Ø-paru doriq laqi nii  
AF.STAT-big eyes child this  
'The child's eyes are big.'
- b. k(u)-paru hari kari-su  
STAT-big:IMP a.little language-2SG.GEN  
'Speak a little louder!'

## (53) Southern Paiwan

- 'a-Leva-'u!  
STAT-happy-IMP  
'Be happy!'

## 3.2.2.3 Irrealis

## (54) Pazeh

DECLARATIVE (REALIS)	IRREALIS	
ma-busuk 'drunk'	ka-busuk-ay	'will be drunk'
	~ ma-busuk-ay	'will be drunk'
m-akux 'hot'	ka-akux-ay	'will be hot' <sup>25</sup>
Ø-tilekeday 'full (of eating)'	ka-tileked-ay	'will be full' <sup>26</sup>

## (55) Pazeh

- a. mausay pa-kita takarad ka ma-ngesen yaku  
go CAUS-see doctor TOP AF.STAT-afraid 1SG.NOM  
'(When) I go to consult the doctor, I am afraid.'

21. In *ka-luhusu-i* 'do s.t.' (cited in Blust, 1999:341)—as in: *ana makelem saken, ka-luhusu-i* 'Don't salt vegetables, make (them just like this)!—the occurrence of *ka-* is thus not as obscure as Blust believes it is.

22. As in *ka-ngesen-i yaku* 'pa-ka-ngesen-i yaku' 'Frighten me!'

23. As in *ka-akux-i ki dalam* 'pa-ka-akux-i ki dalam' 'Warm up (the) water!'

24. Another verbal form *ka-mabin-i* (with the *ka-* and *ma-* prefixes cooccurring) was also accepted by Mrs. Pan. No semantic difference has been noted between the two forms.

25. *akux-ay* was given as an equivalent to *ka-akux-ay* in: *sutun-i siatu ka ini ka-akux-ay/akux-ay* 'Take off your clothes (so that you do not feel) hot.'

26. As in: *meken daxfu ka katilekeday siw* '(If) you eat (too) much, you will be full.'

- b. *ka-ngesen-ay* yaku ka mi-tuku taxabahal  
 STAT-afraid-IRR 1SG.NOM TOP AF-sit plane  
 'I will be afraid (if) I take the plane.'

## (56) Mayrinax Atayal

DECLARATIVE, AFFIRMATIVE (REALIS)	IRREALIS
Ø-kia' 'have'	pa-ka-kia' 'will have'
Ø-lawkah 'strong'	pa-ka-lawkah 'will be strong'
Ø-tikay 'small'	pa-ka-tikay 'will be small'
ma-urag 'dirty'	pa-ka-urag 'will be dirty'
ma-kiluh 'hot'	pa-ka-kiluh 'will be hot'

## (57) Mayrinax Atayal

- a. Ø-kia' a' pila' nku' nabakis  
 AF:STAT-exist NOM money GEN old.man  
 'The old man has money.' (lit: The old man's money exists.)
- b. ubwa' na' *pa-ka-kia'* pila' ni' yaba' mha' ku' 'ulaqi'  
 hope IRR IRR-STAT-exist money GEN father say NOM child  
 'The child hopes that his father will have money.' (Huang 1995:243)

## (58) Mantauran Rukai

DECLARATIVE (REALIS)	IRREALIS
ma-takoLa 'bad'	amo-ka-takoLa 'will be bad'
ma-ha'aoco 'scold'	amo-ka-ha'aoco 'will scold'
ma-'amaze 'dislike'	amo-ka-'amaze 'will dislike'
ma-pacai 'dry'	amo-ka-pacai 'will be dry'

## (59) Mantauran Rukai

- a. *ma-oLipi*-nga ana za'ananae  
 STAT-die.out-already that household  
 'That family clan has already died out.'
- b. avasae vaha-nai *amo-ka-oLipi* 'ina'i  
 a.pity language-IPL.EXCL.GEN IRR-STAT-die.out this  
 vaha-nai 'oponoho  
 language-IPL.EXCL.GEN tribe's name  
 'It is such a pity that our language, Mantauran, might die out.'

