A NOTE ON THE PROTO-OCEANIC VOWELS[1]

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0. INTRODUCTION

Followers of the Dempwolff tradition have generally assumed that Proto-Oceanic (POC) has to be reconstructed as having a 'classical' five-vowel system, which is derived from the four vowels and the several diphthongs of Proto-Austronesian (PAN) in the following way:[2]

(1)

PAN	*i	*uy	*ay	*əy	*a	*aw	*u	*iw
↓								
POC	*i		*e		*a	*o	*u	

Of particular interest in this paper are the POC vowels *e and *o. Their development from PAN can be seen in the following examples, where their subsequent development in one Oceanic language, Fijian (FIJ), is also shown.[3]

	PAN		POC		FIJ	
(2)	*sakay	>	*nsake	>	ɗake	'ascend, upwards'
	*matay	>	*mate	>	mate	'die'
(3)	*takan	>	*tokon	>	i ti/toko	'staff, pole'
	*laŋaw	>	*laŋo	>	laŋo	'a fly'

Although to my knowledge no specific claims as to the phonetic nature of the POC vowels has been made, I think it fair to state that most Austronesianists work on the assumption that the POC five-vowel system was minimally different from the five-vowel system of a large number of its daughter-languages; i.e., the assumption is that the proto-vowels *i, *e, *a, *o, and *u were probably very similar to the vowels [i], [e], [a], [o], and [u] which occur in a large number of present-day Oceanic languages.

In this note I wish to cast some doubt not only on this assumption, but also on the wider assumption that POC had a five-vowel system. The data on which the hypothesis to be presented is based are drawn largely from FIJ and from some of the languages of the Southern New Hebrides (SNH), particularly Eromangan (ERO) of Eromanga Is., Aneityumese (ANT) of Aneityum Is., and Lenakel (LEN) of Tanna Is., all of which are members of the Oceanic subgroup.[4]

1. SOME CASES OF POC *o AS A FRONT VOWEL IN SNH

There are a number of unambiguous cases in which PAN *ə, POC *o, must be interpreted as having been a front vowel in a language ancestral to all the SNH languages. Consider the following data.

Before *a and *u, POC *t has the reflexes ERO t, ANT t, and LEN t or r.[5] Although POC final vowels are usually lost in SNH, these reflexes of *t are consistent whether or not the following *a or *u has been retained, or, if retained, whether or not the following vowel is still a or still u. For example:

	PAN		POC		ERO	ANT	LEN	
(4)	*taliŋa	>	*taliŋa	>	teluŋu-	in/tiiŋa-	ni-mwa/telŋ-	'ear'
(5)	*mata	>	*mata	>	ni/mt-	nesŋa-ne/mta-	ni-/mr-	'eye'
(6)	*kutu	>	*kutu	>	no/xut	ne/xet	kur	'louse'

Before *i and *e, on the other hand, POC *t has the reflexes ERO s or h,[6] ANT s, and LEN s, whether or not the following *i or *e has been retained, or, if retained, whether or not the following vowel is still i or still e. For example:

	PAN		POC		ERO	ANT	LEN	
(7)	*t[in]aqi	>	*tinaqe	>	nouse-n/si-	ne/sŋa- 'spirit'	ni-/sŋaa-	'intestines'
(8)	*matəy	>	mate	>	mah	mas	mi-s	'die'

Before POC *o, however, the reflexes of POC *t vary. Some cases show the same reflex as that before non-front vowels (i.e., ERO t, ANT t, LEN t or r):

	PAN		POC		ERO	ANT	LEN	
(9)	*təka	>	*toka	>	e/te	e/tex 'sit'	a/ni-k	'settle,stay'
(10)	*təbus	>	*topu	>		ne/to	ni-/ruw	'sugarcane'
(11)	*tələn	>	*toñol	>	e/toŋol/i	a/tleŋ[7]	ti-ŋai	'swallow'
(12)	(*kanTuŋ?)	>	*kato	>		in/xat	kani-/m	'basket'
(13)	(*puseị ?)	>	*mputo	>	io/mput		ni-/pri-/ŋ-	'navel'

Other cases, however, show the same reflex as that before front vowels (i.e., ERO s or h, ANT s, LEN s):

