

Reconstructing Proto-Polynesian (PPN)

Irwin J. Howard and Byron W. Bender

Department of Linguistics
University of Hawai'i at Mānoa

Instructions: On the basis of the 41 words in five sister languages given in table 1 below, reconstruct the sound system of Proto-Polynesian. This task is less difficult than it appears if you approach it step-by-step.

1. Determine each set of **sound correspondences**. For example, HAW ‘, MAO k, SAM ‘, TAK k, TON k is one set. It is found, first of all, in the second syllable of No. 1. ‘learn, teach’. For ease of reference, write the numbers of the examples containing each correspondence after each correspondence on the same row. List the correspondence sets you find in the format of the following example, which gives the four correspondence sets to be found in the first word (with each corresponding sound in the same left-to-right order of the languages), each followed by the numbers of all the examples in which the same correspondence set recurs. (The blank preceding each correspondence set will be filled in with Step 3 below.)

___ \emptyset / \emptyset / \emptyset / \emptyset / \emptyset	1, 2, 4, 5, 10, 13, 23, 25, 36
___ a / a / a / a / a	1, 2, 2, 4, 5, 9, 10, 11, 12, 12, 13, 14, 15, 16, 16, . . .
___ ‘ / k / ‘ / k / k	1, 6, 7, 8, 10, 16, 21, 28, 38
___ o / o / o / o / o	1, 3, 3, 4, 10, 13, 13, 15, 17, 18, 20, 23

HINT: In Polynesian languages, one can expect to find consonants and vowels alternating in a CV.CV. . . . pattern, but with the C sometimes missing from a given syllable. Record these missing consonants with a zero (\emptyset) in your correspondence sets. Thus the first correspondence set in the example records the fact that an initial consonant is missing from the words for ‘learn, teach’ in each of the five languages. **Do not mix vowels and consonants in the same correspondence set.**

There are three special consonant symbols used in the words:

‘	the “ <i>okina</i> ” of Hawaiian and Samoan (a glottal stop)
ŋ	the velar nasal that occurs in Māori, Samoan, and Tongan
wh	the <i>wh</i> combination in Māori; consider this as a single consonant, a bilabial voiceless fricative

Because the correspondence sets recur, you will find that there are a limited number of them. Although the first word yields four, and we might therefore expect 41×4 , or a total of 164, the actual total turns out to be just over 20, because the same sets recur so often. (This means that each sound in the parent language changed in the same way in the same places in the many words in which it was found.) It is this recurring regularity that helps us show that all five languages were earlier one-and-the-same language, which we call Proto-Polynesian, and it is why we are able to use the metaphors “parent language” and “daughter languages.”

Ignore the underlined words. Do not confuse **discontinuous correspondences** (blanks in correspondence sets resulting from absent cognates) with the zero consonants in cognate words. The underlined words are thought to have replaced earlier cognate words in the languages where they occur. You should collapse the discontinuous correspondence sets caused by missing cognates into the most similar correspondence sets with which they agree. Thus, for example, you are entitled to collapse the discontinuous correspondence set with *m*'s in No. 13 'shark' with the complete correspondence set with *m*'s in No. 12 'wind':

___	m / m / m / m / m	12
___	m / m / m / m / ___	13

Thus you should show only the following as the result of the *m*'s in Nos. 12. and 13.:

___	m / m / m / m / m	12, 13
-----	-------------------	--------

- After you have extracted all the correspondence sets, rearrange them by rows into an order that has identical or similar sounds in adjacent rows, insofar as possible. This will mean grouping the vowel correspondence sets and the consonant correspondence sets separately. It will also mean grouping the liquids and nasals separately, and so forth.

When the same sound occurs in more than one correspondence set, these sets are said to be **overlapping correspondences**. We may be able to relate some of them to a single sound in the protolanguage by the operation described in 5. below.

