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Hokan I: A review of comparative studies[1]

The article reviews the history of Hokan studies, from the formulation of the Hokan hypothesis by Dixon & Kroeber in 1912–1913 to the present day. Despite more than a hundred years of research, there is yet no consensus on the validity of the Hokan hypothesis. The article argues that one of the reasons for this is the fact that many attempts to compare Hokan languages used a non-standard methodology, in which the study stops at listing the observed sound correspondences, instead of the classical comparative method, which requires a search for complementary distributions and a comprehensive reconstruction of protophonology.

Keywords: comparative method; Hokan languages; Native American languages; genealogical classification of languages.

0. Introduction

The Hokan hypothesis, combining a number of language isolates and small families in California into a single Hokan stock, was proposed more than a hundred years ago. Despite the long history of the proposal, there is still no consensus on its validity. Although putative Hokan languages remain severely underdocumented, now we have much more data on them than was available to researchers in the 20th century. Time has come for a reassessment of the hypothesis in the light of new data. Such a reassessment must necessarily begin with a survey of what has already been done in the field of comparative Hokan studies. In the words of Lyle Campbell (1997: 290), "[a] thorough understanding of the Hokan hypothesis requires a knowledge of its history".

The present paper is organized as follows: Section 1 is dedicated to the first period of Hokan studies, from the original proposal by Dixon & Kroeber to the work of Sapir. Section 2 surveys an intermediate period from the 1940s to the 1950s, when little has been done on the Hokan hypothesis. Section 3 offers a survey of the period from the 1950s to the 1980s, focusing on the work of Mary R. Haas and her students. Section 4 is dedicated to attempts of general synthesis by such scholars as K.-H. Gursky, D. Leshchiner, T. Kaufman and others in the 1980s. Section 5 surveys the work on Hokan done from the 1990s to the present day. Section 6 discusses general methodological problems relevant to Hokan comparison.

1. The birth of the Hokan hypothesis

Although links between, e.g., Yuman, Seri and Tequistlatecan (Brinton 1891: 109–112), Shasta and Palahinihan (Dixon 1905), Chimariko, Shasta and Palahinihan (Dixon 1910: 335–339) had been proposed earlier, the Hokan hypothesis *sensu stricto* dates from 1912–13, when Dixon &

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Kroeber (1912, 1913b) announced their findings on the classification of Californian languages in a brief note, published first in "American Anthropologist" and then in "Science". Their proposed new families were Penutian, consisting of Maidu, Wintun, Miwok, Costanoan and Yokuts; Hokan, consisting of Shasta (including Shastan proper, Achumawi and Atsugewi), Chimariko, Pomo, probably Karuk and possibly Yana; and Ritwan, consisting of Yurok and Wiyot. No evidence was presented in favor of these hypotheses. Then followed a somewhat more substantial paper (Dixon & Kroeber 1913a), where Esselen and Yuman were added to Hokan and a new family was proposed — Iskoman, consisting of Chumash and Salinan. The evidence for Hokan presented in this paper consisted of structural similarities and five sets of lexical cognates — words for 'tongue', 'eye', 'water', 'stone' and 'sleep', each represented in no less than five out of seven postulated branches of Hokan. The authors also tentatively suggested that Seri may belong to Hokan and that Hokan and Iskoman may be related.

Kroeber (1915) connects Seri and Oaxaca Chontal with Yuman and Hokan in general. He lists 35 comparative sets. Kroeber also discusses sound correspondences, but from a decidedly pre-Neogrammarian point of view, e.g.: "This Chontal-Seri correspondence f : x is corroborated by Seri-Mohave f : h in number 15—the fricative character is retained, but the point of articulation changed" (Kroeber 1915: 282).

The next researcher to take up work on Hokan was Edward Sapir. Sapir (1917) presents 192 sets of comparisons between Yana and other Hokan languages; some additional Hokan cognate sets without Yana are also included. Sapir's comparisons are semantically quite straightforward; in most cases the meanings of compared forms are either identical or very close. Some of Sapir's comparisons must be discarded in the light of new data or reconstruction within accepted small families. Consider his etymology of the word for 'man':

60. Yana *ʻisi* "man, male, husband"
Shas. *ic* "man"; New River Shasta *gè-ʼic*
Chim. *itci*, *itri* "man"
S. Pomo *atcai* "man"; N. Pomo *tca* "person"; C. Pomo *tcatc*; S. W. Pomo *atca*
Chum. *-isūyix* "husband"
Chon. *acans* "person" (Sapir 1917: 9).

Checking the Yana, Shasta and Chimariko forms across more modern sources, we can see that these look just as comparable as the forms given by Sapir: Central and Northern Yana *hisi* 'man', Yahi *hihsi* 'man; husband, husband's brother' (Sapir & Swadesh 1960: 98), Shasta *ʔís* 'person; Indian' (Bright & Olmsted 1959: 37), Chimariko *ʔiṭi* 'husband, man' (Conathan 2002: 31). Moreover, we can add Achumawi *ís* 'person; Indian' (Nevin 2020) to the comparison. The Pomoan forms, however, go back to a Proto-Pomo form hardly compatible with the Yana, Shasta, Achumawi and Chimariko forms above: Kashaya *ʔacaˇc* 'person, Indian, man', Southern Pomo *ʔač·ay*, Northern Pomo *čáʔ* 'man, person', Central Pomo *cá·ċ* 'person', Northeastern Pomo *tá·t-ka·*, Southeastern Pomo *ca-wi*, Eastern Pomo *ká·k^{h}* 'man, Indian' < Proto-Pomo *ʔaká·kʔ 'man' (McLendon 1973: 81). The Chumash (more precisely, Ineseño) word *-isūyix* 'husband' was taken from Kroeber (1904: 42). "Samala-English Dictionary", based on data collected by J. P. Harrington, gives this word as *is^{h}ɨ'y* 'husband', from *is-* 'one's own' + *hɨ'y* 'male', a shortened form of *ɨhɨ'y* 'man, male' (The Santa Ynez Band of Chumash Indians 2007: 148). Thus, the comparison with Chumash must be rejected. Finally, Lowland Chontal *sans* 'person, human being, living creature' has an irregular plural *-san^{y}uʔ* (O'Connor 2013: 226), pointing to a root *san-*. The comparison with the forms above does not look promising.

Nevertheless, a surprisingly large number of Sapir's comparisons in (Sapir 1917) stand the test of time. It is interesting to look at some of the recurrent sound correspondences noted by

Sapir. Yana *y* corresponds to Chimariko *s* or *c* [š] in Yana *ʼīya* 'trail', Chimariko *hissa* 'trail'; Yana *wêyu* 'horn', Chimariko *h-owec* 'antlers, horn'; Yana *-ya* 'female', Chimariko *-sa* 'female' (Sapir 1917: 9, 16, 23). Yana *pʼu* corresponds to Chimariko *xu* in Yana *pʼô-* 'to blow', *pʼu-sā-* 'to smoke', Chimariko *-xu-*, *-xuc-* 'to blow'; Yana *pʼū-* 'to swim', Chimariko *-xū-* 'to swim'; Yana *pʼuiʼ-* 'to be fat', Chimariko *-xu-* 'fat' (adj.); Yana *pʼun-* 'to paint', Chimariko *-xol-* in *-po-xolxol* 'to paint' (Sapir 1917: 13). Despite the obviously inadequate quality of data available at that time, Sapir (1917) remains one of the most persuasive collections of comparanda supporting the Hokan hypothesis.