	PAN	POC	ERO	ANT	LEN	
(14)	*təlu	> *tolu	> de/hel	e/sej	ki-/sil	'three'
(15)	*təkən	> *tokon	>	ni/sex	k-a/ski-n	'crutch, staff, pole'

The data in (9) through (15) show two different sets of reflexes of POC *t before *o. There are only two clear cases of *t > s (or h) before *o. Of these, however, example (15) has a POC reconstructed form so nearly identical to that of the POC form in (9) (where *t > t (or r) before *o) as to cast doubt on any proposed explanation involving a conditioned split in the reflexes of *o antedating, and thus conditioning, the split in the reflexes of *t. It thus appears that some cases of what has been reconstructed as POC *o must have been non-front (e.g., (9) through (13) above), while other cases must have been front (e.g., (14) and (15) above). The case would be strengthened if front-vowel reflexes of *o in *tolu and *tokon (but not in *toka, *topu, *toñol, *kato, or *mputo) were found in other Oceanic languages. At present, no such data have been located.

2. e/o DOUBLETS IN FIJ

There is, however, evidence of a different kind which suggests that *o has front as well as non-front reflexes. A cursory examination of words containing PAN *ə in Dempwolff (1934-38) shows the following pattern:

(16) PAN *ə > FIJ

o :	82 cases
e :	17 cases
a :	7 cases
i :	2 cases
u :	2 cases

That is, PAN *ə becomes FIJ o in only three-quarters of the 110 etyma observed. More significantly, PAN *ə becomes FIJ e in at least 15% of these etyma.

Any attempt to verify a possible prejudice by Dempwolff in favour of FIJ e as a reflex of *ə --such a possibility having been suggested by George Grace (pers. comm.)--remains virtually impossible. In other words, Dempwolff may have favoured *ə > e (as opposed to *ə > a, i, or u) but we cannot on present evidence decide the extent of those factors which may have influenced Dempwolff's work other than the ones he himself made explicit.

What is of interest, however, is the existence of a number of doublets in FIJ, one member of the pair containing o and the other member being virtually identical except that it has e where the first had o. Those isolated so far include the following:

(17) PAN *bəlit 'twist' > { FIJ veli-/ya 'curl, curly' ; FIJ voli-t/a 'round, about, of motion' }

(18) PAN *bətaq 'whole' > { FIJ beta 'be in full bloom' ; FIJ bota 'ripe, of fruits, etc.' }

(19) PAN *bəTak 'split' > { FIJ bete-k/a 'break brittle things' ; FIJ bote 'undo in order to break' }

How can these doublets be accounted for? Borrowing is often a convenient panacea in cases like this, but I feel that one has to at least partly document the sources of borrowed words when one is faced with evidence of this kind, and unless this can be done here we must look elsewhere for an explanation. Another possibility--that doublets developed in different morphological environments which provided different conditioning--does not look promising, at least on the basis of the available data. We are thus again led to the conclusion that what has been reconstructed as PAN *ə, POC *o, had front as well as non-front reflexes in FiJ (and in a language ancestral to it?),

and that the conditioning of these reflexes cannot be established on the basis of the data presently available.

3. IMPLICATIONS

The data presented above show what appears to be an unconditioned split in the reflexes of PAN *ə, POC *o. Now either this split occurred separately in SNH and FIJ, in which case it is of minimal interest to the reconstruction of the POC vowel system; or it occurred in a language ancestral to both SNH and FIJ. While this latter is the most economical hypothesis, it is also supported by external evidence. Thus a number of languages show fairly regular occurrences of PAN *ə > o (e.g., PAN *waRej 'vine' > Banoni vano, *bəŋi > boŋi, etc.), but they also show irregular occurrences (like FIJ) of *ə > e (e.g., PAN *bəkas 'residue' > Banoni beghas/a 'defecate'). This suggests that the split-reflex phenomenon is not restricted to SNH and FIJ, but is quite general in Oceanic.

