

KELEY-I PHONOLOGY AND MORPHOPHONEMICS

LOU HOHULIN and MICHAEL KENSTOWICZ

Keley-i is a Malayo-Polynesian language spoken by approximately 5,000 people on Central Luzon in the Philippines between the Ibaloi and Ifugao territories. Although culturally Keley-i speakers are Ifugao, their language shares features of both adjacent families and has recently been placed in a separate group called Kallahan by Reid (1975). This study is based on the fieldwork of the first author and her husband who visited the Keley-i area many times between 1965 and 1974.

There are 23 phonemes in Keley-i, 18 consonants and five vowels.

p	t	c	k	ʔ	i	u
b	d	ɟ	g		e	o
	s	ʃ		h		a
m	n		ng			
w	l	y				

The palatal obstruents are inordinately rare, having arisen from palatalisations of dentals by y or occurring in borrowings from neighbouring languages where these sounds are as common as the stop consonants.¹ Aside from borrowed words like ʔiskul 'school' and ʔistet 'States', s is a variant of t before i, as can be seen by the following forms where the infix -in- has been placed inside roots beginning with t: takang 'to open the mouth', s-in-ekang; tugun 'to advise', s-in-ugun. The remaining consonants have relatively free distribution except for n, which assimilates to the point of articulation of a following consonant, and ʔ. The glottal stop alternates with Ø in two situations. First, stems ending in a vowel take an inserted ʔ before pause and before a vowel. Thus, gesi 'to carve' appears as gesiʔ at the end of a phrase

and as *gesiʔ-an* when the suffix *-an* has been appended to the stem. Although /*gesiʔ*/ could be viewed as the underlying form and a rule deleting ʔ before words beginning with a consonant invoked, the fact that *u* glides to *w* before a vowel² militates against this approach: cf. *bayu* 'to pound rice' which appears as *bayuʔ* before pause but as *bayw-an* before a vowel. If /*bayuʔ*/ were the underlying form, an otherwise unnecessary and unnatural rule deleting ʔ in the context *u__V* would be required. On the other hand, if the underlying forms are /*bayu*/ and /*gesi*/, all that is required is to order the rule gliding prevocalic *u* before the rule that inserts ʔ between two vowels. The other ʔ-∅ alternation occurs with the affixes /*in*/ and /*um*/ which can appear either prefixed or infix. Their underlying shape emerges when they are infix, while when prefixed a glottal stop is inserted since no Keley-i word begins with a vowel phonetically: cf. the forms of *dilag* 'to light' *d-in-ilag*, *d-um-ilag*, *ʔin-dilag*, *ʔum-dilag*. It should be noted that all roots which begin with a glottal stop must be assumed to have that sound present in their underlying forms, since the glottal stop is not lost, even when preceded by a consonant-final prefix: cf. *ʔinum* 'to drink', *man-ʔinum*. The contexts in which the glottal stop is inserted in Keley-i are summarised in the following rule.

$$\emptyset \rightarrow ʔ / \left\{ \begin{array}{l} \# _ V \\ V _ V \\ V _ \text{pause} \end{array} \right\}$$

Turning to the vowels, *e* is always lax while *i* and *u* are lax only before syllable-final velars. Aside from a few words like *toʔon* 'year', *o* is limited to borrowings.

As in other languages of the Philippines, much of the morphology of the verb in Keley-i is connected with the highlighting or bringing into focus of a particular NP in the sentence. The syntactic aspects of this Philippine phenomenon have been treated by a number of writers, most recently by Schachter (1976). Since we are concerned with the phonology and morphology of the Keley-i verb, only a brief description of the syntactic facts will be presented here.