The final statement of Dixon & Kroeber's views on Hokan was their short monograph "Linguistic families of California" (1919). Here, Hokan includes Karuk, Chimariko, Shastan (including Achumawi and Atsugewi), Pomoan, Yana, Washo, Esselen, Salinan, Chumash, Yuman, Seri and Tequistlatecan (Oaxaca Chontal). No new evidence for Hokan as such is adduced in the 1919 publication. The authors explain this in the following way: "The evidence submitted by the writers as to the unity of these languages is admitted by them to be but slender. Yet they feel themselves absolved from the obligation of presenting further formal proofs through the publication by Dr. Sapir of a recent essay devoted nominally to the determination of the position of Yana in the Hokan stock, but in effect rendering as full a proof of the actuality of the family as could be demanded" (Dixon & Kroeber 1919: 103). However, since the inclusion of Washo in Hokan was a new idea, the authors give two lists of Washo-Hokan parallels, one compiled by themselves and another by Sapir. What is more interesting, the authors provide a "Historical Introduction", where they explain how they arrived at their classification. In the wake of Dixon & Kroeber's (1903) typological survey of Californian languages, the authors became interested in lexical similarities between these languages. However, from the start they interpreted these similarities as due to contact between unrelated languages[2]: "As evidences of similarities between this and that language accumulated, they were indeed noted, but were consistently interpreted as instances of one unrelated language borrowing either material or machinery from another" (Dixon & Kroeber 1919: 49). A systematic comparison was attempted: "About two hundred and twenty-five English words were selected on which material was most likely to be accessible in reasonably accurate and comparable form, and the known native equivalents in sixty-seven dialects of the twenty-one stocks were entered in columns. Comparisons were then instituted to determine all inter-stock similarities that seemed too close or too numerous to be ascribed to coincidence. The purpose of the study was threefold: first, to ascertain the nature and degree of borrowing between unrelated languages; second, to trace through these borrowings any former contacts or movements of language groups not now in contact; third, in the event of any relationship existing between languages then considered unrelated, to determine this fact." (Dixon & Kroeber 1919: 49). The resulting "lexicostatistical matrix" made no sense in terms of language contact: "Families some distance apart on the map often had more stems in common than those in juxtaposition; if the remote group was regarded as once in contact with the one with which it shared most words, it must have been in contact also with others with which it shared but few words. ... Finally, in a mood rather of baffled impotence, an interpretation of the cases of most abundant resemblance as due to genetic relationship was applied. At once difficulties yielded, and arrangement emerged from the chaos" (Dixon & Kroeber 1919: 50). The number of resemblances in the "lexicostatistical matrix" between branches of what would be called Hokan ranged from 4 (Karok-Yana) to 21 (Shasta-Pomo). The authors themselves admit that their comparisons

[2] Fernando O. de Carvalho (p.c.) points out that these interpretations by Dixon & Kroeber make sense within the general Boasian outlook of North American linguistics at the time (see Campbell 1997: 62–66, 72).

"might or might not be considered as including radical words due to a common origin: they certainly included words not due to such common origin but derived by loan. ... Further, the comparisons used being avowedly superficial, that is, not based on analysis, a certain number of false coincidences were bound to have crept in" (Dixon & Kroeber 1919: 52). Still, it is clear that there was more to Dixon & Kroeber's Hokan data than just five lexical sets published in Dixon & Kroeber (1913a). This is important in view of the following misleading statement by Lyle Campbell: "Hokan had the shakiest of origins. ... This hypothesis was based on inspectional resemblances involving only five words in these languages: 'tongue', 'eye', 'stone', 'water', and 'sleep'" (Campbell 1997: 290). Of course, the unfortunate fact that Dixon and Kroeber did not publish their evidence, thus setting a precedent for later researchers in the field, does not mean that their evidence was confined to five words.

Sapir (1920a) demonstrates an interesting paradigmatic morphological similarity between Chimariko and Salinan: verbal subjective pronominal prefixes have the following form in both languages (Table 1; see also Zhivlov 2018).

Table 1. Chimariko and Salinan pronominal prefixes, after Sapir (1920a)

		Chimariko	Salinan
Sing.	1	y-, i-	e-
	2	m-	m-
	3	h-	-
Plur.	1	a-; ya-	a-
	2	q-	k- (subject of 2nd per. plur. imperative)
	3	h-	-

Sapir's (1920c) review of J. Alden Mason's monograph "The Language of the Salinan Indians" contains, apart from many valuable remarks on Salinan synchrony, some diachronic observations. The most interesting is the comparison of plural infixes in Salinan and Yana, worth quoting in full: "One of the most interesting and irregular features of Salinan is the formation of the plural of nouns and of the plural and iterative of verbs. No less than a dozen distinct types and a large number of irregular formations are discussed and illustrated by Mason, the great majority of them involving a suffixed or infixed *-t-*, *-n-*, or *-l-*. Significantly analogous plurals, often of great irregularity though of less frequency, are found in Yana ; e. g. such Salinan plurals as *ṭ-eṭeyitinai* ARROWS (sing. *ṭ-eṭeyini*') and *anetem* SEVERAL REMAIN (sing. *anem*) offer more than a cursory parallel to such Yana forms as *mut'djauṭ'i-wi* CHIEFS (sing. *mu·djaup'a·*), *k'uru·-wi* SHAMANS (*-r-* < *-d-*; sing. *k'u·wi*), *sa·dimsi-* SEVERAL SLEEP (sing. *samsi-*, *sams-*). The Salinan type with infixed *-h-*, *-x-* (e. g. *mehen-* HANDS, sing. *men-*; *kaxau* SEVERAL SLEEP, sing. *kau*) may be analogous to such Yana forms as *dja·li-* SEVERAL LAUGH (from **djahali-* ?), sing. *djal-*" (Sapir 1920c: 306). Similar infixed plurals are attested in Chontal, Seri and Pomoan (Langdon 1990; Zhivlov 2018).

Sapir's second large paper on Hokan (Sapir 1920b), actually written before "The position of Yana...", tries to demonstrate the connection between Hokan and Coahuiltecan — a grouping of languages in Texas and northeastern Mexico proposed by Swanton (1915). Swanton's Coahuiltecan includes Tonkawa, Comecrudo, Cotoname, Coahuilteco, Karankawa and Atakapa. Sapir does not question the coherence of Coahuiltecan as a group, but tries to connect it as a whole to Hokan. Almost half of the comparisons in this article are between just one of the

Hokan branches and Coahuiltecan and thus are irrelevant for the Hokan hypothesis in the narrow sense. If Coahuiltecan (or some parts of it) was related to Hokan, we would expect Hokan-Coahuiltecan parallels to have a better distribution within Hokan proper.

Sapir (1921) gives Salinan additions to comparisons from (Sapir 1920b), as well as 28 new Salinan-Hokan comparisons. The paper also briefly discusses the position of Washo within Hokan.

Sapir (1925) presents the evidence for relating the small Mesoamerican family of Tlapanec-Subtiaba to Hokan-Coahuiltecan. We know now that Tlapanec-Subtiaba forms part of the Otomanguean family (Campbell 2017a, 2017b). Even if Hokan is related to Otomanguean as a whole (Kaufman 2016), it is unlikely that many of Sapir's comparisons will hold. The importance of this paper for Hokan studies lies not in comparisons with Subtiaba, but in the fact that it is here that Sapir laid out his views on Hokan morphology, specifically, nominal, adjectival and verbal prefixes. At least one of Sapir's findings in this area was confirmed by later research. Sapir (1925: 506–512) reconstructed Proto-Hokan stative prefix *m- on the basis of the rather inadequate data he had at the time. Traces of such a prefix were later found in Eastern Pomo (McLendon 1975: 48), Yuman (Miller 2001: 60) and Seri (Marlett 1981: 70–71).

While Dixon & Kroeber did not offer much evidence in support of Hokan, Sapir's work represented a huge step forward in collecting and organizing such evidence. In his works on Hokan, Sapir used the method now known as "mass comparison". He understood very well the limitations of this type of work: "Some of these comparisons are doubtful at best and a number of them will, on maturer knowledge, have to be discarded. A certain amount of groping in the dark cannot well be avoided in the pioneer stage of such an attempt as this" (Sapir 1920b: 289). However, a careful application of the comparative method, as in Sapir's own work on Uto-Aztecan (Sapir 1913, 1919), was impossible here because the only phonologically adequate documented Hokan language at the time was Yana, described by Sapir himself. Still, Sapir does not limit himself to comparisons of lexical lookalikes; he notes recurrent sound correspondences (1917: 6, 7, 8, 9, 10, 13, 16, 21, 23, 27, 1920b: 284, 286, 287), provides preliminary Hokan reconstructions[3] (1917: 33); discusses Hokan root structure (1925: 493-495), derivation (1925), and bits of paradigmatic morphology (1920a). Surprisingly, there were no published attempts to systematically reconsider Sapir's evidence for Hokan and Hokan-Coahuiltecan in the light of new data on the languages involved.