**3.3.3 Stative Verbs Can Undergo Voice/Focus Alternations.** Blust assumes that in Pazeh "stative verbs do not participate in the focus system" (1999:342). Thus, he treats *ka-...-an* and *ka-...-en* as two variants that generally "mark an adversative passive" and further compares these two circumfixes with Malay and Javanese *ke-...an* and *k-...-an*, which he identifies as cognates:

- (60) *ma-kelem* 'salty' *ka-kelem-an* 'over-salted, of cooked food' (p. 352)  
*m-akux* 'hot' *ka-akux-an* 'to get heatstroke' (p. 344)  
 Ø-lamik 'cold' *ka-lamik-an* 'to catch a cold' (p. 341)  
 lizax 'sun' *ka-lizax-an* 'to be burned or darkened by the sun'  
 ~ *ka-lizax-en* (p. 352)

Both internal and external evidence permit us to reach a quite different conclusion: first, that *ka-...-an* and *ka-...-en* should not be treated as circumfixes (at least in the Formosan languages), but as the cooccurrence of *ka-* with the PF *-en*

or LF *-an* in stative nonfinite verb bases; second, that stative verbs can undergo voice/focus alternations.

Lin (2000) provides two minimal pairs: *kan-en* ‘eat.PF’ vs. *ka-ken-en* ‘edible’ and *kita-en* ‘see.PF’ vs. *ka-kita-en* ‘visible’. These two examples show that *ka-* and *-en/-an* should be treated as independent variables; that is, one may occur without the other.

(61) Pazeh (Lin 2000:90)

- a. asay paimini? ka-ken-en  
 what this STAT-eat-PF  
 ‘What is this (unknown completely)? Something edible.’
- b. naki a dukun adu-en dini, kan-en nimu dadua lia  
 my LIG taro put-PF here eat-PF 2PL.GEN all ASP  
 ‘All my taros [that were] put here are eaten up by you.’

(62) Pazeh (Lin 2000:90)

- a. mi-kita=siw? haziak ka-kita-en nang mi-kita  
 AF-see=you not good STAT-see-PF not(like) AF-see  
 ‘Do you see (it)? (It is) not good, (I) don’t want to see (it).’
- b. imini siatu p-in-isuzuk-en di a’itukuan a  
 this dress CAUS-PERF-conceal-PF already chair LIG  
 ruburubu, nang kita-en ni saw, liaka iruma-en lia  
 below not(want) see-PF GEN person (still) find-PF ASP  
 ‘This dress has been concealed (under) the chair by me. (I) do not want it to be seen by others, but it still has been found out.’

A comparison of Pazeh with other Formosan languages indicates that stative verbs may undergo voice/focus alternation; the base form, however, must be prefixed by *ka-*.

(63) Paiwan

- a. Ø-tjengeLay ti kivi tjay paDang  
 AFSTAT-love NOM Kivi OBL Padang  
 ‘Kivi loves Padang.’
- b. ‘<in>a-tjengeLay-an ti kivi ni paDang  
 STAT-PERF-love-LF NOM Kivi GEN Padang  
 ‘Kivi was loved by Padang.’
- c. buLay ti kivi tu si-’a-tjengeLay ti paDang tjay kivi  
 beautiful NOM Kivi COMP RF-STAT-love NOM Padang OBL Kivi  
 ‘The reason why Padang loves Kivi is because Kivi is beautiful.’

