

Oya tenemos!

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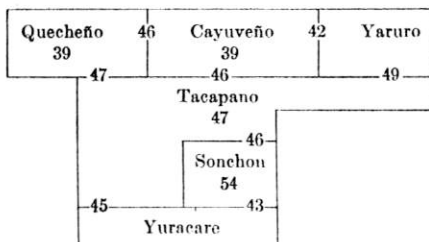
MACRO-PANO-TACANAN

JORGE A. SUÁREZ

INSTITUTO DE INVESTIGACIÓN E INTEGRACIÓN SOCIAL DEL ESTADO DE OAXACA AND
EL COLEGIO DE MÉXICO

0. Introduction
1. Grammatical elements
2. Phonology
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0. Swadesh (1960: 734)¹ includes Pano-Tacanan (under the label Tacapano), Sonchón (i.e. Moseten and Chon), and Yuracare² within his Macro-Quechua net as follows:



materials, including P, which I believe prove the relationship (Suárez 1969). Swadesh, who had C in the same group as M in his 1959 classification (Swadesh 1959: 18), later published sets of probable cognates found in the basic lists of M, O, and Te (Swadesh 1963). As for Y, Loukotka (1944: 19)² noted 'traces' of P, and according to Mason, Métraux considered that a comparison with M would prove fruitful (Mason: 275). Here

The relationship of P and T is proved beyond doubt and a first assemblage of cognates and correspondences has been made (Key 1968). Schuller (Bibolotti: xciii) assumed that M was related to T on the basis of restricted but clear agreements, and I have added

I present evidence of the genetic relationship of C and Y to the other groups.

Although some systematic sound correspondences are given in 2.3, no reconstruction, properly speaking, is attempted for several reasons. First, data on Y and especially M are deficient, but since both are still spoken we can hope to have better ma-

¹ In a later and unpublished classification (Interrelations of the Macro-Mayan languages, 1967), which I have been able to consult thanks to Evangelina Arana, Swadesh maintained this part unaltered.

² Languages will be referred to by the following abbreviations: Panoan (P): Capanahua (Cp), Cashibo (Cshb), Cshinahua (Cshn), Chacobo (Chc), Proto-Panoan (pP); Tacanan (T): Chama or Esse'eja (Chm), Cavineña (Cv), Tacana (Ta), Proto-Tacanan (pT); Chon (C): Haush or Manekenken (H), Ona or Shelknám (O), Tehuelche (Te), Tehuash or Teushen (Tsh); Moseten (M), Yuracare (Y).

² The reader should notice that Loukotka's last classification (Loukotka 1968) and Salzman's review of the 1944 classification (Salzman 1951), contain information about 'mixed' languages, but not about 'intrusions' or 'traces' from other languages. I think this is important because, precarious as Loukotka's ideas about language classification were, he had a thorough knowledge of the primary materials and noticed resemblances which can be the result at least of borrowing if not of genetic relationship.

materials in the future, so that I do not see the point of either exhausting the possibilities of philological interpretation of the present material or trying to reconstruct on the basis of data which can be improved. Second, at least Pano-Tacanan should first be reconstructed. This would be important not so much for the assumed phonemic shapes, but for the identification of morphemic elements (cf. Girard: 74). Finally, but most important, it is not the purpose of this paper to make a reconstruction, but to present agreements which exclude chance or borrowing as explanations. This procedure is not adopted as a better-than-nothing method; on the contrary, I firmly believe that this approach is the most convenient to overcome the impasse into which the classification of South American Indian languages has run: either overall classifications on the remotest level of relationship but without accompanying evidence or reconstructive work for languages obviously related.

It can be seen in the diagram reproduced above that according to Swadesh's counts the internal differentiation of Sonchon is greater than the difference with other groups. The higher differentiation within Sonchon and accordingly the lower percentage with external groups are due to M whose closeness to C was greatly overestimated by Swadesh.⁴

⁴ Swadesh (1963: 318) found 34% of shared vocabulary in his test lists. This high figure—impossible in view of the percentage common to O and Te—is due in part to the circumstance that Swadesh only had access to poor sources for C languages; thus his assumed cognates are invalidated by the correct forms for *eye*, *tail*, *tree*, *who*, *lying* in O, respectively: ?óter, ?óse, wénöe, konés, xá', and for *hand*, *good*, *who* in Te: é'gn, k'ét', xém. His M list also contained errata: *bone*, *han*, *who*, *lying* are yifn, uñ, éis, koska, and again the correct forms invalidate his cognates. Furthermore, in various cases he assumed correspondences which, although likely at first sight, are not confirmed by the examination of the rest of the vocabularies; thus, M b = O p, on the basis of *seated*, M c = Te, O k, in general on the basis of wrong forms, e.g. *fire* in Swadesh's sources O haw-ke Te yay-ke (the breakdown is Swadesh's) are really xá-wke, yagk' and probably unrelated; M ci *fire*,

To give a rough idea of the different levels of relationship involved, the following percentages of shared cognates in the 100 item list, according to my own counts, may be useful:

Cshn : Cshb (Panoan)	60
Ta : Cv (Tacanan)	60
Cshb : Ta (Pano-Tacanan)	32
O : Te (Chon)	35
Ta : M	17
Ta : Y	14
Cshb : M	12
Cshb : Y	11
Y : M	11
Y : O	8
M : O	8
Cshb : O	7
Ta : O	7

The percentages, especially for the more distantly related languages, surely contain errors, but some conclusions can be drawn: (1) P and T are well differentiated families while P-T and C are well differentiated stocks; (2) Y and M are approximately at the same distance from P-T; (3) C is on a more removed level of relationship. In spite of the rather different horizons at which these groups are related, I think that provisionally they can be considered a genetic unit in the sense that they seem to be more closely related among themselves than to any other family so far proposed.⁵

instead, could be related to Te yag' *live coal*. In spite of so many errors, I find it remarkable that Swadesh's hypothesis seems confirmed. The fact that out of his cognates, perhaps only seven are right, appear to confirm estimates on chance resemblance held by Greenberg, Swadesh, and now Bender.

⁵ A possible exception is Alacaluf, listed by Greenberg in the same group as C. Tonelli (1926), without committing himself as to genetic relationship, put a series of coincident forms in O and Alacaluf side by side. Some are unlikely either semantically or phonetically, others can be borrowings, but there remains a residue of suggestive coincidences. Also, from what can be guessed about the grammar of Alacaluf there are significant parallelisms with Te. Nevertheless, I have not attempted to investigate Alacaluf further be-

1.1. Pronominal forms offer one of the best proofs of genetic relationship among the languages under consideration since they show not only resemblance in form and meaning but also coincidences in alternant shapes. The pertinent forms are:⁶

	1st sg	2nd sg	3rd
Cp	?i-a, ?i-a-n, ?i-n	mi-a, mi-a-n, mi-n	
Chc	?i-a, -a, ?i, -?i-	mi-a, mi, -mi-	
Ta	e-ma, yama (*e-fa-ma) ⁷	mi-da, miada (*mi-fa-da)	-ta
Cv	i-ke, eya (*e-fa)	mi-ke, miya (*mi-fa)	
Chm	e-, eya (*e-fa)	mi, miya (*mi-fa)	
Y	se, -i, ti, ti-n-	me, mi, mi-, -m, -ma, mi-n-	
M	ye	mi	
O ⁸	ya', ya'-ne, e-	ma', ma'-ne, m-	ta-, t-
Te	ya', ya'-n, ye-, e-, y-, -e	ma', ma'-n, m-, -m	ta', ta'-n, t-

These forms are used as follows:

Capanahua (Cp):

?i-a, mi-a: subject of intransitive verbs when occurring before the modal particle;

?i-a-n, mi-a-n: subject of transitive verbs when occurring before the modal particle;

?i-n, mi-n: subject of intransitive verbs when occurring after the modal particle, possessive with nouns;

-n: marks subject in nouns;

/high tone/: pronouns and nouns have high tone when they occur before the predi-

cause the different dialects or languages are strongly differentiated lexically and the transcriptions differ so much among themselves as to render their interpretation hopeless.

⁶ Cp (Loos 1963: §§ 6.1.4.1.1.4, 6.1.4.2, 6.1.4.3, 6.2; Loos 1969: 94-5, 152-3); Chc (Prost 1965: 107, 128-9); Ta (Ottaviano: 402); Chm (Shoemaker: 293); Cv (Key 1963: viii-ix); Y (La Cueva: 9-10, 12-5, 21-3, 34-6); M (Bibolotti s.v.).

⁷ Starred forms are reconstructions proposed by Girard (1970: 75-6).

⁸ Data on O, unless otherwise stated, were gathered by Delia Suardiaz in Río Grande (Tierra del Fuego, Argentina) between 1966 and 1968. Data on Te were gathered by Emma Gregores and the author between 1965 and 1968 in Kamusu Aike (Province of Santa Cruz, Argentina), under the auspices of the Consejo Nacional de Investigaciones Científicas y Técnicas. The bulk of this paper was written while the author did research at the Consejo and the Fundación Bariloche.

cate; the last two features are also pP, but the pattern of high tone is only reconstructed for the case in which the predicate is transitive (Shell 1965: 264-5).