2. A temporary standstill

The following decades saw no new work on Hokan in the proper sense. The only papers published in that period were attempts to add new languages to Hokan.

Rivet's (1942) article is an unsuccessful attempt to show Hokan affiliation of a fragmentarily attested Colombian isolate, Yurumanguí. "The result of the dearth of Yurumangui data combined with the fecundity of Rivet's etymological imagination is that most of the morphological analyses he proposed rest on hypothetical affiliations with Hokan, and so remain undemonstrated" (Poser 1992: 216). If anything, Rivet's work shows that with the loose application of the "mass comparison" approach it is possible to "demonstrate" Hokan affiliation of just about any language.

[3] "Sapir was aware that the available data, except for Yana, was phonologically underspecified if not totally inadequate. I reckon that he intended his pHok starred forms as an approximation to what a full reconstruction would be when phonologically adequate data was available" (Kaufman 1989: 80).

Harrington's (1943) article is broadly similar: it attempts to show a Hokan affiliation for a South American language, this time Quechua. The results are similarly unconvincing. Unlike Rivet, Harrington tries to set up sound correspondences, but his approach can only be characterized as pre-Neogrammarian. Cf. the following sound correspondence with examples:

> *', q, y—'*
> Q iwa, plant, tree; Subt i·ci, tree; Q qalyu, for *'alyu, tongue; Chim -pen, tongue; Q yawar, blood; Sal a·ˊkat, blood (Harrington 1943: 337).

Greenberg & Swadesh (1953) propose that Jicaque (Tol), spoken in Honduras, is a Hokan language. The actual scope of the comparison is wider, since it includes not just "Hokan-Coahuiltecan", but also "Gulf" languages and occasionally other languages from Sapir's Hokan-Siouan superstock. Some comparisons look plausible, e.g,

> *house*: Jicaque wa; Yuma ʔava; Esselen iwa-no; Chimariko ʔawa; Yana wa-wi; Comecrudo wamak; Subtiaba g^{w}a (Greenberg & Swadesh 1953: 219).

More typical, however, are comparisons like the following:

> *mouth*: Jicaque lam, lala; Tonkawa kala; Comecrudo xal; Atakapa kat; Yuma axaʔa; Pomo xacita; Chumash ïk; Chitimacha ša; Tunica šohu; Karankawa emi-akoy. Earliest form perhaps xa-la, with development in two directions as lala and axa, ixa (Greenberg & Swadesh 1953: 219).

The "reconstruction" *xa-la, which is not based on regular sound correspondences, allows the authors to compare such dissimilar forms as Jicaque *lala* and Chumash *ïk*.

3. Mary Haas and the Survey of California Indian Languages

The next period of Hokan studies, which lasted from the 1950s to the 1980s, was dominated by the work of Mary R. Haas and her associates at the Survey of California Indian Languages, established in 1953 in the University of California at Berkeley under the leadership of Haas and Murray B. Emeneau. The main purpose of the Survey was to organize fieldwork on endangered languages of California. The results of this fieldwork gave new impetus to comparative studies on Hokan and Penutian.

Haas (1954) attempts to reconstruct the Proto-Hokan-Coahuiltecan word for 'water'. While Haas discusses sound correspondences for the word in question, she does not provide any evidence that these correspondences recur in at least one other word. Thus, the methodology used in this paper only superficially resembles the traditional comparative method. Haas' reconstructions are actually "pre-reconstructions" in the sense of Peiros (1997).

Bright (1954) compares data from Karuk, Chimariko, Shasta, Achumawi and Atsugewi with the aim of establishing regular sound correspondences. He correctly notes that irregularities in sonorant correspondences may be caused by morphophonemic alternations of nasal and non-nasal sonorants, of a type attested in Karuk.

Bright (1956) attempts to carry out experimental glottochronological counts for eight southern Hokan-Coahuiltecan ("Hokaltecan") languages: Seri, Oaxaca Chontal, Subtiaba-Tlapanec, Jicaque, Comecrudo, Yuma, Salinan, and Tonkawa. The author uses strict objective criteria of what counts as "similar" forms. In addition, dissimilar forms may be counted as matches based on recurrent sound correspondences. Still, it is intuitively clear that the criteria used by Bright result in many spurious matches, such as Seri *ítak* ~ Chontal *ekał* 'bone', counted as a match on the basis of the "correspondence" Seri *k* ~ Chontal *k*, or Seri *ʔánoł* ~ Salinan *i̱népuk*^{h} 'arm', with the "correspondence" Seri *n* ~ Salinan *n*. The fact that such matches are not distinguished from obvious similarities like Seri *ʔaX* ~ Chontal *axáʔ* 'water' or Seri *ʔapł* ~

Chontal *ípaL* ‘tongue’ deprives the resulting counts of any value. See also Marlett’s (2008) criticism of Bright’s Seri-Salinan comparisons.

In a series of three short papers, Olmsted (1956, 1957, 1959) tries to show that Achumawi and Atsugewi do not form a subgroup with Shasta within what he calls Northern Hokan. Olmsted uses his own field materials on Achumawi and Atsugewi. Unfortunately, the phonological accuracy of his field records leaves much to be desired (Nevin 1998: 15–18), which makes the work in question less useful than it might have been.

Jacobsen (1958) compares Washo — a language he himself worked on — with Karuk, for which a good description (Bright 1957) was available. Some of his comparisons are striking: Washo *í·biʔ* ~ Karuk *ʔípih* ‘bone’, Washo *-á·gal* ‘into or in the mouth’ ~ Karuk *-kara* ‘into one’s mouth’, Washo *-íwl* ‘to roll’ ~ K *-ívruh* in *ikrívruh* (sg.) ‘to roll (as a ball)’, *ʔinívruh-* (du.-pl.) ‘to roll (as balls)’, Washo *-í·šib* ‘to be straight, correct, right’ ~ Karuk *ʔíšip* ‘to extend, be in a line’, Washo *-ámad* ‘through a tubular space’ ~ Karuk *-vara* ‘in through a tubular space’, Washo *-íliʔ* ‘up, upwards’ ~ Karuk *-rih* ‘up’. Since these comparisons find no counterparts in other Hokan languages, and even Jacobsen himself does not postulate a specific relationship of Washo and Karuk, a contact explanation seems preferable. It is interesting that many of these parallels are locative-directional suffixes/postpounds — a category whose spread in the Northern California language area must have involved language contact (Mithun 2007). Jacobsen lists sound correspondences between Washo and Karuk, but his approach is rather mechanistic. The comparison of Washo *émle* ‘heart’ and Karuk *iθva·y* ‘breast, chest, heart’, according to Jacobsen, illustrates the following correspondences: W *e* ~ K *i*, W *e* ~ K *a·*, W *m* ~ K *v*, W *l* ~ K zero, W zero ~ K *y*, W zero ~ K *θ*. Each of these correspondences, save the last, is supported by at least one additional example. While no segment is left unaccounted for, one may doubt the realism of the whole picture.

One of the parts of Morris Swadesh’s introduction to the Yana Dictionary (Sapir & Swadesh 1960) is dedicated to “Yana-Hokan Notes”. Swadesh compares the basic vocabulary of Yana and Chimariko and finds 22 “likely cognates” among 113 semantically equivalent word pairs. Swadesh correctly emphasizes the necessity of recurrent sound correspondences: “The principal fact in this connection is that the compared elements show consistent phonetic relationships, as strikingly illustrated by the correspondence of Chimariko /x/ to Yana /p/ before rounded vowel in four cognate sets, including "swim" and "blow," listed above, and two others ("fat," "smear") given by Sapir” (Sapir & Swadesh 1960: 17). He also notes the importance of lexical sets represented in many daughter languages: “Even more striking is the multilanguage agreement; such words as "water," "two," "drink," "eat," "tongue," "thou" show cognates in six to ten different languages or language families” (Sapir & Swadesh 1960: 18).