**3.3.2 Summary and Historical Implications.** The morphological alternations discussed in 3.1 and 3.2 are summarized in tables 8 and 9. Based on this cross-linguistic pattern, two conclusions are reached. First, *ka-*, which recurrently occurs in stative nonfinite verb bases, must be treated as a single morpheme. Second, if it is true, as assumed by Blust (1995:585), that “phonological, lexical, and to some extent morphological comparison of the non-Formosan Austronesian languages yields a reconstructed language (‘Proto-Malayo-Polynesian’), which differs in significant respects from the reconstructed language [that] results when Formosan languages are included in the comparison (‘Proto-Austronesian’),” then we are forced to hypothesize that

causative verbs in PAN were morphologically marked by *pa-* and that stative verbs were distinguished from dynamic verbs through the marking of *ka-*.

A few Formosan languages (of those that preserve the morphological distinction in finite verb forms between dynamic and stative verbs) show that *pa-ka-* must have been later reanalyzed as *paka-* (Saisiyat) or replaced (Bunun and Thao). This tendency towards reanalysis and replacement in the causative construction is also well-attested in extra-Formosan languages, as illustrated in Blust (1999). In other languages, such as Yami or Tsou, the morphological distinction between dynamic and stative verbs seems to have been partially or totally lost.

TABLE 8. MORPHOLOGICAL ALTERNATIONS OF DYNAMIC AND STATIVE VERBS IN SOME FORMOSAN LANGUAGES

	PAZEH	ATAYAL	RUKAI	SEEDIQ	PAIWAN
DYNAMIC FINITE (AF DECLARATIVE/REALIS)					
	mu-, me-, ma <sub>1</sub> -, m <sub>1</sub> -, mi-	<um>, m-, ma-, Ø <sub>1</sub>	o-, om-, m-	<um>, m <sub>1</sub> -, mu- Ø <sub>1</sub>	<əm>, <ən>, m-, Ø <sub>1</sub>
DYNAMIC NONFINITE					
CAUS	pa-Ø-	pa-Ø-	pa-Ø-	p-Ø-	pa-Ø-
IMP	Ø-...-i	Ø-...	(pa-Ø-)	Ø-...	Ø-...-i/-u
IRR	Ø+RED-...-ay	pa-Ø-...	amo-Ø-...	—	—
STATIVE FINITE (AF DECLARATIVE/REALIS)					
	Ø, m <sub>1</sub> -, ma <sub>2</sub> -	Ø <sub>2</sub> , ma <sub>2</sub> -	ma-	m <sub>2</sub> -, Ø <sub>2</sub>	ma-, Ø <sub>2</sub>
STATIVE NONFINITE					
CAUS	pa-ka-	pa-ka-	pa-ka-	p-k(u)-	pa-ka-
(CAUS) IMP	(pa-)ka-...-i	(pa-)ka-...	(pa-ka-)	(p-)ka-...	(pa)ka-...-i/-u
IRR	ka-...-ay	pa-ka-...	amo-ka-...	mp-k(u)-*	—
	PAZEH	ATAYAL	RUKAI	SEEDIQ	PAIWAN

\* This form is found in the Taroko dialect. It is not clear from existing sources whether it is also found in Paran.



**4. LANGUAGES WHERE *PA-KA-* HAS BEEN REANALYZED AS *PAKA-*, OR REPLACED, OR WHERE THE MORPHOLOGICAL DISTINCTION BETWEEN DYNAMIC/STATIVE VERBS HAS BEEN PARTIALLY OR TOTALLY LOST.** Yeh (1991, 2000a, and 2000b) provides a number of morpho-syntactic tests (verbal affixation, negation, relativization, etc.) that indicate that Saisiyat exhibits quite the same distinction between dynamic and stative verbs. In causative constructions, dynamic verbs are marked by *pa-* and stative verbs by *pak-*. The segmentation of *pak-* as *pa-k*, though historically sound, lies on very thin evidence in this language (cf. *ma-skes* ‘cold’, the only verb where the *ma-/ka-* alternation has been found, as in *pa-ka-skes* ‘make s.t. cold’). Thus, it seems that *pa-ka-* has been reanalyzed as *pak-* through a process of phonological blending (see Zeitoun, forthcoming).