Chacobo (Chc):

?i-a, -a, mi-a: subject if the predicate pre-

cedes, object (-a occurs with only one verb);

?i, mi: subject if the predicate follows, mi possessive with nouns;

-?i-, -mi-: subject suffixes in verbs;

/high tone/: occurs in suffixed subject forms when the verb is transitive.

Two further facts are pertinent about P pronominal forms. Cshn probably has the same system as Cp according to Abreu's data, and Amahuaca has suffixed forms like Chc (Shell 1965: 140).

Tacana/Cavineña (Ta/Cv):

ema, mida / ike, mike: subject of intransitive verbs and object of transitive verbs;
yama (*e-fa-ma), miada (*mi-fa-ma) / eya (*e-fa),

miya (*mi-fa): subject of transitive verbs;

-ta: subject marker in verbs.

Chama or Esse'eja (Chm):

e-, mi: personal reference in postpositions, sometimes subject when occurring before the predicate;⁹

eya (*e-fa), miya (*mi-fa): subject, object.

Yuracare (Y):

⁹ The description is contradictory and not at all explicit; the formula CL 32 (Shoemaker: 191) indicates the pronoun miya but in the corresponding example (ib.: 202) the occurring form is mi; likewise in the example of included clauses (Cl 13i, ib.: 216) one of them has mi but the other eya.

se, me, mi: independent pronouns;
 ti-, mi-: direct object with transitive verbs,
 non-agentive subject with intransitive verbs,
 possessive with nouns;

-i, -mi: agentive subject with transitive
 and intransitive verbs;

-ma: subject of imperative verbs;

ti-n-, mi-n-: caused agent (object of causative
 verbs, indirect object).¹⁰

Ona or Shelkam/Tehuelche (O / Te):

ya', ma' / ya', ma', ta': independent pro-
 nominal forms;

/level tone/: in independent pronominal
 forms used as possessives without nominal
 head;

/falling tone/: in independent pronominal
 forms used in any other function;

ya'-ne, ma'-ne / ya'-n, ma'-n, ta'-n: in O,
 at present in apparent free variation with
 the forms without -ne, but according to
 Tonelli the latter forms occur in equational
 clauses, with intransitive verbs, and with
 transitive verbs if the object precedes the
 verb or if the object is lacking; in Te, to the
 extent that -n forms have been analysed, the
 use agrees partially with Tonelli's rules for
 O: they occur as subject in equational
 clauses in which the predicate is a transitive
 verb without object proclitic;

e-, m-, ta-, t- / ye-, y-, e-, -e, m-, -m, t-:
 obligatory for subject and object, possessive
 with nouns; (y-, e-, in Te, before stems be-
 ginning with vowel and consonant respec-
 tively, ye- seems in free variation with e-
 before consonant; enclitic forms are rarely
 used and no difference in function was found
 as against the proclitics).

There are some recurring features in the
 use of these pronominal forms which are
 specific although they do not agree in every

detail. (1) -n, *-f (pT *f = pP *n [Key 1968:
 50]) is associated with transitivity, in pT
 (Girard: 75), specifically with a pronominal
 system of the ergative type, and this inter-
 pretation seems to fit Cp also, while in Y,
 -n- signals that the preceding pronominal
 form—which is object—is also agent (the
 system is clearly of the ergative type too);
 (2) /high tone/ or /level tone/ is associated
 with a given grammatical feature, probably
 transitivity according to the reconstruction
 for pP, the occurrence in suffixed pronomi-
 nals in Chc, and the use as possessive in C
 languages; (3) -a occurs in free forms. In
 connection with the last point, Cp and Te
 show striking similarity. Our preliminary
 grammatical analysis of Te does not allow
 at present the stating of rules for the deriva-
 tion of pronominal forms as detailed as those
 given by Loos (1969: 92-5) for Cp, but
 common rules would be: (1) marking of
 subject pronouns as 'emphatic', (2) copying
 of subject pronoun after the mood marker
 in Cp and before the predicate in Te, and
 marking the copy as 'emphatic' (as are the
 possessive pronouns), (3) adding -a to pro-
 nouns marked as 'emphatic'.¹¹ Final forms
 are: Cp ?iá ta in ka?i I — mood marker —
 I — going I am going; Te e-wán -šk. yá'
 I — go — aspect — I I am going.

1.2. Other coincidences of form and mean-
 ing in grammatical elements are included in
 the list of cognates, cf. 3. They are: ADJEC-
 TIVAL, AGENT, CAUSATIVE, COMMI-
 TATIVE, CONTINUOUS ASPECT, DI-
 RECTIONAL, DUMMY, FOCUS, GENI-
 TIVE, GERUND₁, GERUND₂, NEGA-
 TION, NOMINAL MARKER, PAST,
 PROHIBITIVE, PROSPECTIVE, RE-
 FLEXIVE₁, REFLEXIVE₂, TEMPORAL,
 TOPIC, VERBALIZER. For two of these
 further details are pertinent.

CAUSATIVE: pP -m(a), Chm (-)mee,

¹¹ There would be a problem of ordering in Te
 between the rule which assigns the feature 'em-
 phatic' and that deleting the noun head in a pos-
 sessive phrase, because we have y-é-w my home
 (the level tone is that of the stem -é-w) but yá-
 mine.

¹⁰ I believe the explanation given here is a rea-
 sonable one for the statements of La Cueva and
 the examples found in the dictionary. Typical
 examples are: wata-i I go, uspe-i I take a bath,
 ti-bašti My wife, ti-bešti I am hungry (or It makes
 me hungry), mi-wilale-i I love you, ti-m-buce-m
 You give me (it) (-m- instead of -n- is conditioned
 by the following labial), ka-n-enşe-i I make him
 drink (ka- is 3 p sg), ti-m-buita I am surprised (or
 It makes me wonder).

Ta -me, Y ma-, Te m-, -m, O me-, m-. The Y prefix does not seem to be productive, but there are definite examples in the dictionary: yečē *toasted* : ma-yečē *to toast*; tečē *long object* : ma-tečē *to stretch* (La Cueva s.v. *tostar*, *estirar*, *larga cosa*). The enclitic form in Te occurs only in ól-m *to pluck*, the stem ól not being otherwise attested in this language but it is in O, ól *skin*, *cover*. It is not clear if me-, m- are productive in present-day O, examples are found in Beauvoir (s.v.), e.g. tox *cooked* : me-tox *to cook*. The forms of the causative are probably derived from the stem attested in Te māt *to make*.

DUMMY: Cp ha- 'tense carrier' (Loos 1969: 91). The tense suffix is attached to it when 'tense' has been separated from 'verb' by a 'mood' shift, as in ríra ta ha-iki chop — mood marker — dummy — tense *He is chopping*. Cp has also a sentence introducer with topical meaning built upon the same root, ha-ska- *and so* (Loos 1963: 701-2; 1969: 85). Te ?à 'aspect carrier', occurs at the beginning of clauses with topical meaning, it is followed by aspect clitics while the principal verb is not, for example, ?à -šk' nóm é'áyto lé? é'l dummy — aspect — road — much — water — have *It is that there is much water on the road*, cf. é'áyto lé? é'l -šk' nóm *There is much water on the road*. Furthermore, several of the languages under consideration have forms which are probably built upon the same element: Chc ?a- auxiliary verb meaning 'almost' (Pros 1965: 49, 97); Chm a?a, sentence introducer (Shoemaker 188 ff, 303); Cv amena *then* (Key 1963: s.v.); Y ača, ati-kai, ati-kei *then* (La Cueva s.v. *entonces*); M at *as yet it is* (Bibolotti: lxxxi); Te ?ám *then*, sentence introducer.¹²

1.3. Other coincidences in grammatical

¹² I have equated the Cp form with that of the other P languages because Loos (1963: 701) identifies the root with the verb ha- *to make*, as does Shoemaker (196ff) for the Chm introducer a?a. Now, pP *?a *to make* is ?a in Cp (Shell 1965: 145), while Cp ha- should derive from a proto-form *[h]a (on pP [h] see below 2.1). The stem, probably, had alternant forms, as did for example the word for *chigger*: *(?)o?posši (Shell 1945: 152).

features, although rather general, are worth mentioning.

The object can occur between the proclitic pronominal subject and the verb stem in Te, and that could be described as a process of incorporation were it not for the fact that the noun functioning as object preserves the phonological characteristic of a free form: e- t- k'è- -šk' gáwoy I - it - see - aspect - horse *I am seeing the horse*, also e- gáwoy k'è- -šk' (observe that the obligatory object proclitic t- does not occur in the second example). This is matched in P and T by the incorporated object (designating chiefly body parts) as first member of a verbal stem. Likewise, and even though the descriptions specify that the order of elements in a clause has few restrictions, to judge from the examples given, the preferred position for the object in Cp, Chc, Chm, and Ta seems to be before the verb, as is the case in Y and M.

Chc, Chm, Ta, and Te have the attributive noun preposed in a nominal phrase and the adjective-like attribute postposed; Y has both kind of attributes preposed.