Haas (1963) starts from an observation that certain cases of long vowels in Shasta go back to earlier sequences *VmV with intervocalic *m. This *m completely disappears in Shasta, but is reflected as /w/ in Okwanuchu. This finding allows Haas to propose a number of Proto-Hokan reconstructions with such sequences: PH *išamaruƙa ~ *išamaƙaru ‘ear’, PH *č-imapasi ~ *imačipasi ‘liver’ (cf. Sapir’s *ipasi), *imaraƙʷi ~ *imaƙʷari ‘navel’, *imapaki ~ *amipaki ‘neck (nape)’, *yamari ~ *imari ~ *irama ‘nose’, *amiraẋʷa ~ *amiẋʷara ~ *s/kiraẋʷa ~ *s/kiẋʷara ‘nails (claws)’, *iš/čarima ~ *iš/čamira ‘arm’, *ipari ~ *ipawari ~ *ipariwa ‘tongue’, *as/cima ~ *is/cama ‘sleep’. Proto-Hokan, as it emerges from these reconstructions, is a language with rather long words, from three to five syllables, with no consonant clusters and with frequent metathesis[4].

[4] Fernando O. de Carvalho (p.c.) points out that Haas’ willingness to go on with such “protoform stuffing” and to postulate rampant metathesis likely stems from her prior work on Muskogean (see, e.g., Haas 1969: 40–42). In the Muskogean domain this kind of strategy, yielding three syllable proto-forms for disyllabic, widely

Now, one can hardly object to the comparison of such forms as, e.g., Antoniano Salinan *-épal* 'tongue', Southeastern Pomo *bal* 'tongue', Yuma *i·pálʸ* 'tongue', for which Haas reconstructs PH *ipari — whether or not supported by recurrent correspondences, we at least have here a clear case of phonetic similarity. But the same cannot be said about Barbareño Chumash *elʔew* 'tongue' and Washo *álŋ* 'to lick', which are given under PH variant reconstruction *ipariwa. The problem is that the correspondence of Chumash and Washo zero to a labial stop in other languages is not confirmed by additional examples, and thus, is not recurrent. Comparing dissimilar forms not connected by recurrent correspondences may allow one to call cognates any two forms at will. Another problem is that the length of the reconstructed forms allows comparisons between words which supposedly continue different parts of a longer form, so that "cognates" may share no cognate material at all. Thus, both Karuk *ti·v* 'ear' and Barbareño Chumash *tuʔ* 'ear' are said to go back to Proto-Hokan *išamaruƙa 'ear', but the Karuk word continues the *išam- part, whereas the Chumash word reflects *-ruƙ- (Haas 1963: 46). In the same way, Yana *ima* 'liver' and Chimariko *-ši* 'liver' are given under Proto-Hokan *č-imapasi 'liver', but the Yana form reflects *-ima-, while the Chimariko form reflects *-si (Haas 1963: 47). The device of metathesis allows Haas to compare words that are unrelated within one uncontroversial family: Cocopa *iya·kal* 'navel' (supposedly from PY *imakʷáli < PH *imaƙʷari) is compared to Yuma *malʸpú·* 'id.' (< PY *imalikʷí < PH *imaraƙʷi), with the following comment: "PYu. *kʷ > p in Maricopa, Yuma, and Diegueno; > k in Kahwan and Cocopa." (Haas 1963: 48). Actually, Proto-Yuman *kʷ is retained as such in all Yuman languages (Langdon & Munro 1980: 126). Lyle Campbell (1997: 294) was certainly right to conclude that "[i]n the absence of a more fully developed proposal for the historical phonological developments, one might suspect, for example in the case of 'ear', that Karuk *t<i·v* (< means that the sound is assumed to have undergone a change of assimilation), Chimariko *-sam*, and Chumash *tuʔ* may not really be cognate forms in genetically related languages and that they may not derive from Haas's proposed proto form **išamaruk'a/*išamak'aru* (1963b:46); similarly, Achomawi *owè·*> 'liver' is a stretch from the assumed Proto-Hokan **č-imapasi/*imačipasi* (1963b:47); and Chumash *top'o*, Achomawi *alu*, and Washo *í>ʔb* 'navel' are a far leap from each other and from the proposed Proto-Hokan **imarak'ʷi/*imak'ʷari*".

Haas (1964) compares Yana and Karuk — two Hokan languages for which published dictionaries were available at the time. Comparisons with other Hokan languages are also adduced, but sound correspondences are listed only for Yana and Karuk. In what would become a model for further binary comparisons, correspondences, including non-recurrent ones, are simply listed, and no attempt is made to show that they form a coherent system or to assign protophonemes to each correspondence. Haas also points out the problem of "intersection" between Hokan and other Californian families: Penutian, Yukian and Ritwan. She compares her Proto-Hokan reconstructions to words with the same meaning in non-Hokan languages of California. Thus, Proto-Hokan *imaraƙʷi ~ *imaƙʷari 'navel' is compared to such "Penutian" forms as Chukchansi Yokuts *čˇut-*, Central Sierra Miwok *pó·ṭi-*, Rumsen *lop-*, Wintu *naq* and Maidu *betéke*. What these comparisons demonstrate is not the extent of lexical diffusion in California, but rather the ability of Haas' method to integrate almost any word from any language under polysyllabic reconstructions unsupported by recurrent sound correspondences.

McLendon (1964) presents 149 lexical comparisons between Eastern Pomo and Yana. Data from other Hokan languages are included wherever possible. While comparisons between

diverging reflexes (e.g. Choctaw *fani* 'squirrel' : Creek *íłu* 'id.' < Proto-Muskogean *ixʷaNi/u), with different languages retaining different "parts" of the etymon, was apparently successful, and some Muskogean languages like Creek do in fact have very frequent cases of metathesis.

Eastern Pomo and Yana mostly look reasonable, it is not always clear whether the compared forms from other languages are intended as cognates, and if yes, what exactly is being compared. Consider the set for 'belly':

> Pe *wi·ní* 'pregnant' : Yn, Yy *wil(la)*. ... Cf. Ps *wi·ní* 'pregnant'; K *višva·n* 'belly'; S *ʔíčnit* 'belly'; Yuy *i·tó* 'belly' (McLendon 1964: 129).

Southern Pomo *wi·ní* 'pregnant' is straightforwardly related to the Eastern Pomo form. Karuk *višva·n* 'belly' may originally be a compound whose second part may be related to Pomoan and Yana forms. Shasta *ʔíčnit* 'belly' is perhaps adduced because the *-ni-* part can be compared with *-ní* in Pomoan words, but nothing in the Shasta form corresponds to *wi-* of Pomoan and Yana words. It is a complete mystery to me why Yuma *i·tó* 'belly' is given in this set. This case shows how important it is to have a working model of sound correspondences for the family as a whole — without it, there is no clear boundary between plausible and implausible comparisons.

Silver (1964) compares Shasta and Karuk, although forms from other Hokan languages are occasionally adduced. Some of the comparisons may represent genuine Hokan cognates: 'drink' S *-ic·-*, K *ʔíš*; 'rock' S *ʔíc·aʔ*, K *ʔasa*; 'sleep' S *-icmas-*, K *ʔasiṽ*; 'water' S *ʔác·a*, K *ʔá·s*. Some other comparisons, without parallels in other Hokan languages, are likely to be areal loans: 'gopher' S *xáras·aʔ*, K *axra·s*; 'sack' S *pú·ʔas*, K *pu·viš* (cf. also Yurok *puwi·š* 'sack'); 'dog salmon' S *ʔičmú·n·a*, K *ačvu·n*.