## (64) Saisiyat

a. yako s<om>i’ael ka pazay

1SG.NOM eat<AF> ACC rice

‘I ate the rice.’ (Yeh 1991:34)

a’. ‘oya’ pa-si’ael ka korkoring ka pazay

mother CAUS-eat ACC child ACC rice

‘Mother fed the child with rice.’ (Yeh 1991:68)

b. taw’an koza kin Ø-sobaLeh?

house how.much ASP big

‘How big is your house?’ (Yeh 2000a)

b’. so’o pak-sobaLeh switi’; yako ’okik bazae’

2SG.NOM CAUS-big a.little 1SG.NOM NEG hear

‘Please, speak a little louder; I cannot hear you.’ (Yeh 1991:68)

In both Thao and (Isbukun) Bunun, *paka-* has been replaced: by *pia* in Thao and by *pi-* in Bunun.<sup>27</sup>

## (65) Thao (Blust 1999:357)

DECLARATIVE (REALIS)

c-m-anit ‘to cry’

faqlu ‘new’

CAUSATIVE

pa-canit

pia-faqlu

‘make someone cry’

‘to innovate’

## (66) Bunun (Yeh, pers. comm.)

a. huud saikin mas danum

drink 1SG.NOM OBL water

‘I drank water.’

a’. ma-pa-hud saikin danum mas tina

AF-CAUS-drink 1SG.NOM water OBL mother

‘I let mother drink water.’

b. ma-kazav a danum

AF.STAT-cold NOM water

‘The water is cold.’

b’. ma-pi-kazav-ik mas danum

AF-CAUS-cold-1SG.NOM OBL water

27. Even if *pa-ka* has been reanalyzed as *paka-* and later replaced, this does not mean that the *ma- ~ ka-* alternation does not hold in the language in question (and that is true for extra-Formosan languages, too). In Bunun, for instance, this morphological alternation is found in nominalized constructions.

'I let the water cool.'

In Yami, though stative verbs are marked by *ma-*, in opposition to dynamic verbs (infixed by *<um>* and other variants), there seems to be no morphological distinction between causativized dynamic and stative verbs.

(67) Yami (Shih 1996)

a. ya k<um>an si mapay  
 TNS eat<AF> NOM Mapay  
 'Mapay is eating.'

a'. na pa-kan-en nu mavekes u kanakan  
 3SG.GEN CAUS-eat-PF GEN woman NOM child  
 'The woman made the child eat.' (p. 36)

b. ya ma-tava u kanakan  
 TNS AF.STAT-fat NOM child  
 'The child is fat.' (34)

b'. pa-tava-en mu u katawtawnu-mu  
 CAUS-fat-PF 2SG.GEN NOM body-2SG.GEN  
 'You should make yourself fat.' (p. 81)

In Tsou, dynamic and stative verbs are not morphologically distinguished (see Tung et al. 1964, Szakos 1994, Zeitoun 2000a). The only syntactic test that has been so far uncovered to differentiate these two types of verbs is the (non)occurrence of *o'ha* 'not really' (for details, see Sung 1999).

(68) Tsou

a. \*mi-ta o'ha boni ta tacimi  
 AF.REAL-3SG.NOM not really eat OBL banana

b. mi-ta o'ha kaebi to pasuya  
 AF.REAL-3SG.NOM not really like OBL Pasuya  
 'He does not really like Pasuya.'

**5. CONCLUSION.** If there is a lesson to be learned, it is perhaps that to achieve the reconstruction of PAN morphology, two factors must be taken into consideration: (i) the extreme diversity of the Formosan languages (on which more in-depth studies are crucially needed), as cross-linguistic comparisons might reveal a pattern (partially) lost in other Austronesian languages, and (ii) the intertwined relationship between morphology and syntax.

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