All the languages for which there is grammatical information agree in having predominantly suffixes or enclitics, but few prefixes or proclitics.

Y (La Cueva: 6, 23, 46-9) and M (Bibolotti: xc-xci) make extensive use of reduplication; it also seems to be productive in Chm (Shoemaker: 280-4), Ta (Ottaviano: 393-5), and Chc (Pros 1965: 79). On the other hand, C languages have no reduplication.

Apparently, Te would contrast sharply with P languages as to the structure of the word. As a phonological unit with some grammatical correlation, the word has a reduced scope in Te: most grammatical elements—which are either clitics or dependent roots¹³—have few restrictions of

¹³ Forms in Te can be classified phonologically into three groups: (1) with contrastive tone and primary stress; (2) with contrastive tone and secondary stress; (3) without contrastive tone and unstressed. Stress is predictable marking tone and morphological boundaries. Dependent roots belong to class 2, like -kót in the example.

order. For example, mš- šè- -kòt : šè- -kòt -mš *Go to sleep!* (mš *you*); ?ám m- é'áyto xátee-š-kòt : m- ?ám-kòt é'áyto xátee-š *Then you will eat a lot* (m *thou*, kòt 'prospective aspect'). On the other hand, P languages (Y too; T languages occupy an intermediate position) have a complex word structure with prefixes, compound stems, and many derivational and inflectional suffixes belonging to numerous classes of relative order. Nevertheless, several peculiarities of the word structure in P and T suggest that this may be a relatively recent development: (1) the alternate positions in which many suffixes occur in Cshb (Shell 1957: 196 chart 3c), in Chc (Prost 1965: 79), in Ta (Ottaviano: 397); (2) the double status of aspect morphemes in Chc which occur as suffixes and as inflected stems (Prost 1965: 90-1); (3) the discrepancies of relative order to which cognate suffixes belong in different P languages, e.g. bona 'directional' 2nd order suffix in Cp, but 5th order suffix in Chc; (4) the low percentage of suffixes which are cognates among P languages and even less among P and T languages, thus Chc has 44 suffixes and Cp 56, but there are only 19 cognates, and between those 56 of Cp and the 31 Ta has, I have only found 7 cognates. The causative referred to above exemplifies simultaneously the first three characteristics. None of the data enumerated seem very compatible with a tight word structure and it is to be assumed that in a not very remote stage P and T languages had a structure similar to that of Te; that is to say that present-day suffixes were clitics or free forms.

1.4. A detail of lexical structure found in Cshb, Cshn, Y, and Te is unlikely to be casual; namely the occurrence of different verbal stems meaning 'close', 'open', 'extend', 'join' are selected according to the object affected by the action (whether or not this feature of lexical selection occurs in T or in M cannot be ascertained from the available vocabularies). In P languages, the object occurs incorporated into the verbal

stem, and the same pattern can still be recognized in some cases in Te (cf. 2.3), while in Y, the incorporated object must have lost its identity and become an unanalyzable part of the verbal stem. Examples are: Cshb mī-špa *to open the hand* (mī- *hand*), pī-ča *to open the arms* (pī-ña *arm*), bī-tika *to open the eyes* (bī-ru *eye*), boka *to open*, šī-pu *to close a door* (šī-kwi *door*), bitás *to close*; Y nimta *to close the eyes* (tanti *eye*, bebe, šosa *to close*), kusuxa *to stretch the legs or the arms* (tekte *leg*, bana *arm*, ba'a *to stretch*), ma-šepexe *to join the legs* (deče *to join something*); Te gón-kér *to close a door* (gónk'o *door*), áywen-bér *to close the hand* (k'áýwenk' *palm of the hand*), qáá-ter *to close the eyes* (qáš é'ex *eye brows*, é'ex *fur, hair*).

2. The phonemic system are given in summary form, then some pertinent features of the phonemic systems, and finally the correspondences.

2.1. Proto-Panoan (Shell 1965): p t c ě k k* s š ś m n r w y ? (h) i i o a i i o a ' (high tone) ' (low tone). Syllable = (C₁) V (C₂), in which C₁ = any consonant, C₂ = s, š, ś; checked syllables occur only word-medially; Shell assumes that in a previous stage there were no checked syllables. Most P languages have an h-, but Shell does not set up a corresponding proto-phoneme because it only occurs word-initial; h- then would have arisen later in the individual languages. I find the argument unconvincing in the first place because h could have been a phoneme of defective distribution as it is now the case in Cshn, Shipibo, and Amahuaca (Shell 1965: 48), and secondly because it implies that h developed out of nothing and a contrast hV- versus V- arose in many languages possibly through borrowings. It is true that in the reconstructed forms no contrast is found between hV- and V-, but that could mean that in pP no word began in a vowel.

Proto-Tacanan (Key 1968; Girard 1970): p t c ě ó k k* b d s š ś m n w r f y ? i e o a. Stress is probably morphologically predictable. Syllable = (C)V. The proto-system

adopted here is a compromise between Key's reconstruction and the corrections suggested by Girard. The latter is surely right in holding that Key's *k and *x should be *k* and *k respectively, and they are so represented here. He also gives good arguments for eliminating *č and *š, but this step leaves a residue of common words not suspected of being borrowings, so that in this respect I consider it safer to retain Key's reconstruction.

Yuracare: p t č k b d g s š (x) m n ñ r l w y ? i u e o a. Stress seems morphologically predictable, it is not marked in the vocabulary and the author (La Cueva: 3) makes the following statements: (1) there are very few proparoxytonic words, (2) nouns are regularly stressed on the penultima, (3) verbs stress the last syllable when ending in -m, -p, -a, -ni. Syllable = (C₁) V (C₂); any consonant occurs as C₁, and any consonant, except č (x) ?, occurs as C₂; checked syllables occur only word-medially, and ? does not occur word-initially. La Cueva's transcriptions are consistent but the following points need comment. (1) La Cueva states that verbs beginning with k- replace it by x- when preceded by personal morphemes (but the dictionary shows that the shift takes place after any prefix); there are almost no examples of intervocalic -k-, and Spanish *vaca cow* has been borrowed as *waxa*; likewise, initial x- is rare, and does not occur finally in the syllable, so it is almost certain that [k] and [x] represent the same phoneme, but since the distribution is so simple, I have retained the distinction. (2) ⟨z⟩ is said to be a sound intermediate between Spanish ⟨s⟩ and ⟨z⟩; assuming that La Cueva had in mind the Castilian apico-alveolar [s], I have interpreted ⟨z⟩ as [s̠], and ⟨s⟩ as [s̠] ([š] is represented by ⟨x⟩). (3) No statement is made about ⟨h⟩ which occurs only between vowels; I have interpreted it as [ʔ], but it could be an aspiration. (4) ⟨guV⟩ occurs only when V = a, o (only one exception, -guigoleto milk), while ⟨vV⟩ occurs only when V = e, i; Spanish *vela candle* is spelled ⟨vela⟩ in

Y, but *vaca cow* and *balsa raft* are spelled ⟨guaja⟩ and ⟨gualso⟩ respectively; therefore I have interpreted ⟨gu⟩ before vowel and ⟨v⟩ as allophones of /w/. (5) All vowels occur geminate; I have assumed that geminates represent two syllables and not long vowels since different vowels also occur in succession.

Moseten: p t c č k b d f s š x v y r m n ñ i i i u e o a. There is no indication on stress or tone. Syllable = (C₁)V(C₂); any consonant occurs as C₁ or C₂. This system is based on my interpretation of the different spellings found in the sources (Suárez 1969), but now I have the impression that it over- and undifferentiates the system.

Tehuelche: p t č k q p' t' č' k' q' b d g ġ s š x ɣ m n l r w y ? ɛ ɔ ɛ e o a e' o' a' ɛ' ɔ' ɛ' ' (level tone) ' (falling tone), underlinings represent glottalized vowels. Syllable = ((C)C)V(C(C)); any consonant occurs initial or final in type CVC; initial clusters are few and most of them with a petrified but still recognizable morphemic limit in between; final clusters are more numerous and varied, but show no clear pattern of occurrence; V represents short or long vowels, plain or glottalized, but only long vowels occur in unchecked syllables. The patterns given are those found in lexical roots, and cover only the predominant patterns; there are also a few triconsonantal clusters syllable-final. The grammatical clitics pose some problems for determining what is a syllable, but the issue is of no concern here. Notice that the vowel system could equally well be represented by i, u; the choice of e, o is dictated by the allophones with wider distribution. The phonemic system of O is the same minus the voiced stops. The voiced stops of Te are not taken into account in what follows since no cognates have been found in O for stems which have a voiced stop in Te.

2.2. It is clear that the phonemic systems of pP, pT, Y, and M are very similar, while the phonemic system of C languages diverge considerably by the glottalized series of stops, the additional contrast in the velar

order, and the contrast of length and glottalization in the vowels. As there does not appear to be any conditioning factor for splits, we have to assume that mergers occurred in pP, pT, Y, and M (but see below 2.4). Otherwise there are significant parallelisms of general structure, as well as likely explanations for some divergences.