Turner (1967) tries to show that Oaxaca Chontal languages are not related to Seri. He lists eight "cognates" between Highland Chontal and Seri on the 100-word Swadesh list plus twelve additional "cognates" from a bigger 500-word list and comes to the following conclusion: "Evidently all of the above cognates are either accidental or the result of borrowing. Because of the lack of actual cognates, it seems unnecessary to even attempt to describe systematic phonemic correspondences". Turner's lack of familiarity with historical linguistics is evident from the following passage: "It would be difficult to explain how two related languages could have different grammatical categories, and such is the case with Seri and Chontal". A list of supposedly insurmountable differences between the two languages includes the following: "Seri identifies blue and green by different words whereas Chontal does not have separate words for these two colors. ... Seri has separate words for the urine of men and women as well as separate words for the act of urination by men or women; Chontal does not have this feature". Bright (1970) in his rebuttal remarks "(1) that it is impossible to prove the LACK of relationship between ANY two languages, and (2) that the positive evidence for the relationship of Seri and Tequistlatec is in fact greater than admitted by Turner".

Langdon (1974) is a detailed survey of the history of Hokan studies up to 1970. Her final evaluation is quite optimistic: "We may conclude that Hokan-Coahuiltecan as conceived by SAPIR has withstood the test of time fairly well. Seriously disputed as to membership are only Tonkawa and Karankawa, and a new member, Jicaque, is likely. Less clear is the validity of SAPIR's subgroupings, which, however, have no serious competitors to replace them, except the very cautious view that no two of the families grouped under the label Hokan-Coahuiltecan can be shown as yet to be closer to each other than to the others. ... While a full demonstration of the validity of the Hokan-Coahuiltecan hypothesis is not yet a reality, there is a growing sense of excitement as convergent results are reported" (Langdon 1974: 86).

Silver (1974) discusses suffixes/postpounds in names of plants, trees and bushes. She draws attention to parallels with non-Hokan Californian languages and suggests, e.g., that the Yurok suffix of plant-tree-bush terms *-ep̓* may be borrowed from the Karuk morpheme *(ʔ)i·p* with the same function.

Turner (1976) shows that noun plural formation follows different rules in Chontal and Seri; he uses this fact as a further support for his argument that the languages are unrelated.

Silver (1976) raises the problem of "morphemization", i.e. fossilization of morpheme sequences, "which often has the result of obscuring diachronically significant underlying phonological representations of morpheme strings". According to Silver, aspirated and glottalized consonants in Hokan languages can go back to sequences like *CVx, *CVh and *CVʔC.

James M. Crawford (1976) compares Chimariko and Yuman, presenting 134 lexical sets. While many comparisons are quite good, e.g., Chimariko *'awa*, Cocopa *wá* 'house', Chimariko *'awu*, Cocopa *wí* 'mountain' or Chimariko *hoxu*, Cocopa *i·xú* 'nose', in some other cases long dissimilar forms are compared on the basis of one matching segment. E.g., the set for 'smooth' compares Chimariko *luyu'it*, *luyu'-* with Cocopa *xlqáy*, Yawapai *halowári* (these two Yuman forms evidently have different roots), with the following comment: "[o]nly laterals are compared". There are other cases where the Yuman forms within one set are not related to each other, as in the set 'bird', where Cocopa *šá* and Mohave *ʔaciyér* are unrelated. The author lists sound correspondences between Chimariko and Proto-Yuman. Out of 45 consonant correspondences, 14 are encountered only in one example (i.e., they are non-recurrent), and nine more are encountered in two examples. This is one more case of a binary comparison where analysis stops at the stage of listing the correspondences. No attempt is made to distinguish between chance coincidences and actual correspondences, or to integrate the correspondences into a coherent system.

Judith G. Crawford (1976) compares Seri and Yuman languages. The paper contains 227 comparative sets; forms from other Hokan branches are also adduced. Sound correspondences are listed, but not analyzed; no reconstruction is attempted. In some cases, long forms are compared based on one "corresponding" segment only; e.g., Seri *kkap* 'to fly' is compared to Mohave *himán* 'fly, get up', Havasupai *mánika* 'fall' with the comment "Only S *p* and Yuman *m* are being compared". Some other cases involve loose semantics, as in the comparison of Seri *ʔáapXa* 'cottontail rabbit' with Cocopa *prxá·w* 'fox'. See also criticism of this work by Marlett (2007).

Waterhouse (1976) gives a detailed reconstruction of Proto-Chontal (Tequistlatecan), based on a systematic comparison of Highland and Lowland Chontal. She also provides several lists of comparisons with other languages: "Comparison with Yuman languages", "Comparison with Seri", "Comparisons with other Hokan languages", "Comparisons with Karankawa and Cariban" and "Comparison with Tlappanec (and Otomanguean?)". Many of her comparisons with Yuman languages look quite promising, e.g.:

Paipai *yipúk* ~ Lowland Chontal *-epúh* 'nape'; Cocopa *ipáɬ* ~ Lowland Chontal, Highland Chontal *-paL* 'tongue'; Tipai *tú* 'stomach' ~ Lowland Chontal, Highland Chontal *-etú* 'navel'; Cocopa *ix^{w}áṭ* ~ Lowland Chontal, Highland Chontal *-Wac'* 'blood'; Yuma *ʔamáṭ* ~ Lowland Chontal, Highland Chontal *amác'* 'earth'; Diegueño *ʔak^{w}í* 'cloud' ~ Lowland Chontal, Highland Chontal *akwí* 'rain'; Kiliwa *amʔál*, Diegueño *ʔamal* ~ Lowland Chontal, Highland Chontal *ʔmaL* 'century plant'; Mohave *naʔáy* 'father (w.s.)' ~ Highland Chontal *aʔáyiʔ* 'father'; Yuma *ʔaxán* 'good' ~ Lowland Chontal *hanáʔ* 'all right'; Yavapai *ʔaháʔ* ~ Lowland Chontal, Highland Chontal *aháʔ* 'water'; Diegueño *ʔíɬ* 'worm' ~ Lowland Chontal, Highland Chontal *ʔiL* 'flea'; Cocopa *išáɬ*, Paipai *ṣál* 'hand, arm' ~ Lowland Chontal *asáL*, Highland Chontal *išáL* 'wing'; Paipai *ṣmá* ~ Lowland Chontal *sma-*, Highland Chontal *šmay-* 'to sleep'; Paipai *x^{w}íx*, Mohave *hah^{w}é·k* ~ Lowland Chontal *Weloo-*, Highland Chontal *We-* 'to smell'; Paipai *oʔo x^{w}áy* ~ Lowland Chontal *We-*, Highland Chontal *Way-* 'to smoke'; Yuma *ʔu·n^{y}é* ~ Lowland Chontal, Highland Chontal *áne* 'road'; Yavapai *k^{y}úli* 'long' ~ Lowland Chontal *kul^{y}íʔ*, Highland Chontal *akulíʔ* 'far'.

Lyle Campbell (1976) supports the Jicaque-Hokan hypothesis with a list of 30 resemblances between Jicaque, Chontal, Comecrudo, Seri, Proto-Pomo and Proto-Palaihnihan. According to

him, “[t]he Jicaque-Hokan hypothesis looks even better when the full spectrum of Hokan languages is compared”.

Oswalt (1977) discusses in detail the Proto-Pomoan word *hibal ‘tongue’ and its development in Pomoan languages. He also briefly lists cognates from other Hokan branches. This type of an in-depth treatment of an individual etymology is unfortunately quite rare in Hokan studies. Especially interesting is Oswalt’s demonstration that Pomoan languages have a fossilized noun prefix *Hi-, frequent in terms for body parts.

Jacobsen (1979) is a detailed survey of Hokan inter-branch comparisons. Jacobsen gives some figures to show to what extent errors in badly controlled Washo data recorded by Dixon and Kroeber can vitiate the comparisons: “In my opinion at least 10 (16.7%) in the Dixon and Kroeber list, and 14 (13%) in the Sapir list fall into this category. Most of the mistakes involve misanalysis of the forms, usually failure to recognize the presence of more than one morpheme”. A special critical section deals with Gursky (1974)[5]. Analyzing two-member sets from Gursky’s compilation, Jacobsen comes to the conclusion that 89 sets represent probable loanwords: “These 89 dubious sets represent 20.5% of the two-member sets, and 12.6% of the total number of sets”. He also finds “the strong onomatopoetic component in at least 23 of the sets, mostly bird names”.