- Taking the clearest cases first, decide what the nature of each protosound must have been, and write it (with pencil) in the blank preceding the correspondence set. (Put an asterisk before it to identify it as a protosound.) In the simplest case, all five languages have the same sound, and you can assume that the protolanguage had that sound also. This is called an **identity correspondence**. Where a correspondence set shows variety among the daughter languages, choose one of the sounds tentatively as the protosound, and briefly present your reasons for the choice.
- Note that if some languages have \emptyset while others have a given consonant, there are two choices: (a) the protolanguage had that sound and it was lost in the languages with \emptyset , or (b) the protolanguage had \emptyset and certain daughter languages *added* a sound. For this latter to be a regular change, the context in which this sound was added must be predictable.
- Māori *wh* is (for our purposes, at least) in **complementary distribution** with the MAO *h* that corresponds with *f* in SAM, TAK, and TON. When does this *wh* occur and when does *h* occur?

___	h / wh / f / f / f	14, 19, 30, 40
___	h / h / f / f / f	3, 18

HINT: Consider the position of *wh* and *h* in each word (whether initial or medial), and what vowels follow each. Although we do not have examples for all vowels in our data, the special place for *wh* turns out to be initially before unrounded vowels, and the more widespread and general position for *h* can simply be stated as "elsewhere."

Note that the complementary distribution makes it possible to reduce these two correspondence sets to one, with both deriving in a predictable way from one protosound.

<u>*f</u>	{	h / wh / f / f / f	14, 19, 30, 40	/# ___ *i, *e, *a
		h / h / f / f / f	3, 18	/ elsewhere

Polynesian scholars tell us that the first correspondence set in No. 41 ‘woman’ is also in complementary distribution with these two, so that all three can be united as deriving from the same protosound.

<u>*f</u>	{	w / w / f / f / f	41	/# ___ *af, *as
		h / wh / f / f / f	14, 19, 30, 40	/# ___ *i, *e, *a
		h / h / f / f / f	3, 18	/ elsewhere

The very special environment for this correspondence set is further narrowed down from the one containing Māori *wh*, as being only when an *f or *s followed the *a as the second consonant in the word; that is, words in the protolanguage that began with *faf or *fas were the only ones that changed the first *f to *w* in Hawaiian and Māori (but not in the other three sister languages). Here, Hawaiian and Māori can be seen as dissimilating the first of certain fricatives in successive syllables (the “Peter Piper” effect). Notice that the three sets are given in the order of starting with the narrowest environment and ending up with the broadest.

Complementary distribution also exists between the correspondence set for the first vowels in Nos. 28 ‘chief’ and 41. ‘woman’, on the one hand, and the one that is an identity correspondence of *a*’s, on the other.

<u>*a</u>	{	a / a / a / a / e	28, 41	/ ???
		a / a / a / a / a	1, 2, 2, 4, 4, 5, 9, 10, 11, 12, 12, 13, 14, 15, 16, 16, 21, 22, 23, 25, 25, 26, 26, 27, 27, 29, 30, 30, 31, 33, 33, 34, 35, 36, 37, 38, 38, 39, 40, 40	/ elsewhere

What seems to be the special context in which Tongan has *e*, while the other languages have *a*?

HINT: Look at the vowel in the next syllable, and the intervening consonant (or lack thereof).

These are the only instances in our data in which correspondence sets can be derived from one protosound through complementary distribution. You should tentatively label all the other correspondence sets each with a different protosound in the blank preceding.

6. When you have determined all the correspondence sets and protosounds, write the protoform for each cognate set in the final column of table 1. [This has already been done for you in the web version of this problem; compare the protoforms given there with the ones that derive from your own work.] Note that if your correspondence sets are correct and complete (with all the reference numbers included), this amounts to giving the protosounds that label each correspondence set in the order in which they occur in each word. [A correct and complete listing of the correspondence sets is to be found at the web site by clicking on “polynesian sound correspondence sets”.]

Which language is closest to the protolanguage? (Which is the most conservative; which has changed the least?) Use the form available at the web site under “polynesian sound changes and mergers” to tabulate all the changes.

Which changes have resulted in different protosounds merging as one in a given daughter language? Use the form available at the web site under “polynesian sound changes and mergers” to tabulate all the mergers.

7. The word for ‘laugh’ in HAW is *‘aka*. What would you predict to be the TON word for ‘laugh’?

The word for ‘stone’ in HAW is *haku*. Can you predict what it ought to be in SAM? If you knew the SAM form, could you predict the HAW form? Why or why not?