Both P and C have a two tone system of very restricted functional load. In C there are few minimal pairs differentiated by tone, and that this was true of pP can be inferred from the fact that few, if any, pairs of reconstructed forms are found with identical segmental shape (although this statement needs qualification, because some entries in Shell's reconstruction contain glosses which are too divergent). It is all the more significant then, that in both groups contrast in tone is associated with grammatical function as was shown for the pronouns. On the other hand, stress seems to be morphologically predictable in all groups.¹⁴

Cp (Loos 1969: 127-8)—and pP falls within the same formulation—has a consonantal harmony by which c ĉ s š ŝ occur in the same root only agreeing in stridency and, if continuant, also in flatness. This rule also applies to Y s š ŝ, except in three cases: šešeši *blue*, šaša *charcoal*, sudešu *to hiccough*; but the stems for *blue* and *to hiccough* are too long for the average in Y, and probably contain an affix. There is also in Y an inter-

esting case of alternating shape for the stem meaning 'fat', šeše ~ šeše. In C, on the other hand: (1) O and Te have a consonantal harmony by which k q k' q' x ɣ (in Te g ɣ too) occur in the same root only agreeing in backness; (2) some words with x or ɣ in one C language have s or š in another, e.g. Te xéter O séter *mucus*, Te xó'm Tsh šom *bridle* (it is not a regular correspondence among C languages); (3) C x ɣ correspond to sibilants of the other groups.

O, Te, and Y have an l which corresponds to a sibilant or vibrant in the other groups. We have to distinguish initial position in the root from medial or final. l root-initial is not uncommon in Y and seems to correspond to an affricate sibilant in pP and pT. This is in line with the fact that a T language, Reyesano, has an l as reflex of pT c and č (Key 1968: 47), and that examples for this Reyesano reflex are few, explains that only two likely cognates were found for Y; besides, there is an instance of l ~ s alternation in this language, a-see *to beget*, see *life*, but a-lee *origin*. In C, instead, l is exceptional root-initial. There are only three examples in O and three in Te, but none has cognates in the other language. Moreover, one of the Te examples was registered as non-initial in the first Te vocabulary (Piga-fetta [1520], in Outes): ⟨holi⟩ *water*, today lé?, so that there are not many chances of finding a cognate in the other groups. Nevertheless it is not impossible that precisely the word lé? might be cognate to pP *š'i'a, Y *ense to drink*; the old form ⟨holi⟩ may contain the nominalizer ɔ-, besides, pP -*ša which can be extracted from pP *ʔoma-pa-ša *water* (cf. Chc hini paša *water*, Pano ʔompaško id Cp ʔompa *corn beverage*) could be an alternant shape of the pP form for 'to drink' and would match Te lám *alcoholic beverage*. On the other hand, l is rather common root-medial and final both in C and Y, and there are various facts suggesting that in that environment it is the outcome of a cluster. First, there is a connection between r and l in C as well as in Y: r and l alternate

¹⁴ Within a transformational framework, Loos (1969) manages to predict both stress and tone. That this could be done also for pP is doubtful, since some P languages, Amahuaca (Russel 1959) and Marinhua (Scott and Pike), have lexical items of the same grammatical category and same general segmental shape which have different tone in isolation. Moreover, even if one is willing to play the game of assigning, suppressing, assigning again, and so on, a given feature in the same place, it should be noticed that Loos has to refer in Stress Rule 3 and in Pitch Rule 3a (Loos 1969: 193, 198), not merely to segmental shape, grammatical categories, and syntactic bracketing, but to individual morphemes, which, from my point of view, amounts to recognizing that pitch is not predictable.

in some words in C (an O example occurs in set 205, a Te example is *ór* ~ *ól nose*); only r or l occur more than once in a root in Y, with two exceptions, *urorile wiririle partridge* (-le, then is probably a suffix). Second, for pP, Shell reconstructs clusters *sš, *sš, šc, and the second could have also been *sr which she rejects as foreign to P structure (Shell 1965: 87-91), while in Cp š or ř could be the result of an underlying cluster *sn or *sr (Loos 1969: 11-2). Furthermore in two cases (sets 48, 73) l of Y and/or C correspond to a reconstructed pP cluster (*sš and *šc). A likely explanation is that a cluster of sibilant + r merged regularly with other sibilants in pP, pT, and M (but in some cases it merged with r) while an allophonic [l] in this environment became phonemic (or merged with r) after the reduction of the cluster in Y and C. If now we consider that pP clusters occur at inter-morphemic boundaries and that root-initial l in Y and C could occur after a prefix, then we may surmise that also root-initial l is reflex of a cluster.

2.3. All the languages examined can be characterized morphophonemically as agglutinating. Cp has rules of vowel harmony in suffixes determined by the stem vowel, some of which are surely pP (Loos 1969: 149-55, 167-8; Shell 1965: 109), and Y has the same kind of process (La Cueva: 8, 13, 17-8). Some cases found in Y, P, and T suggest traces of vowel alternation in roots; for example: Ta *e-risi-xi something for tying*; *e-ru-xei bar across a door* (cf. pP **risi thread*, Y *repu tie*); pP **ša-na hot* (cf. Cshb *ša-ra burn*); pP **šo'i to roast*; pP **šo-ka to husk*; pP **ša-kata husk*; Y *lom-lo to boil*; *lumu-la to put to boil, to-to*; *tuu-tu stumble* (I have the impression that a careful search would yield many more examples, especially in Y where many disyllabic stems have the same vowel in both syllables).

pP nouns added a suffix whenever they occurred as subject of transitive verbs or were marked for transitive reference; the form without suffix was used as object and

probably as subject of intransitive verbs (Shell 1965: 126-35; Loos 1969: 154-62; Prost 1962). The phonological shape of the root determined the allomorph of the suffix which always ended in -n or a nasalized vowel; among the alternants were forms such as -in, -nin, -xna (the -n or the vowel nasalization is clearly the same element which occurs in the pronominal forms, cf. 1.1). Furthermore, pP nouns were reduced to the first syllable when used as first member in compound stems, including the case of incorporated object. That syllable, in some cases, is all that pT reflects: pP *mī-ki-nī*, pT *e-me hand*, pP *šī-ta*, pT *e-ce tooth* (e- is a nominal marker). Some of these processes are found as residues in Te. Examples of forms with and without suffix, the last used as incorporated object, are: *q'ónq'en mouth*; *q'ón-p'e to open the mouth*, *gónk'o door*; *gón-kér to close a door* (the last step in becoming an unanalyzable root can be observed comparing Te *qás-ter to close the eyes* with O *ótél qás-ken id, ótel eye*). There is a class of bisyllabic stems in Te, unanalyzable semantically, but whose second syllable is clearly an old suffix which has forms -en, -el, -er. It could be that -en is related to the -in form of pP, and even, in view of what was said about l in Te (cf. 2.2), it is possible that -el and -er are related to P -xna ($x < pP$ *š).

Finally, in order to evaluate some cognate sets correctly, it has to be noticed that many P, T, and Y bisyllabic stems turn out, upon internal comparison, to be decomposable into two elements.

2.4. Assuming mergers in the other groups of the C contrast between plain and glottalized stops as well as that between velar and back velar sounds, the correspondences for p/p', t/t', k/k', q/q', b/w, m, n, ñ, y are trivial, except that the velar series are represented in Y by ě before i, e, and (if it is a phoneme, cf. 2.1) by x between vowels. I think there is justification for lumping together b and w (or v) here as a single correspondence, although it probably involves

two phonemes. There are cases of interchange in the reconstructed P and in the M vocabularies; see further Girard's comment on Ta b/w (Girard: 77). Again, except for the contrast in plain vs. glottalized and short vs long vowels of the C languages, vowels show the following correspondences:

Y	M	pP	pT	C
i	i	i/ī	i	C
e	e	ī	e	e
u	u	o	o	o
o	o	o	o	o
a	a	a	a	a

Vowel correspondences other than those in the table are too sporadic to be systematized (perhaps with the exception of a/o matchings); thus, cognate sets in which the vowels show different correspondences are included because of the possibilities of lost conditioning factors and of vowel alternation mentioned in 2.3.

The present data are too scanty to ascertain the number of contrasts in the original vowel system, but certain facts would suggest that there were splits in Y and M. (1) u does not occur after several consonants in M; (2) sets including Y and/or M u are scanty (only one M example), and except in sets 117 and 161, it is always in contact with a sibilant (even in those sets the other languages have a sibilant). Thus, there is the possibility that Y and M had previously a four vowel system like pT and pP. On the other hand, i and ī have defective distribution in pP (Shell 1965: 49-50); Loos 1969: 131-32), and they are so unevenly represented in reconstructed forms in regard to neighboring consonants that it strongly suggests a former complementary distribution, that would yield a three vowel system.

2.4.1. The most differentiated system are taken as point of reference for the correspondences, i.e. C for stops (pT and pP *k* occurs only in set 157) and Y/M for the vowels and nasals (although ñ is probably a palatalization of n in contact with a front vowel).