Langdon (1979) compares Pomoan and Yuman — the two branches of Hokan for which solid reconstructions were available. Langdon’s work is unlike other “binary comparisons” produced at the time. Instead of merely listing sound correspondences, she tries to show how comparison with Yuman can shed light on the problems of Pomoan reconstruction. According to Langdon (1979: 594-595), “Hokanists recognize that the concept of "Hokan" or for that matter, of any of the other groupings subsuming such ancient connections, differs somewhat from that of the prototypical "language family" in that the relationships it encompasses, while probably partly genetic in the traditional sense, must have been also affected by early as well as ongoing non-genetic areal pressures”. One might argue that prototypical “language families” in this sense, i.e. cases where genetic relationship is not accompanied by subsequent contact, simply do not exist. Langdon’s advice is quite reasonable: “the rational way to approach the "Hokan problem" is to work within the strong hypothesis that Hokan is in fact a language family in the classical sense, thus keeping alive the eventual aim of fully established sound correspondences and solidly reconstructed meaningful elements in the context of their grammatical structure, while simultaneously welcoming and actively seeking evidence for diffused and universal traits”. Langdon shows that some superficial similarities between Pomoan and Yuman languages are due to parallel development. Thus, voiceless resonants, found in Eastern Pomo and Diegueño, result from independent innovations. Langdon suggests that contrast between /t/ and /ṭ/, known to be secondary in Yuman languages (in Proto-Yuman, [t] occurred pre-stress, [ṭ] — post-stress), may also be secondary in Pomoan. She notes that “among the affixes reconstructed by Oswalt, only *t and *t^h appear” (Langdon 1979: 603). Langdon also demonstrates the parallelism between the effect of stress in Yuman, where consonants are never lenited in pre-stress (root-initial) position, and Pomoan, where pre-stress (root-initial) consonants are accompanied by a “laryngeal increment” (/h/ or /ʔ/). A similar process is attested in Yana (Langdon: 1979: 614-615). The article also includes a discussion of morphosyntactic parallels between Pomoan and Yuman, and a list of 49 lexical comparisons between the two families. Most of Langdon’s comparisons look much more probable than average comparisons by other authors of that period.

Webb (1979) compares terms for ‘tree’ and particular tree species across Hokan family. Each of her comparisons is represented in many daughter branches, thus minimizing the risk

[5] For this work see Section 4 below.

of areal loans. Despite the statement that "[t]he cognate lexeme sets are recognized on the basis of recurrent consonant correspondences", no such correspondences are given in the paper. Some of the compared forms are unreliable. E.g., Webb gives Yana *ʔaxa* 'tree', a form I was unable to find in the primary sources. Webb's inclusion of some Proto-Uralic forms as external comparanda raises the question of just how easy it is to find accidental similarities in the absence of recurrent sound correspondences.

The main part of Campbell & Oltrogge's (1980) article is a detailed reconstruction of Proto-Tol. The paper also contains a brief discussion of external affiliation of Tol. The authors suggest a specific relationship between Tol and Oaxaca Chontal, listing 57 probable cognates. While some of their comparisons do indeed look probable, e.g., Proto-Tol *lo 'leaf' ~ Highland Chontal *-la* 'leaf', some others can be shown to be wrong. Take, for example, the following comparison: "*to be sick:* WJ pte-vé *sick,* EJ peʔ, pa¢ *die;* -tafba *sick*; -fwana *sick*" (Campbell & Oltrogge 1980: 221). Highland Chontal *-tafba* 'sick' is actually *ɬ-aštaf-ba* 'sick person', derived from the verb *d-eštaf-ʔma* 'to make sick; to get sick'. This form is unrelated to Highland Chontal *ɬ-af-gwana* 'sick one', derived from *ʔal-gwana* 'sickness'. The authors' conclusion that "regardless of the ultimate outcome of distant genetic research involving Hokan generally ... the Jicaque-Tequistlatec relationship will hold up" (Campbell & Oltrogge 1980: 222–223) is certainly too optimistic.

Webb (1980) compares Esselen with other Hokan languages. Again, some of her data are unreliable: I was unable to find the source of Washo *amatu-* 'land/earth'.

Webb (1981) lists Hokan comparisons for some kinship terms as well as terms such as 'man' and 'woman'. Here, too the compared material is highly unreliable: the word *xmár* 'boy/child', listed as Chimariko, is actually Yuman.

While Hokan comparative studies of that period used new accurate field data, they failed to create a working model of comparative Hokan. This is at least partly due to a nonstandard methodology which is discussed in detail in Section 6 below.

4. Attempts at synthesis

The next period in Hokan studies, partly overlapping with the previous period, was characterized by attempts at synthesis.

The work of Karl-Heinz Gursky (1964, 1965, 1966a, 1966b, 1968, 1974, 1988, 1989, 1990, 1995) logically continues that of Sapir. Like Sapir, Gursky was initially interested in large-scale classification. In his early work he compares Hokan with two poorly attested isolated languages, Quinigua (1964) and Waikuri (1966b), as well as with "Gulf" and the wider "Algonquian-Gulf" (1965, 1966a, 1968) — hypothetical macrofamilies suggested by Mary Haas. Later, Gursky turned to collecting lexical and grammatical comparative sets for Hokan itself. Especially important is Gursky's magnum opus "Der Hoka-Sprachstamm" (1974) with 707 comparative sets — the largest published compilation of Hokan lexical comparisons. Subsequently, Gursky published a three-part addenda et corrigenda (1988, 1989, 1990). While Gursky occasionally gives preliminary Proto-Hokan reconstructions (marked with # rather than with the usual asterisk in order to emphasize their tentative nature), he thought that a reconstruction of Proto-Hokan would be premature (1974: 173–175). Although methodologically his work adopts the "mass comparison" approach, it is strikingly different from the most widely known examples of this approach, such as Greenberg (1987). Gursky pays close attention to phonological accuracy of the forms compared, trying to verify all the forms with the help of the most reliable sources. He painstakingly distinguishes between forms which can be transcribed phonologically, and forms known only in pre-phonological notation. His attention to

details led him to an unexpected discovery that Olmsted's Achumawi dictionary (Olmsted 1966), based on Jaime de Angulo's fieldnotes, contains a number of Eastern Pomo words. These words were taken from de Angulo's manuscript comparison of Achumawi and Eastern Pomo, compiled with the aim to show that these two languages are unrelated (Gursky 1987). In his paper "Some grammatical evidence for the Hokan stock" Gursky (1995) gives 138 comparative sets for grammatical morphemes. This is undoubtedly the most extensive compilation of grammatical evidence for Hokan. One can agree with Terrence Kaufman's assessment of Gursky's work: "The contribution of Gursky to comparative Hokan studies is in my view quite valuable and probably not given as much attention as it merits. I was amazed at the number of undoubtedly valid grammatical comparisons found in Gursky 1966b. Although his scope of comparison was broader that just Hokan, the Hokan data can be examined by itself. ... The work of K-H Gursky in assembling likely Hokan lexical cognate sets (especially Gursky 1974) deserves the highest praise also. Even though he used all the previously published work of other scholars, he has found much that is new, he has judiciously split apart sets that were unlikely in the first place, and has brought all this together in the compass of two or three major articles" (Kaufman 1989: 111).

In his well-known monograph "Language in the Americas", Joseph Greenberg (1987) gives a list of 168 exclusively Hokan comparisons plus 100 Hokan comparisons with parallels in other "Amerind" languages. Greenberg's Hokan is maximally inclusive: it consists of "Achomawi (including Atsugewi), Chimariko, Chumash, Coahuilteco, Comecrudo, Cotoname, Esselen, Jicaque, Karankawa, Karok, Maratino, Pomo, Quinigua, Salinan, Seri, Shasta (including Konomihu, probably a distinct language), Subtiaba (including Tlappanec), Tequistlatec (sometimes called Chontal of Oaxaca), Tonkawa, Waicuri, Washo, Yana, Yuman, and Yurumangui" (1987: 132). Thus, Greenberg calls Hokan what others called "Hokan-Coahuiltecan". Greenberg was an advocate of the method of "mass comparison" and his Hokan comparisons are assembled based on superficial similarity rather than sound correspondences. Greenberg's treatment of Salinan and Yurumangui data was criticized by Poser (1992).