A probable explanation of these and similar data is as follows. The first stage in the development of the Oceanic vowels is that of PAN, which had four vowels:

(20)

*i		*u
	*ə	
	*a	

It is quite possible that the vowel *ə has both front and non-front allophones in PAN. Note here that Tagalog has i, u and a reflexes of *ə (depending on environment). In addition, the considerable amount of i/u variation in many Austronesian languages (Blust 1970) suggests that front/non-front alternation was not uncommon.[8]

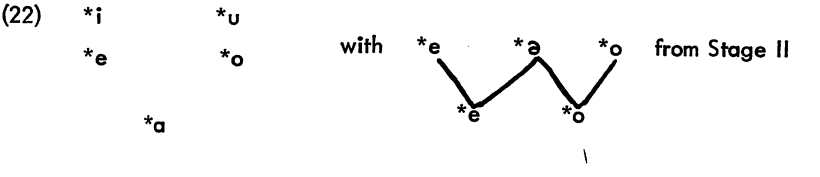
If this hypothesis is correct, then the second stage in the development of the Oceanic vowels may be represented as (21):

(21)

The vowels *e and *o develop in final position only from the PAN diphthongs. Presumably at this stage *ə retained its front and back allophones, but these would have occurred in non-final position and would thus be in complementary distribution with *e and *o.

The third stage may be represented as (22):

(22)



Here the vowel *ə has been merged with both of the other mid vowels.

The general view to date has been that (22) represents the POC vowel system, and that *ə from (20) became *o. The facts presented in sections 1 and 2 above, however, seem to me to be better explained if the POC vowel system is represented by (21), with (22) being a post-POC development.[9] That is, the variability between front and non-front reflexes of PAN *ə can be better explained in terms of a fluid system like (21), where not only do the vowels *e and *o occur as full phonemes, but vowels like them occur as allophones of another vowel, *ə. Further data are

needed to assist in confirming or disproving this hypothesis. The evidence presented here, however, suggests that the general view of a POC five-vowel system may need to be revised.

NOTES

1. This paper is a revised version of one presented to the Tenth Annual Congress of the Linguistic Society of Papua New Guinea, held at Port Moresby in September, 1976. I have profited from discussions with George Grace, Peter Lincoln, and David Walsh, although I reserve responsibility for errors and misinterpretations.

2. In recent years PAN *ə has generally been written as *e for typographical convenience. I retain the symbol *ə here in order to avoid confusion with the POC vowel *e.

3. Most PAN reconstructions are from Dempwolff (1934-38). Most POC forms are from Grace (1969) with occasional slight revisions--e.g., the addition of (or the removal of parentheses from) final consonants.

4. The other Tanna languages and dialects (North Tanna, Whitesands, Nivhaal, Southwest Tanna, and Kwamera) have similar phonological histories to that of Lenakel.

   I assign the SNH languages to Oceanic for the following reasons: they merge PAN *p and *b; they distinguish the POC 'labiovelars' from the simple labials; they show inalienable and alienable possessive constructions; and they reflect a number of 'characteristic' Oceanic lexical items or innovations.

5. The conditioning of the LEN reflexes t and r is as follows:

*t- > r- in kinship terms; t-, -r- elsewhere;

*-t- > r;

*-t > t.

6. Generally, the reflex is s initially, h finally, and s or h medially. The situation is complicated by a considerable amount of free variation between s and h, since a sound change s > h is currently in progress.

7. ANT appears to reflect the PAN form while ERO and LEN reflect the POC metathesised form.

8. Peter Lincoln first suggested the relevance of this to me. The kinds of variation I am speaking about (which are catalogued in great detail in Blust 1970) are, for example, POC *kulit 'skin' > Proto-Polynesian *kili; POC *inum 'drink' > FIJ ŋ/unu; and so on.

9. There is some evidence that the merger of PAN *i and *uy also did not take place until some post-POC stage. Note PAN *apuy 'fire' > ANT inx/ab, Ni-vhaal n/apw, where the nature of the labial reflexes suggest that the following vowel (which was subsequently lost) was *u and not *i (cf. Lynch in prep.). Support for this view comes from Banoni, where POC *p is generally lost before *u and retained elsewhere, but where PAN *apuy > dz/ai. Lincoln (1976:263) suggests as a possible explanation that "the p was lost before the change *uy to *i".

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