In order that the amount and kind of

evidence for each correspondence may be checked easily, language groups which have corresponding cognates are indicated within parentheses after the number of each cognate set. Language groups are cross-referenced by numbers: 1 (Panoan), 2 (Tacanan), 3 (Yuracare), 4 (Moseten), 5 (Chon); numbers are starred if the corresponding cognates are found at least in two languages of the group (naturally numbers 3 and 4 are never starred).

p: 83 (1,3), 85(*1,3), 105 (1,3), 119 (*2,3, 5), 124 (*2,3), 131 (2, 3), 143 (*1,*2, 3,5), 144 (*1,*2,4,*5), 156 (*1,3), 161 (*1,2,3,5), 167 (4,5), 176 (2,3), 202 (3,4).

p': 36 (*1,*2,*5), 81 (*1,5), 118 (*1,5), 170 (4,5).

t: 21 (3, 4), 27 (*2,5), 28 (*1,*5), 38 (1,3,4), 59 (*1,3,*5), 74 (4,5), 80 (4,5), 84 (*1,3), 108 (4,5), 111 (4,5), 133 (*1,3), 136 (1,3), 141 (2,3), 142 (*1,3), 180 (3,5), 188 (*1,*2,3), 189 (1,3), 208 (1,2,*5).

t': 7 (4,5), 47 (3,*5), 50 (*1,*2,5), 71 (4,5), 166 (*1,2,5), 179 (1,2,5).

k: 2 (2,3), 16 (*1,2,3), 19 (1,3), 26 (2,4,5), 29 (1,5), 94 (*1,3), 106 (2,3), 116 (*1,3), 134 (*1,5), 140 (*1,5), 157 (2,3), 172 (4,5).

k': 30 (1,5), 43 (*1,2,3,5), 71 (4,5), 79 (4,5), 123 (*1,5), 170 (4,5), 194 (*1,3,5).

q: 56 (4,5), 74 (4,5), 87 (4,5), 148 (3,4,5), 162 (3,5), 195 (*1,*5).

q': 14 (*1,*5), 88 (4,5), 130 (4,5), 167 (4,5).

?: 46 (*1,*2,5), 51 (*1,5), 90 (*1,5).

m: 1 (1,2,3), 11 (2,4,5), 23 (*1,*2,3,*5), 64 (2,3), 96 (*1,5), 101 (*1,*2,3), 110 (*1,*2, 3,4,5), 113 (*1,*2,5), 115 (*1,*5), 120 (*2,3), 125 (*1,3), 149 (*2,4,5), 181 (4,5), 184 (*1,*5).

n: 3 (1,5), 32 (*1,3) 49 (*1,3), 51 (1,3,5), 60 (2,*5), 63 (1,5), 64 (1,5), 65 (*1,3), 68 (1,3,4,5), 69 (2,5), 70 (*1,4,*5), 73 (*1,5), 107 (*1,5), 112 (*1,5), 135 (2,3), 154 (*1,3,5), 163 (*1,*5), 181 (1,3), 191 (1,5).

ñ: 93 (4,*5), 99 (*1,3,4,*5), 174 (4,*5).

b/w: 4 (*1,3), 5 (3,4), 6 (2,3), 9 (1,3), 12 (*1,5), 25 (*1,2,3), 28 (*1,*5), 31 (1,2,4,5), 50 (*1,*2,5), 53 (4,5), 65 (*1,3), 67 (*1,4,*5), 69 (*1,2,3,5), 70 (*1,3,4,*5), 75 (3,4), 95

(*1,3), 95a (2,*5), 110 (*1,*2,3,5), 112 (*1,5), 139 (1,5), 145 (*1,5), 148 (3,4,5), 152 (1,3), 153 (*1,*2,3,5), 165 (1,3), 190 (1,3), 196 (*1,5), 201 (*1,5).

y: 3 (*1,5), 58 (2,3,5), 66 (*1,*2,5), 79 (4,5), 87 (4,5), 117 (*1,3), 155 (*1,3), 164 (*1,5), 177 (*1,5), 185 (3,4,5).

i: 12 (*1,5), 16 (*1,2,3), 24 (2,3), 33 (*1,*2,3,5), 47 (3,*5), 55 (*1,*2,3,4), 70 (*1,3,4,*5), 73 (*1,5), 95 (2,5), 97 (1,4,5), 104 (*1,*2,3), 11 (4,5), 136 (1,3), 139 (1,5), 147 (4,5), 150 (1,4,5), 157 (2,3), 166 (*1,2,5), 190 (1,3), 194 (*1,2,5), 198 (2,5).

e: 4 (*1,3), 25 (*1,2,3), 26 (4,5), 27 (*2,5), 32 (*1,3), 36 (*1,*2,*5), 44 (*1,3,4,5), 52 (*1,*2,3,5), 57 (2,5), 65 (*1,3), 74 (4,5), 82 (1,2,3), 112 (*1,5), 114 (*2,*5), 116 (*1,3), 118 (*1,5), 120 (*2,3), 134 (*1,5), 153 (*1,3,5), 158 (2,3), 169 (4,5), 170 (4,5), 172 (4,5), 174 (*2,4,*5), 201(*1,5), 207 (1,5).

u: 11 (4,5), 18 (1,3), 76 (3,4), 109 (*2,3), 117 (*1,3), 124 (*2,3), 131 (2,3), 161 (2,3,5), 183 (2,3), 196 (1,3), 204 (*1,*2,3).

o: 3 (4,5), 14 (*1,*5), 15 (*1,2,4,*5), 21 (3,4), 34 (3,4,*5), 41 (4,5), 51 (*1,3,5), 53 (4,5), 60 (2,*5), 66 (*1,*2,5), 70 (*1,5), 77 (1,5), 80 (4,5), 82 (*1,3), 92 (3,4), 99 (*1,2,*5), 105 (1,3), 106 (2,3), 126 (*1,*2,3,4,5), 130 (4,5), 135 (2,5), 137 (*1,4,5), 138 (*1,5), 154 (*1,3,4), 155 (*1,3), 164 (*1,5), 171 (*1,*5), 175 (*1,*2,3,4,5), 178 (4,5), 181 (4,5), 187 (*2,3), 191 (1,5), 203 (*1,2,3,4,*5), 208 (1,5).

a: 2 (2,3), 6(2,3), 7 (4,5), 8 (*1,5), 13 (*1,*2,4,5), 17 (1,2,5), 22 (1,3), 28 (*1,*5), 31 (1,2,3,5), 38 (1,3,4), 42 (1,2,3,5), 45 (*2,5), 46 (*1,*2,3,4,5), 58 (2,3,5), 61 (*2,3), 63 (1,5), 67 (1,4,5), 68 (1,4,*5), 69 (*1,2,3,5), 77 (1,5), 79 (4,5), 81 (*1,5), 87 (4,5), 88 (4,5), 93 (4,*5), 95b (*2,*5), 110 (*1,*2,3,4,5), 115 (*1,*5), 117 (*1,3), 121 (*2,*5), 129 (*1,5), 133 (*1,3), 145 (*1,5), 148 (3,4,5), 151 (4,5), 163 (*1,*5), 177 (*1,5), 189 (2,3), 195 (*1,*5), 199 (*1,2,5), 200 (*1,*2,5), 206 (4,5).

2.4.2. The remaining correspondences appear, for the time being, too complex to be handled together for all the groups. For that

reason they are arranged taking the C languages as point of reference and then in turn taking Y as point of reference (correspondences between C and Y are listed under C). In each case for each C or Y sound the correspondences are given separately for each of the other groups. As before, the starred numbers mean that the corresponding form is attested at least in two languages (when they are C languages, the star follows the number).

C:

- č P č (*164*)
M č (35, 88, 147, 172)
- č' P č (*8, *129, *144*, *200); š (*44, *137); s (37)
T č (*10*, *168); ś (32); é (*44); c (*200)
Y š (44, 32, 99*, 144*)
M č (36, 44, 144*); š (137); s (149)
- s P s (*161); š (52)
T c (52); s (207); é or ś (139)
Y s š (52)
- š P š (134, *173, *175, *199); ś (*30, *66, 193); c (*159)
T c (40*, 60, 175); s (66, 199); é (*173); ś (11)
Y š (175); s (72)
- s ~ š P č (*171*)
M s (174*)
- x P š (*13, 15*, 17, *126)
T ś (57, *95*); č (*13); é or ś (*15*)
Y š (95*, 126)
M s (42, 107); c (13)
- ɣ P š (*33)
T ś (*33)
- l P š (81, *203); śc (*48); sš (*73); r (77)
Y š (34*); l (33, 48*, 72); l ~ r (175)
M š (34*)
- r P r (12, *171*, *175); ś (*138, 143)
T r (26, *27, 45, *143, *175);
Y l ~ r (175); s (143)
M r (26, 53)
- r ~ s P r (*195*)
- r ~ l P š (*203*, 208)
T š (*203*)
M r (*203*)
Y l (203*)

r š	M š (7)
Y:	
č	T c (24, *187); č (157).
d	P d (22) T d (22, *78, *86, 105, 128); f(*168) M d (128)
s	P š (*76, 83, 152, 196); c (*4, 165); š (190) T c (*76); d or r (131) M s (83); š (76); c (95c)
š	P š (18, *33, *44, 91, 126, *146, *175); s (32, 89, 136); š (42, 95) T š (*6, *37, *61, *127); č (*33, *44, *146); s (165, 42); š (183); c (175); č or c (*168); c or s (*108)
š ~ s	P š, T c, M c (52)
l	P š and r (9); š and s (*115); š (84, 84); c (84, 159) T c (24, 158); č (34, 82); r (187) M š (34)
r	P r (*153, *188); ?n (104) T r (62, 122, 175, 183, *188)

3. The list of cognates is selective. Many probable sets have been eliminated which at present would have probably made the case weaker rather than stronger, specifically most of those where one had to assume: (1) vowel alternation of breakdown of a stem not supported by further data; (2) C x, ɣ corresponding to k in the other groups (although a good case could be made for it on the basis of the shift $k > x$ in Ta, and some cases of alternation $k \sim x, q \sim ɣ$ in C); (3) a fossilization in P, T, Y, or M of the markers k-, t-, w- which occur in a class of verbal stems beginning with vowel in C.