The years 1988–1990 saw two attempts at reconstructing Proto-Hokan based on regular sound correspondences. One of these was made by Dmitry Leshchiner with the assistance of Sergei Nikolaev (Leščiner 1989, 1990; Leshchiner & Nikolaev 1992). Leshchiner reconstructs Proto-Hokan consonants, vowels and tones, giving their reflexes in Achumawi, Karuk, Yana, Proto-Pomoan, Proto-Yuman, Seri and Tequistlatecan. The reconstructions are accompanied by 295 cognate sets, which makes Leshchiner's work the only one with both cognate sets and explicit Proto-Hokan reconstructions. Unfortunately, Leshchiner's reconstruction has a number of serious drawbacks. First, his Proto-Hokan consonant and vowel systems (Tables 2 and 3) are much larger than any system in any of the attested daughter languages. He reconstructs 58 consonants and 11 vowels (not counting vowel length). Typologically, this system looks rather unexpected when compared to attested phonological systems of Hokan and other Californian languages.

Table 2. Proto-Hokan consonants, after Leshchiner & Nikolaev (1992).

^{m}b	b	d	ḍ								
^{m}p’	p’	t’	ṭ’	ƛ’	č’	č^{w}’	k’	(k^{w}’)	q’	q^{w}’	
^{m}p^{h}	p^{h}	(t^{h})	ṭ^{h}	ƛ^{h}	č^{h}	č^{wh}	k^{h}	k^{wh}	q^{h}	q^{wh}	
^{m}p	p	t	ṭ	ƛ	č	č^{w}	k	k^{w}	q	q^{w}	
^{m}f	f	s		ɬ	š	š^{w}	x	x^{w}	ẋ	ẋ^{w}	
^{m}w	w	r	ṛ	l	y						ʔ
	m	n	ṇ				ŋ				

Table 3. Proto-Hokan vowels, after Leshchiner & Nikolaev (1992).

i	ü	ɨ	u
e	ö	ə	o
ɛ		a	ɔ

Second, probable borrowings were not systematically excluded: "When we weren't sure that the words compared are not true cognate, then this item remains in the dictionary. We note the cases which strongly seem to be borrowings" (Leshchiner & Nikolaev 1992: 366). This strategy can only lead to proliferation of spurious sound correspondences, which in turn leads to overbloated protophonology. Third, many comparisons exhibit loose semantics, leading one to suspect that the forms compared are neither true cognates nor loans. Thus, the list of Hokan body parts (Leshchiner & Nikolaev 1992: 373–380) contains the following comparisons: 'cheek ~ forehead'; 'nose ~ forehead'; 'brain, Adam's apple, head ~ eye'; 'spleen ~ milt ~ body, meat'; 'back ~ shoulder blade ~ elbow'; 'calf of leg ~ elbow'; 'shoulder blade ~ arm ~ finger, hand ~ thigh, inside of leg'; 'palm of hand ~ arm above elbow ~ thigh'; 'ankle ~ nail'. Finally, the regularity of correspondences is also in doubt. As an example, we can look at the reflexes of the alleged Proto-Hokan phoneme *^{m}b (see Table 4). This phoneme should give /v/ in Karuk, at least word-initially, but out of four examples with Karuk reflexes, two have /v/, one /p/ and one /ʔ/. Yana should have /m/, but out of five cases with Yana reflexes, three have /m/ and two /p/ without any complementary distribution. Moreover, none of Leshchiner's papers give any comments on complementary distribution of reflexes. Overall, Leshchiner's work cannot be used as a working model in further attempts to reconstruct Proto-Hokan.

Table 4. Reflexes of Proto-Hokan *^{m}b in Leshchiner & Nikolaev's (1992) reconstruction.

PHo*	Ač	K	Ya	PPo*	PYu*	Se	Ts
*^{m}b	m/p-	v-	m-	b	m-	?-/-p-	ø-
*^{m}bāk'ő 'back'	pōk	vásih	mak'i 'back, backbone'	*bak'ő	*mák		(?) la-picúlâ? 'buttocks'
*si^{m}b[ü] 'moss'	simi?túl (PR sa**p̄'**a)			(Pe) [xālé] sībú 'tree moss'			
*xä^{m}bu 'carrot'	hamuč (PR h'ām'ač) 'wild carrot'			(Pe) šībú			
*^{m}bā̄$_{\circ}$xʌ 'bear'	**w**ah' (PR woh')		mūxa (N) 'porcupine'		*max$_{\circ}$á 'badger', *max$_{\circ}$áta 'bear'		
*^{m}b[ō]wʌ́ (~-ā̄- ?) 'elk'	páw (PR puwwāwi 'cow')	**p**ŭfič 'deer, venison'	**p**a(na) 'deer, deer meat'	*bo?ó 'to hunt; elk'	*ma?úl 'antelope'	?ap 'venado buro'	
*^{m}bHéšö 'meat'	**m**ísuč (PR mīsuč')	**?**íš	**p**asi (N), **p**ahsi (Y)	*bixe		ipp̣ási	l-išík'
*^{m}baka 'wood-pecker sp.'	**m**akmáka			(Pe) bākáka			
*^{m}būk'ā́ 'worm'	amuq (PR āmoq' 'caterpillar, grub, maggot')	vákaj	cāmuk'u (N) 'acorn worm'				ɬ-âmúšâk^{h} 'large white worm sp.'

In 1989, Terrence Kaufman, a leading authority on Mesoamerican languages, published his work "A Research Program for Reconstructing Proto-Hokan: First Gropings". The 119-page paper contains a survey of Hokan phonological systems, tables of sound correspondences between Hokan branches and a list of 1118 Proto-Hokan reconstructions. Kaufman's Hokan includes the following languages: Pomoan, Chimariko, Yana, Karuk, Shastan, Achumawi-Atsugewi[6], Washo, Esselen, Salinan, Yuman, Cochimí, Seri, Coahuilteco, Comecrudoan, Chontal, Tol. Kaufman reconstructs the following phonological system for Proto-Hokan (see Tables 5, 6).

Table 5. Proto-Hokan consonants, after Kaufman (1989)

p	ṭ	t	¢	č	k^y	q	k^w	7
p'	ṭ'	t'	¢'	č'	$k^{y'}$	q'	$k^{w'}$	
p^h	$ṭ^h$	t^h	$¢^h$	$č^h$	k^{yh}	q^h	k^{wh}	
f		θ	s	š	x^y	ẋ	x^w	h
	r							
	l	l^y						
m	n	n^y						
					y		w	

Table 6. Proto-Hokan vowels, after Kaufman (1989)

i		u
e		o
	a	
length /:/		
stress /ˊ/		

This work might have put an end to the debate on the validity of Hokan, were it not for one thing: Kaufman lists his reconstructions but omits the data underlying those reconstructions. The absence of reflexes in Kaufman's work makes its evaluation a hard, although not impossible, task. Kaufman's Proto-Hokan phonological system looks typologically and areally plausible for a Californian language, and his reconstructions look more realistic compared to those by other authors. Compare Kaufman's #(a-)l^yafu 'navel' (Kaufman 1989: 133) with Haas' *imarak̆^{w}i ~ *imak̆^{w}ari 'navel' or Leshchiner's *ʔăHlúp'ʌ 'navel'. Kaufman's protoform looks more similar to such forms as Chimariko *-onapu* 'navel', Karuk *ʔárup* 'navel, navel cord', Shasta *ʔé·raw* 'navel' and Proto-Yuman *ml^{y}pu(:) 'navel' (Miller 2018: A61).

Nevertheless, some of Kaufman's reconstructions must be rejected in the light of new evidence. For instance:

(a) #saHmaH [s ~ š] 'heart' (Kaufman 1989: 133) is based on the following comparison by Gursky (1974: 193):

Eastern Pomo *sa·ma·i* 'heart', Highland Chontal *-unšahmaʔ* 'heart'.