In every sentence a particular NP is highlighted or made the 'topic'. It will usually correspond to a NP marked by the definite article in English. Non-focused NPs in the sentence are usually indefinite. Pronouns occur in a focus and a non-focus set (also oblique) while nouns are marked by a binary system of particles.

	pronoun sets			particles	
	focus	non-focus		focus	non-focus
1sg.	ʔak	ku	personal	hi	nan hi
2sg.	ka	mu	non-personal	hu/∅	ni
3sg.	∅	tu	locative	di/∅	di
ldu.	ʔita	ta			
1pl.excl.	kami	mi			
1pl.incl.	itsu	tayu			
2pl.	kayu	yu			
3pl.	ʔida	da			

The verb is marked by a portmanteau morpheme expressing tense and 'agreement' with the highlighted NP in terms of its syntactic function in the sentence. Thus, compare the two sentences below.

- (a) b-imm-edbed hi Juan ni paʔul.
'John has bound some cane.'
- (b) b-in-edbed nan Juan (hu) paʔul.
'John has bound the cane.'

In (a) the subject 'John' is in focus, while the object 'cane' (paʔul) is not. This is marked by the appropriate particles. The past tense on the verb bedbed 'to bind' is marked by the infix -imm- since it is the subject of the sentence that is highlighted. On the other hand, in (b) paʔul is in focus and 'John' is not. This necessitates a different agreement marker on the verb. In this case the past tense is marked by -in-, used to signal object focus. It should be noted that the word order in Keley-i is fixed: Verb-Subject-Object. Transposition of the subject and object in either (a) or (b) leads to an ungrammatical sentence. Keley-i seems to differ in this respect from some other Philippine languages where the word order is apparently more free.

In addition to subject and object focus, Keley-i has what we will call (c) accessory focus (used for instrumentals), (d) referent focus (used when the action of the verb is directed to an object located in a particular region of time or space), and (e) beneficial focus. Examples of the past tense of bedbed in each of these foci follow.

- (c) ʔim-bedbed nan Juan ʔetan ʔikat ni paʔul.
that string
'John has bound the cane with that string.'
- (d) b-in-edbed-an nan Juan hu heli tu.
leg his
'John has bound (it, e.g. the wound) on his leg.'

(e) ?im-bedbed-an nan Juan hi Pablo ni pa?ul.

'John has bound some cane for Paul.'

It should be pointed out that a Keley-i sentence frequently has only two NPs per clause and for this reason some of the above sentences, while perfectly grammatical, are a bit unnatural. When there are more than two NPs in a clause, the focus NP must appear in one of the first two NP slots. The subject must appear immediately after the verb, even if it is not in focus. The position of the object, referent, accessory, and beneficial NPs is dependent on which of these NPs is in focus. This constraint accounts for the fact that the object pa?ul occupies the third NP slot in (c) and (e).

Most of the morphophonemic alternations in Keley-i occur in the verb inflection. In each of the five simple foci enumerated above, a verb appears in an imperative form and three tense forms: past, present, and future. The basic opposition is between past and non-past or more accurately between perfective (completed action) and imperfective (incompleted action). The imperfective is broken down into present (action begun) vs. future (action not yet begun). As we shall see, these two basic oppositions are reflected in various ways in the morphology. The overwhelming majority of verb roots are disyllabic, occurring in two canonical forms: CVCV(C) or CVCCV(C). Examples of the latter type are ?agtu 'to carry on the head' and duntuk 'to punch'.

subject focus	fut.	man-?agtu	?um-duntuk
	past	nan-?agtu	d-imm-untuk
	pres.	ka-man-?agtu	ka-?um-duntuk
object focus	fut.	?agtu-?en	duntuk-en
	past	?-in-agtu	d-in-untuk
	pres.	ka-?agtu-?a	d-in-untuk
accessory focus	fut.	?i-??agtu	?i-dduntuk
	past	?in-?agtu	?in-duntuk
	pres.	ke-?i-??agtu	ke-?i-dduntuk
referent focus	fut.	?agtu-?an	duntuk-an
	past	?-in-agtu-?an	d-in-utuk-an
	pres.	ka-?agtu-?i	ka-duntuk-i
beneficial focus	fut.	?i-??agtu-?an	?i-dduntuk-an
	past	?in-?agtu-?an	?in-duntuk-an
	pres.	ke-?i-??agtu-?i	ke-?i-dduntuk-i

Inspection of these paradigms reveals that, by and large, the present and future are differentiated from the past in the same way and that