Looking through the previous sets of correspondences and through the following sets of cognates, it can be observed that there are few cognate sets represented by at least two languages on the C side. That these are usually O and Te is explained by the fact that the available Tsh and H vocabularies are extremely short. Furthermore, O and Te show strong lexical differentiation in non-

basic vocabulary. In terms of comparison this circumstance has both a positive and a negative effect. Positive, in that due to the slight change undergone by cognate forms in C languages, we can be confident that a form attested in any of the languages, if inherited, had the same shape in Proto-Chon. Negative, because, at least in Te, there is a word *tabu* which in some cases caused a permanent replacement in vocabulary, and word *tabu* is also reported for O and H (although it is not reflected in the vocabularies and we cannot gauge its effects), so that in cases of forms attested in only one language there would always be the possibility that the original meaning was very different or that the word was a borrowing (both cases are attested in Te). If we also take into consideration that two series of stops in the C languages are equated with only one series in the other groups, and that many cases involve CV matchings, it is obvious that the possibilities for including false cognates are great. In fact, since about 120 cognates were found between O and Te, we can surmise that the assumed cognates included in the list of, lets say, O and/or Te on one side and pP or any P language on the other, are too many. They are included as possibilities, and from my point of view, the validity of the proof does not depend on their number. What I consider decisive are the agreements in the pronouns, the causative, the dummy element, the coincident details of grammatical and phonological structure, well represented correspondences like those of m, n, b/w, and the vowels, a non trivial correspondence like that for Y and C lateral, a selected number of resemblant forms found in at least three of the groups, for example sets 8, 11, 26, 34, 36, 37, 44, 50, 51, 52, 59, 66, 69, 70, 97, 98, 126, 144, 148, 173, 174, 203, 208.

Forms in parentheses either justify breakdown of stems, or point to irregularities, or indicate the corresponding pP and/or pT phoneme(s) when it is a form not reconstructed by Shell or Key and if different from the reflex(es) in the language(s) quoted.

Hyphenated forms without further comment present no problem of analysis. Forms which I consider less probably related are also included within parenthesis preceded by a question mark.¹⁴

1. ADJECTIVAL Chc -mī; Reyesano -me; Y -ima (sg), -mu (pl); (Prost 1965: 109; Girard: 76; La Cueva: 6).

2. AGENT Ta ha (<*k); Y xa (probably /k/); (Ottaviano: 412; La Cueva: 4).

3. ANIMAL pP *yo?ina; O yòwn.

4. ANOTHER pP *wica; Y besu.

5. BE Y li-be to be inside; M bei

6. BEE pT *waša; Y wašou (the form is pl, the sg should be waša).

7. BEACH M taša; O t'árš.

8. BIG₁ Chc čai, Cshb čaa, Shipibo iča much; M čoi; O č'ó'wn, Te č'áy.

9. BIG₂ Cshn biša, biro to increase; Y a-bole

10. BIRD Cv čai; O čáč'e, Te č'è'.

11. BLANKET pT *maša; M musumu; O móšen headband; (? M šum; O šó'n cloak made of guanaco skin).

12. BOIL Cshn bi-ri (pP *košji); O k-wêrēn

13. BONE₁ pP *šao; pT *e-ča'o; M caca brain; Te xá' shin-bone.

14. BONE₂ pP *koi chin, jaw; O, Te q'ó'; (? pP *poš[V]ko ankle; Cshn poška shoulder; O q'òyen id, Te q'á id).

15. BREATHE Cshb šoška, Cshn šqa; Cv hoha (<*č or *š); Te xóx; (? M xetči).

16. BROAD pP *kišto- (Cshn kīyo); Cv kini; Y čišne.

17. BROTHER Cshn šano (male speak-

ing), Shipibo šabue sister-in-law (of a w.); Chm šana sister-in law; Te xáw brother-in-law.

18. BUD Cshn šo-šo; Y šu-bitá (šu-ri to bud a fruit-tree, šu-fie to grow).

19. BURN₁ Cshn kī-tj to light the fire (ri-kī live coal); Y čive (intr.), ku-čio (tr.)

20. BURN₂ pP *mī-šo (Cshn, Cshb mī-no [Key 1968], pP *no-ka to put out fire); Cv šowa, Ta ocoa (Cv š Ta c, irregular); Y lu-mu (-xulula); cf. HEAT.

21. CANE Y toño; M ton spear; (? pP *tawa arrow; Hsh tal id).

22. CARRY Cshb račka to drag (rič to carry); Chm, Cv doxo; Y dayu to load.

23. CAUSATIVE pP -m(a); Chm (-)mee, Ta me; Y ma-; O me-, m-, Te m-, -m; (Shoemaker 228ff, 300, 302; Ottaviano: 393 ff, 397).

24. CLEAN₁ Ta cici; Y čili

25. CLEAN₂ Chc ba-wī (Shipibo ma-wī) to sweep; Chm weha; Y we.

26. CLOSE₁ Ta (Armentia) karia; M ker; Te gón-kér to close a door.

27. CLOSE₂ pT *teri; Te qás-ter to close the eyes.

28. CLTH pP *bači skirt, tent (pP č = pT t, before i [Key 1968: 49]); O wá'ten, Te wá'ten band.

29. COMMITATIVE Cshn -ki; Te -ke.

30. CONTINUOUS ASPECT Cp -ska already, next; O, Te -šk'; (Loos 1963: 728-9).

31. COOK₁ Cshn bə, Shipibo yuwamis (n); Chm dawa to roast; M evak to burn; Te wán.

32. COOK₂ Cshn na-ni to roast, Cshb nūj to burn; Cv xi-ña (Cv xixi to burn); Y nene.

33. CORN pP *šī-ki (pP *šī'mi to shell corn); pT *-čik; Y šili; Te xélmon flour.

34. COVERING Y ošo clothes (ološo to fall the skin, lule to peel off); M ošo clothes; O ól skin, leather, feather, Te ól-m to pluck; (? pP šoko to peel; Ta e-hošo-i clothes).

35. CRAZY M čaupi; Te čop'.

36. CUT₁ Cshb pi, Cshn piš; Cv paca, Chm poho, Ta peđu (irregular correspondence); H peu, O p'é, Te p'è'y-xen-we axe ('that which cuts many things').

¹⁴ Sources are: pP (Shell 1965), pT (Key 1968), Cshb (Shell 1959), Cshn (Abreu), Shipibo (Alemany), Ta (Van Wynen, Armentia 1902), Cv (Key 1963), Chm (Wyma), Y (La Cueva), M (Bibolotti, Armentia 1903), Tsh (Lehmann-Nitsche), Te, O (Cf fn 8), H (Lehmann-Nitsche, Tonelli). Tsh and H forms are interpretations of poor phonetic recordings; I have modified Abreu's and Alemany's spellings for Cshn and Shipibo respectively according to the forms which can be checked with Shell's data for these languages, but there may remain errors especially in the difference between š and ś. In general, the forms quoted are stems or roots, even when they are not free forms.

