

MORPHOPHONEMICS OF VERB SUFFIXES IN TSOU

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1. INTRODUCTION

Tsou, an Austronesian language of Taiwan, has commonly been analysed without final consonants in underlying forms. At the same time, there are not only medial consonant clusters of a fair degree of complexity, but also such clusters initially. In addition, final vowels fall phonetically into three separate groups, characterised by devoicing, an [h] offglide, and glottalisation respectively (Lin 1952:210). Along with the unusual contour of its base forms and the variation in treatment of final segments, Tsou is alleged to have a high degree of irregularity in verb inflection. Before inflectional suffixes, some of which have three allomorphs, vowels sometimes change, sometimes drop, and occasionally remain unchanged.

It is the contention of this paper that the underlying structure of this language is far different from that implied superficially by the phonetic data sketched above. The supposedly irregular verb inflection is in fact quite regular; moreover, the underlying morphemes of the language are of a quite different configuration than indicated by an

analysis which demands that there be no morpheme-final consonants. The argument will be that both the treatment of final vowels and the phonological changes involved in suffixing can be accounted for most economically if underlying forms may have, in any syllable, final consonants.

2. SOME SUGGESTED PHONOLOGICAL ANALYSES

With minor difference, previous workers (Ogawa 1935, Lin 1952, Tung 1964, and Tsuchida 1969) consider the segmental phonemes of Tsou to be the following:¹

p	t	c	k	ʔ	i	u
b	d				e	ə
m	n		ŋ		a	
f	s		h			
v	z	r				

Both Tung and Ogawa agree that syllabic vowels may occur without intervening consonants. Two-consonant clusters are quite common, both initially and intervocalically. Tung's phonetic characterisation of consonant clusters will be pertinent to the discussion to follow. He points out that while in general a voiceless stop is unaspirated, "Only when /p t c k/ are followed by /f/ or /s/ a 'puff of the air' is always heard between the stop and the spirant." (Tung 1964:10). This puff of air is so distinct that, as he points out, it is often transcribed as a vowel, either an echo of the preceding vowel or a neutral or low vowel ([ə] or [a]).

While there is general agreement on the status of consonants and vowels, glides are more of a problem. The close phonetic transcription of Ogawa indicates that there is some free variation between vowels and glides. This variation is found within the speech of a single speaker, as, for example, the following set of alternations within a single text (Ogawa 1935):

jaintsa iaintsa 'say'

It does not appear from this data that glides are phonemically distinct from vowels.

Tung never records glides separately in the orthography. Rather, he states a rule for determining whether in context a segment is to be interpreted as syllabic (i.e. a vowel) or non-syllabic (i.e. a glide):

"/e/ is syllabic immediately before another stressed vowel or after it but not in the final position. /o/ is non-syllabic between two other vowels of which the one preceding it is stressed. Otherwise they are syllabic." (Tung 1964:20)

Tung indicates another variation, one between vowels and continuant consonants:

"Whereas Tfuea and Luhtu [Tsou villages] have /pz, nz, hz/, etc., Tapangu [a third village] has the vowel /i/ in place of /z/,... It goes without saying that the /z:i/ correspondence does not apply to /z/ as a simple consonant in Tfuea and Luhtu. In that case /z/ in Tfuea and Luhtu is also /z/ in Tapangu." (Tung 1964:18)

"In the speech of the Luhtu people, another apical vowel we symbolize with 'r' is found in the place of /e/ in the other two dialects on many occasions in certain positions, leaving /e/ totally unaffected [*sic*] in those positions only in relatively few cases ... However, the situation is not so simple in regard to the occurrence of /r/. It is in fact not consistently distinguished from /e/ with different persons." (Tung 1964:20)

These descriptions of vowels and non-syllabic alternations make the nature and form of these non-syllabics far from clear. For example, the segment transcribed as e may either be syllabic, non-syllabic (but presumably not a variant of r), or varying dialectally with r. o may be syllabic or non-syllabic, but presumably distinct from the segment v which is recorded in the phonological inventory.

These variations are attributed, then, sometimes to free variation, and at other times to dialect differences. In any event, their phonemic status is in doubt. As we shall see, proper analysis of these segments is central to the question of canonical form in Tsou. A great deal about their nature and behaviour may be learned through the analysis of verb forms, the problem to which we now turn.

3. VERB INFLECTION

Inflected verbs have both suffixed and unsuffixed forms.² While the unsuffixed verbs may have other affixes, for our purposes we shall be concerned only with the difference between suffixed and unsuffixed forms. These suffixed forms will, furthermore, be limited to two categories: those in which the suffix a (or its putative allomorphs va or za) appears, and those in which the suffix i (with its putative allomorphs vi or zi) appears.

3.1. VERBS WITHOUT STEM CHANGE

Regular verbs are those in which the suffixation of a or i apparently causes no changes in the stem.³ These are such verbs as:

<i>Unaffixed</i>	<i>Suffixed</i>	
etokə	etokəa	'strike with cudgel'
əmnə	əmnəa	'be good'
maaseu	paaseua	'fish with a net'
coŋo	coŋoa	'hurt'
tufŋi	tufŋia	'fish by torchlight'
tmələ	taləi	'hear'
eofŋu	eofŋui	'headhunt'
pofuŋu	pofuŋua	'carry on head'
zonso	zonsoi	'shoot deer by a stream'
sume	sumea	'be sweet (of wine)'

Clearly, these forms may be analysed as the simple addition of a suffix to a stem, without morphophonemic change. If all stems are in fact vowel-final, then most of the verbs should be in this category (allowing for some irregular forms). In fact, according to Tung, most verbs are irregular in one way or another. It is these supposedly irregular forms which will in fact demonstrate regular morphophonemic changes.

3.2. VERBS WITH SUPPLETIVE SUFFIXES

A large group of verbs are analysed by Tung as dropping the stem-final vowel of the unaffixed form before adding the suffix. The suffix will then itself be irregular, either *za* or *va* as an allomorph of *a*, or *vi* or *zi* as an allomorph of *i*. For example:

<i>Unaffixed</i>	<i>Suffixed</i>	
ahoi	ahoza	'begin'
toʔtohəŋe	toʔtohəŋva	'think'
sifkou	sifkova	'flay'
eansou	eansovi	'breathe'
toniou	toniovi	'wash'
tiavai	taivaza	'hold with two hands'
eiʔmi	eiʔmzi	'come from'

To consider these forms as irregular misses a clear phonological generality. Where the final vowel in the unaffixed form is *i*, the putative suffix begins with *z*; where it is *u* or *ə*, the suffix is said to begin with *v*. It is not the suffixes which vary, it is the stems.

The question then is whether a stem-final vowel changes to a consonant before a suffix; or whether on the other hand the consonant becomes a vowel (or glide) in word-final position. Since in the preceding examples we have vowels which have not changed before suffixes, these