Would it be possible to predict the protoforms for other words if you knew some one daughter language, or would you need to know more than one? If only one, which one? If more than one, how many daughter languages would you need to know? Which languages would be best for this purpose?

8. Consider the two Māori words for ‘fly (n.)’ (No. 15), one of which is underlined. The fact that two words, variants of each other, are recorded for Māori, is meant to indicate that both are in use currently and in competition. Which of the two is the original word, inherited from Proto-Polynesian? How did it change to form the other word? Which variant do you predict will eventually win the competition? Was there a similar competition in Hawaiian, and which variant won out?

Table 1. Forty-one words in five Polynesian languages

GLOSS	HAW	MAO	SAM	TAK	TON	PPN
1. 'learn, teach'	a'o	ako	a'o	ako	ako	*Øako
2. 'channel, passage'	awa	awa	ava	ava	ava	*Øawa
3. 'sit, dwell'	noho	noho	nofo	nofo	nofo	*nofo
4. 'sea'	moana	moana	moana	moana	moana	*moØana
5. 'leaf'	lau	rau	lau	rau	lau	*laØu
6. 'breadfruit'	'ulu	kuru	'ulu	kuru	kulu	*kulu
7. 'louse'	'uku	kutu	'utu	kutu	kutu	*kutu
8. 'dig'	'eli	keri	'eli	keri	keli	*keli
9. 'sky'	lani	raŋi	laŋi	rani	laŋi	*laŋi
10. 'outrigger boom'	'iako	kiato	'iato	kiato	kiato	*kiØato
11. 'bird'	manu	manu	manu	manu	manu	*manu
12. 'wind'	makani	matani	matani	matani	matani	*matani
13. 'shark'	manoo	maŋoo	maŋoo	manoo	<u>'aŋa</u>	*maŋo(' ,Ø,h)o
14. 'house'	hale	whare	fale	fare	fale	*fale
15. 'fly (n.)'	<u>nalo</u>	<u>ŋaro</u> , raŋo	laŋo	rano	laŋo	*laŋo
16. 'mullet'	'anae	kanae	'anae	kanae	kanahe	*kanahe
17. 'sleep'	moe	moe	moe	moe	mohe	*mohe
18. 'tooth'	niho	niho	nifo	nifo	nifo	*nifo
19. 'seven'	hiku	whitu	fitu	fitu	fitu	*fitu
20. 'voice'	leo	reo	leo	reo	le'o	*le'o
21. 'net'	'upena	kupeŋa	'upeŋa	kupeŋa	kupeŋa	*kupeŋa
22. 'prohibited'	kapu	tapu	tapu	tapu	tapu	*tapu
23. 'spear'	kao	tao	tao	tao	tao	*taØo
24. 'snare (n.)'	hele	here	sele	sere	hele	*hele
25. 'stink, smell'	hauna	haŋa	saŋa	sauna	haŋa	*haØuŋa
26. 'wrong'	hala	hara	sala	sara	hala	*sala
27. 'road'	ala	ara	ala	ara	hala	*hala
28. 'chief'	ali'i	ariki	ali'i	ariki	'eiki	*'ariki
29. 'eight'	walu	waru	valu	varu	vau	*waru
30. 'stalk (of taro)'	haa	whaa	faa	faa	fa'a	*fa'a
31. 'scrape'	walu	waru	valu	varu	vau	*waru
32. 'enter'	<u>komo</u>	uru	ulu	uru	huu	*huru
33. 'awake'	ala	ara	ala	ara	'aa	*'ara
34. 'gall'	au	au	au	au	'ahu	*'ahu
35. 'cry'	kani	taŋi	taŋi	tani	taŋi	*taŋi

36. 'neck'	<u>'aa'i</u>	ua	ua	ua	u'a	*Øu'a
37. 'rain'	ua	ua	ua	ua	'uha	*'uha
38. 'canoe'	wa'a	waka	va'a	vaka	vaka	*waka
39. 'sea (water)'	kai	tai	tai	tai	tahi	*tahi
40. 'pandanus'	hala	whara	fala	fara	faa	*fara
41. 'woman'	wahine	wahine	fafine	[fafine]	fefine	*fafine