37. CUT₂ Cshb ci-k'is, Cshn si-kii (Cshn si-no to cut); Chm hewi, Cv hik'i, Ta siki (<*š); Y šigmi to carve; M ðet to split; Te ð'e-y, ð'e-r.
38. CUT₃ Cshn taski; Y takta; M tačeyi.
39. DEEP Y imuxu; M moč far.
40. DEFECATE Chm see; H ša-, Te ša'.
41. DEVIL M soyo; Te šó'yken witch.
42. DIE Cshn šakai to agonize; Ta (Armentia) sanatana; Y sama; (? Marinahua yamama? to kill [Shell 1965: 256]).
43. DIRECTIONAL pP * -ki; Chm -ke; Y -či; Te -k'(e); (Shoemaker: 302; La Cueva: 4).
44. DRINK pP *šī'a; pT *i'í; Y enšei; M t'ei; O ð'é't'en.
45. DRY Cv erara, ora, Ta sara; Te 'á r.
46. DUMMY Cp ha-; Chc 'a-; Chm a'a, Cv amena; Y ača, ati-; M at; Te 'à, 'ám (cf 1.2).
47. EAT Y tia; O, Te t'é.
48. EGG pP *[h]iši seed, egg of a louse, *šašci; Y aluli; H alon, O é l.
49. FALL₁ Cshb ni-pa, ni-ti, Cshn ni-ri (Cshn nuša to throw into a purse); Y neta, nulu.
50. FALL₂ pP *bot[V]; pT *boti; Te wá't'.
51. FAR Cshb 'ora, Cshn onoa; Y oonaa; Te e'ón.
52. FAT pP *šini grease, lard; pT *e-ce-fi obese; Y šeše ~ sese; Te sè we obese; (? pP šoa-; Y libe to fatten, sule id; M coye oil).
53. FIGHT M vori; Te wór.
54. FIND Y deče; M dake; Cv dadi.
55. FINGERNAIL pP *-cis-; Chm -kiši, Reyesano -tiši, Ta -tidi (<*č); M patči; (? Te qàč'wel).
56. FISH M keveye; Te qó'yen.
57. FLY Cv heta (<*č or *š); Te xé'?
58. FOCUS MARKER Chm ya; Y ya he says that; Te ye 'emphasis'; (Shoemaker: 301; La Cueva: 25, that the Y form is some kind of focus marker is inferred from the fact that it is also used with the verb meaning 'to say'; in the three languages it is a postposed element).
59. FOOT pP *ta'í; Y te-we (te-se to stand up); H tei, Te (Pigafetta, in Outes) te.
60. FULL Cv cono-da; H son surfeit, O šó'n.
61. GENITIVE pT *-ša (Chm ha, Ta -sa; T s Chm h < pT *š [Key 1968: 35]); Y -ša; (Ottaviano: 412; Shoemaker: 303; La Cueva: 4).
62. GERMINATE Ta muruita; Y mororo-ta.
63. GERUND₁ (concomitant action) Chc tai ∞ nai ∞ kai ∞ 'ai; Te (n)ay; (Prost 1965: 101, 129-30; both postposed).
64. GERUND₂ (final) Cshn nona; Te náon.
65. GET LOST pP *bi'no; Y benene to hide.
66. GHOST pP*yo-šini (*yo-šika sorcerer); Cv yoso god, saint; Ta iyuda frightful; O yò'wše.
67. GIVE BIRTH TO₁ Cshn ba to be born, Shipibo bake; M basiyi; O wánnen pregnant, Te wášen id.
68. GIVE BIRTH TO₂ Cshb nánipaki; Y nu; M na-t'ei (nai be born); Te na'mne.
69. GO₁ Chc waha to go out, Cshn ba to stroll; Cv bana to come; Y ba; Te wá'n.
70. GO₂ pP *wino to pass by; Y wi-; M venčo to arrive; O wé'nen, Te wè-nole to walk, wè'sen to visit.
71. GOOD M kextesin beauty, kec accomplished; Te k'é't'.
72. GRASS Cshb šo-βi (pP *šopo fur, small hairs); Y sulo; Te šál a kind of grass; (? O xóšel).
73. HAMMOCK pP *nisši also bark, shell; O nel bed.
74. HARMFUL M ketin-ye; Te qetelx.
75. HEAR Y a-wesebe; M seve.
76. HEAT pP šana hot (*šo'i to roast), Cshb šara to burn; Y šuxuša, surura; M ešuk; cf BURN₂.
77. HIDE Cshn aro; O alo-pen (pen to sit).
78. HIGH Cv de- deep, Ta due-da id, due-xi too much; Y doxo above, i-doxo-le too much.

79. HOLE₁ M kaiya; O k'á?yen *waterhole*.
80. HOLE₂ M to; O tó'qo.
81. HUNGER Cshc pašna, Cshb paašna;
Te p'ál.
82. IMBUE Cshb pico *to suck the hand*; Ta
peđa (< *ć); Y pele.
83. INCLINE Cshb pošoko *to fall as a
tree*; Y pusu; (? M puešei *curvet*).
84. JOINT₁ pP *tišo *nape, throat*, *tistö
Adam's apple (*ti-*throat*); Y tilis.
85. JOINT₂ pP *po-š[V]-ko *ankle* (Paka-
guara ra-po-to *knee*, ho-po-to *ankle*, Ara-
zaire ram-pu-tu-ku *knee*); Y popo *wrist*, *podo
shoulder*, *poiloxoto heel*.
86. JUNCTION Cv dida *to join* (dodo
forked pole), Ta doč *forked pole*; Y deiste.
87. KIDNEY M kai; O q'á'y
88. KNEE M kace-ye (a descriptive term
derived from the verb meaning 'to fold');
O q'á'č.
89. KNOT Cshb sibo *to tighten forming a
knot*, Cshn siki; Y šebueta.
90. KNOW pP *?ona; Te ?ó'm.
91. LAUGH Cshb šičf; Y širare *to mock*.
92. LAX Y šoma; M šofi, šoi.
93. LEAF M šaň; O še'n, Te šá'n also *ear*
(O e = Te a, before a nasal).
94. LEG pP *kis-ši *thigh*; Y kušu-xa *to
stretch the legs*.
95. LIGHT (not heavy) Cshb bišbá *thin*,
Cshn bišaka; Y basi-basi.
95a. LIE (tell a lie) Ta biřu; O wáren,
Te wér.
95b. LIE Chm haa *to throw oneself
down*, Ta sana *id.*, -sa- *lying* (vbl suffix),
(*š); O, Te xá'.
95c. LIFE Ya-see *to beget*, a-lee *origin*;
M ca.
96. LIMB pP *mi-ři *arm*, *mi-šo *to crawl
on hand and knees* (pP *mi-kinī *hand*); Te
mél *wing* (cf. O k'əl *branch*).
97. LOUSE₁ pP *(?)o'pos-ři *chigger*, Cshb
šřšř *little louse found in clothes*; Y ne-še
(nieške *nit*, šiňoxo *louse of hen* cf LOUSE₂);
M cii, cicitin *moth*; Te č'érđ.
98. LOUSE₂ Cshb soko *little louse*; Y
šořořo; (? H šapen, O xá'pen).
99. MAN pP *[h]oni; Y suňe; M coňi;
H onk, O é'ón, Te é'ón-k'.
100. MARRY pP *binu *husband*; Cv
vanaya, T xa-we, xa-wan-etike; Y ba; M
ve-mi.
101. MEAT pP *namī; Chm e-yami, Cv
e-rami, Reyesano yami; Y eme.
102. MELT Cshn muša *to dilute*; Te mó?.
103. MISTAKEN Cshn ki-bino (Cshb
kimiti *lie*); Te kéw kó't'.
104. MONKEY (kind of) pP *šino; pT
*šifowa; Y sisiro.
105. MUD₁ Cshn popos; Y popo *plaster*.
106. MUD₂ Cv doka *thick, muddy*; Y
dořořdo, kodořko.
107. NAME pP *ani; Te ónen.
108. NARROW M set; Te xátter.
109. NAVEL Cv so'o, Ta cu (irregular);
Y šuruna; (? M oyo).
110. NEGATION pP *-ma; Chm xima
not yet, Cv aihama *no*, Ta maše; Y čama;
M am(ba); O (Tonelli) kma.
111. NEST M tii; Te até?.
112. NEW pP *ři'na; Te wę'n.
113. NIGHT pP *yamī; Chm meka-xe,
Cv meta, Ta moeta; Tsh mane?.
114. NOMINAL MARKER Chm e-, Ta
e-; O, Te é-; (Shoemaker: 291-3; Ottaviano:
398-42).
115. NOW pP *ra?ma; O, Te má?.
116. OBLIQUE Cshb kiska *to stumble*,
Cshn kiska *inclined*; Y čeleme *strobic*.
117. OLD WOMAN pP *yoša Y yuma
mother.
118. OPEN Cshc -pi(š)-, Cshb bi-pi-kiťi,
Cshn be-pi, ču-pi; H ayepam, Te q'ón-p'e
to open the mouth.
119. OTHER Ta pea; Y peše; O pé-mer
that (Te mér *that*).
120. OWNER Ta -mečf; Y eme.
121. PARENTS Ta ano *grandmother*; O
á-me *mother*, a-én *father*, Te á'-n *mother*,
á'-n-k'o *father*, á'-tš *parents*.
122. PARTRIDGE Ta wiriri; Y wirile;
(compared to the rest of sets, this matching
is too long, it could be a loanword).
123. PAST Cshc -ki 'completed action',

Cshb -ki 'habitual past'; Te -k'e 'completed action'; (Prost 1965: 90; Shell 1957: 189 chart 3a).

124. PEEL pT *poši; Y a-puši, pišo (puši *feather, hair*); cf. COVERING.

125. PICK UP pP *mīʔi; Y mi; cf. LIMB.

126. PIERCE₁ pP *šoʔmoši *needle*; Chm soko *to sew*, Cv toco *id.*, Ta rusu *id.*; Y soxo-lo, soxo-to *to prick*; M coso *to sew*; Te xǫlen *id.*; (? pP kiʔši *to sew*, *šīwa *to weave, to thatch*, Cshn šoi *hole*, šato *flat hole*); cf. THORN, ROOF.

127. PIERCE₂ Cshn pis; Y peg *to nail*.

128. PINCH Ta ǫixu; Y duya *to sting*; M doš.

129. POINTED pP *čaʔ-či *to pierce* (Cshn čara *three pointed arrow*, čati *to pierce*); O č'áter.

130. POUND M kotčai; Te q'ó'č'en.

131. PRESS Ta pu-du (puri *squeeze*); Y pusuri *to crumple*.

132. PROHIBITIVE Y -yo (La Cueva: 17-8); Te -é'o.

133. PROSPECTIVE Che -ta *go to*; Cp -taʔ *immediately*; Y -ta *intend to*; (Prost 1965: 90; Loos 1963: 728-9; La Cueva: 20).

134. PUSH₁ Cshb šiki-nan *to escape in a group*, Cshn šik *to change place, to hurry*, šikitaniš *to recoil a horse*; Te šík *to trample a horse*.

135. PUSH₂ pP * nini *to pull*; Ta nunu; Y noto.

136. RAT pP * šoya; M šošo; O č'óter.

138. RED pP *ošini; O órǫ; cf. WHITE.

139. REED Cv hiwiwi (< *é or * š; Te séwerwen).

140. REFLEXIVE₁ Cp -kīt, Cshn -ki; Te k.

141. REFLEXIVE₂ Ta -ti; Y (a-...) -te *ta to 'reciprocal'*; (Ottaviano: 397; La Cueva: 17-8).

142. RELATIVE (female) Cshb tita *mother*, Cshn titi *mother's mother*; Y tee *nephew or niece of a woman*.

143. RIB Cshb, Cshn piši; Cv e-pere-kace, Ta e-pareiri; Te pár; (? Cshn paso *lateral*; Y paša *bank of river*, pišiji *edge*).

144. ROACH pP *čapo *cricket*; Chm

čapa, Cv sopa, Ta sapakala (irregular); Y šepaire; O č'á pel *worm*, Te č'éper

145. ROAD pP *βaʔi (*wai *field, trail*); O wáx.

146. ROOF pP *šīwa *to thatch* (Marinahua šīpa *roof*); Chm e-sipi, Ta cipi (< *č); Y šele; M šiamis.

SALT M hiccó; Te xétč'en.

148. SAME Y bakta; M wakec; Te wá'qe.

149. SAP pT *emadi; M misare; Te mé'č'ar.

150. SAY Cp ʔiʔ; M yi; Te ʔè.

151. SCRAPE M pacak-ye *refuse*, pacak-paca *in pieces*; Te p'át'kt *to scrape a skin*.

152. SCRATCH Cshn biša, biwiš; Y bešbei, besebe.

153. SEE pP *βi-ro *eye*; pT ba; wekta (wiri-u-ta *to open the eyes*); M ve.

154. SENTIMENT pP *noi *to want* (Cshb noiba *to trust*, noo *to frighten*, Cshn noci *to hate*); Y no-me *to frighten* (nole *fond of*); M noiya *to frighten*.

155. SHELTER pP *yoʔo, yona; Y yoya, beyu.

156. SIBLING pP *poi *sibling of opposite sex*; Y pa *younger brother*.

157. SICK Ta čiki *sickness*; Y čišči.

158. SILENT Ta e-cive; Y ele.

159. SIT DOWN pP *caʔo; Y le.

160. SKIN M ciñ; Te č'čx.

161. SMELL Ta po-i-da *fragrant* (po-đe-da *insipid*; Y pupa, pupu; Te pósq *to stink*; (? pP *pisi *foul odor*).

162. SLEEP M kuši; Te qò te.

163. SPEAK₁ pP *čani; H čane, O čan, Te č'ène (O č T č' is irregular).

164. SPEAK₂ pP *yoka *to ask for*, yo(o)si *to instruct*; O y'osen; cf. GHOST

165. SPLIT Cshn biči; Ta bučeče *to slice*; Y busu, boro.

166. SQUEEZE₁ pP *ti-ma *to strike, to pound food* (Cshn tiwa *to press out*); Cv tisi; Te t'éwe *to grind*.

167. SQUEEZE₂ M kup; Te q'á'pe.

168. STEAL pT čifi; Y šete, šede; Te č'à re.

169. STRETCH₁ Y ma-teče; M tek.

170. STRETCH₂ M *kepkep to milk*; O *k'ep'é'n*.

171. STRONG pP **čoriši hard*; H *ksolen*, O *só're*, Te *kšó're*.

172. SUFFOCATE M *kečei*; Te *kđčere*.

173. SUN pP **oši moon*; pT **ícteti*; M *icuñ*; Te *šé'wen*.

174. SWELL₁ Chm *šexe swelling*, Ta *sehe id*; M *kisiñ bubo*; O *kšené'n*, Te *kšé'n*.

175. SWELL₂ Cshb *šoró bladder*, Cshn *šuru*; Chm *e-so furuncle*, Cv *e-coka*, Ta *e-suru mature*; Y *šololo pimple*, *šororo scab*, *sore furuncle*; M *šo(x)bi*; Te *šó'r furuncle*.

176. SWELL₄ Ta *poxo to burst*; Y *puxa*.

177. SWING pP **pa-ya (*maya to rotate*, Cshn *šayai fan*); Te *yà'*.

178. TAIL₁ M *oši handle*; O *óše*.

179. TAIL₂ Cshn *ti-to tailless (tišo but-tocks*, Cshb M *mī-to one handed*); Ta *e-tiđa (<*s)*; Te *t'é'r*.

180. TEMPORAL Y -*ti (La Cueva: 15-6)*; Te *te-*.

181. THAT M *mo*; Te *món*.

182. THIN₁ Chm *ešwiyo (<*č, *š, or *s)*; H *čewel*, O *č'éwel*.

183. THIN₂ Ta *ošori*; Y *uši to become thin*.

184. THORN₁ pP **moša*; O *mó' awl*; Te *mó' thistle*; cf. PIERCE₁.

185. THORN₂ M *ioti, iovi hook, ioke needle*; Y *yušute sting of a bee*; H *yaš arrow point*, O *yá' arrow*.

186. THREAD M *Tin-ye*; Te *té'*.

187. THROAT Cv *e-cori-kan*, Ta *e-coi-han*; Y *čololoto*.

189. THUNDER Chc *tiri-?aina*, Chani-nahua (Key 1968) *daitiria*, Mayoruna *tiriiki (ibid.)*; Cv *tiriti*, Reyesano *etiriđa*, Ta *tiri*; Y *terere*.

189. TIE₁ Cv *tani*; Y *tana*.

190. TIE₂ Cshn *bīši*; Y *wisko*.

191. TIME Chc -*no hour, time*; Te *nó'ken watch*; (? Te *kén-nos when?*, cf Chc *nini-no when?*).

192. TOOTH pP **šita*; pT **e-ce*; Y *sansa*.

193. TOPIC MARKER Chc -*š 'subject marker in participles' (Prost 1965: 101)*; Te -*š (e.g. yà-š wénnay ?ěš I-topic-here-come*

I am the one who is coming here vs e- ?è- šk' yà' wénnay I am coming here).

194. TOWARDS pP **-ki*; Y -*či*; Te -*k'(e)*.

195. TREE pP **ka(a)ro firewood*; H *kasse charcoal (of wood)*, Te *qárđ*.

196. UNRIPE Cshb *šoo*; Y *suyuyu-ta fresh thing*.

197. VERBALIZER ('be in the state of/ have the quality of/ produce that meant by the stem') Chc, Cshn -*wa*, pP **wa to make*); Te -*đ (e.g. xá?lđ to scrape a skin : xá?l scrapes)*; (Prost 1965: 83; Abreu *ba cook (intr) : bawa cook (tr)*).

198. WANT Cv *bihida*; O *wiyáve?*.

199. WARM pP **šana hot*; Ta *đaria to set fire to (<*s)*; Te *k-šáy-wenk'*; cf HEAT.

200. WASH pP **mí?ča to wet (*pača to wash clothes, *čoka to wash)*, Chn *šak*_a, -čoe wet*; Cv *oca*, Ta *cabi (<*c)*; Te *č'áx*.

201. WAVE₁ pP **βičo(n)*; O *wé?*.

202. WAVE₂ Y *poše*; M *pufei*.

203. WHITE pP **ošo*; Chm -*oše*; M *oroškañ clear day*; H *kore*, O *óleč clean*, Te *óré*; (? Cshn *boš gray hair*, *uru to clean*; Y *bololo white*; O *só?ol id*).

204. WILD TURKEY pP **ko-šo (*šoki toucan)*; pT **koco (*cok'e toucan)*; Y *šune, sune*.

205. WOMAN Cshb *šano*; Y *šenye*.

206. WOOL M *pañ*; Te *páx*.

207. WOUND Cshn *šino*; O *sénčén*.

208. YELLOW Cshn *tuši*; Ta *tirina*; O *tól ~ tór*, Te *tór*.

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