[6] It is widely believed that Achumawi and Atsugewi constitute a language family (or a subfamily of Hokan), sometimes called Palaihnihan. There is a published reconstruction of Proto-Palaihnihan phonology (Olmsted 1964). However, Nevin (2019) has persuasively shown that Olmsted's reconstruction is based on faulty methodology and inaccurate data. According to Nevin, "a proto-language ancestor common to Achumawi and Atsugewi has not been reconstructed, and they cannot be claimed to be more closely related to each other than either is to the Shastan languages or perhaps even to Yana" (Nevin 2019: 48).

In fact, the Highland Chontal form is derived from the verbal stem *-unšá-* 'to breathe' with the instrumental suffix *-hmaʔ*, therefore, the comparison should be rejected.

(b) #i-7ip 'navel' (Kaufman 1989: 133) is based on the following comparison by Judith G. Crawford (1976: 316):

Seri *ʔatóošx iʔíip* 'navel', Washo *íʔib* 'navel'

The Seri word literally means 'where the umbilical cord is', from *ʔatoošx* 'umbilical cord' and *iʔiip* 'where it is', derived from the verb *kaap* 'to be' (Moser & Marlett 2010: 76, 379, 435). While the similarity of Washo and Seri forms is striking, it is undoubtedly due to chance resemblance.

(c) #panA [a ~ o] 'river' (Kaufman 1989: 160) is based on a comparison by Campbell & Oltrogge (1980: 222):

Tol *sɨ-pones* 'river', Highland Chontal *-banaʔ* 'river'

The Tol word is most likely a compound of *ʔɨsɨ́* 'water' (Dennis & Royce de Dennis 1983: 55) and *pɨné* 'big' (Dennis & Royce de Dennis 1983: 30).

In some other cases, Kaufman's reconstructions can be amended based on new data.

(d) #ẋowK 'coal' (Kaufman 1989: 142) is probably based on the following entry in Gursky (1974: 183): "COAL Ach //həwk// *coal*; Sh //xúk^{w}// *coal (ember), charcoal*; Chi kōwa *coals*". Judging by Kaufman's reconstruction and correspondences, the Chimariko word does not belong here. The diphthong in #ẋowK is apparently based on the Achumawi word, for which the online "Achumawi Dictionary" gives variants *ɬúk* and *ɬuq̓* (Nevin 2020). Thus, we can safely assume that *ow should be replaced with *u in the reconstruction of this word.

The cases above are, however, exceptional, and on the whole Kaufman's comparisons hold water remarkably well. For example, Kaufman reconstructs the following pair of words for Proto-Hokan: #a-pẋa 'shit' and #i-pẋa 'guts' (Kaufman 1989: 133). While some daughter languages preserve only one of the two words, the opposition between the two is preserved in Southern Pomo *ʔahp^{h}a* 'excrement', *ʔihp^{h}a* 'intestines, guts' (Oswalt 1981: 17, 22) and Chimariko *ápẋa* 'excrement', *ípẋa* 'intestines' (Berman 2001: 1053). Since there is no evidence of contact between Chimariko and Pomoan, this remarkable parallel is best viewed as inherited from the common ancestor. The two words share the same root but have different fossilized prefixes. These prefixes are not synchronically attested in Pomoan and Chimariko, but they can be identified with Kaufman's Proto-Hokan #7a:- 1. 'absolutive of intimately possessed noun'; 2. 'substance or mass noun prefix' and #Hi:- 1. 'body-part prefix'; 2. 'possessed state of intimately possessed noun' (Kaufman 1989: 117), thus confirming Kaufman's morphological reconstruction. Another pair of reconstructions having the same prefixes is #a:-x^{y}á7 'water' and #i-x^{y}a7 'juice' (Kaufman 1989: 131). Here, the opposition of the two prefixed forms is preserved in Seri *ʔaχ* 'water' vs. *iχ* 'liquid, sap, juice' and Highland Chontal *l-ahaʔ* 'water' vs. *l-iha* in *l-iha-ʔmał* 'mescal (lit. its-water the maguey)' (Turner & Turner 1971: 179, 194). Unlike the case with Chimariko and Pomoan, Seri words contain productive prefixes *ʔa-* 'absolute (without explicit possessor)' (Moser & Marlett 2010: 298–299) and *i-* 'third person possessor' (Moser & Marlett 2010: 386). In this case we deal not with isolated lexical parallels, but with reconstructed items that can be morphologically segmented on the Proto-Hokan level.

Kaufman (2015)[7] provides a model of Proto-Hokan grammar and a list of approximately 150 reconstructions of grammatical morphemes. Once again, the reflexes in daughter lan-

[7] This paper is a slightly updated version of a manuscript written in 1989.

guages are omitted, but, unlike Kaufman 1989, this study lists the languages on which a particular reconstruction is based.

Langdon (1990) offers a new approach to Hokan morphological comparison: "The alternative then suggested itself to focus on elements of the stem without prejudging whether they function as prefixes, roots, or suffixes. Crucial here is Jacobsen's (1980) notion of bipartite verb stems in Washo, where two basic parts of a stem are postulated but where each part can consist of a root. So instead of thinking of a Hokan verb stem as consisting of one (or more) prefixes plus a root, it seemed more appropriate to focus simply on how many distinct parts a verb stem consists of, and the semantic patterns in which they combine. The consequence is a view of Hokan verb forms as consisting of a sequence of elements (possibly all basically lexical) whose various combinations and recombinations in the daughter languages reshape the identifying criteria of the distinction between root and affix so that the issue of what is a root vs. what is an affix, while important for the synchronic structure of each language, is perhaps less crucial historically" (p. 66). Langdon reconstructs the following Hokan kernel stem structure (Table 7):

Table 7. Hokan stem structure, after Langdon (1990)

I	II	III	IV	V
Bipartite I	Plural infixed	Bipartite II	Direction/Motion	Plural

"The basic insight — if that is what it is — is that in a particular language and from the perspective of comparative Hokan, one cannot assume that prefixes must be compared to prefixes (and only prefixes) and roots only to roots" (1990: 67). For example, "Bipartite I" yields so-called instrumental prefixes in, e.g., Pomoan, but so-called primary stems in Yana.

5. Hokan studies on the wane

The period from the 1990s up to the present is characterized by a decline of interest in the Hokan hypothesis. Symbolically, the last of the Hokan-Penutian conferences, which were regularly held since the 1970s, took place in the year 2000 (Golla 2011: 304–305).

Poser (1995) argues against Greenberg's (1987: 132) assertion that binary (rather than multilateral) comparisons have done much harm to Hokan studies. Poser points out that even so-called "binary comparisons" often included forms from all branches of Hokan, being thus essentially multilateral in Greenberg's sense. "Ironically, the real problems with Hokan classification are due to the very causes that make Greenberg's methodology questionable. What is controversial about Greenberg's methodology is not his comparison of many languages. It is his failure to establish the systematic correspondences between languages that remove the possibility of chance similarity, his lack of concern for loans, and his willingness to postulate relationship on the basis of minute amounts of evidence, precisely the weaknesses that affect parts of Hokan. ... If we are to learn more about which languages really belong to Hokan and how the family is to be subgrouped, it will be via the program laid out by Haas (1963), namely, the acquisition of more and better data, the establishment of phonological correspondences, and the reconstruction of Proto-Hokan and intermediate proto-languages. It is not from the assemblage of lists of vaguely resemblant words that we can expect to improve our knowledge, but from the fieldwork that continues to be done, the study of the vast store of Harrington material, and such initiatives as Kaufman's (1988) reconstruction of Proto-Hokan" (Poser 1995: 142).

Lyle Campbell's (1997) monograph "American Indian Languages: The Historical Linguistics of Native America" contains a section with a detailed critique of the Hokan hypothesis. His justified criticism of Haas' methodology was already cited above. Nevertheless, some of Campbell's criteria seem overly strict. Thus, by his count, twenty-six comparisons in Haas (1964) are to be rejected as "short forms" (1997: 294). The problem is that many Hokan languages have short roots. Thus, Jamul Tiipay roots have the canonical structure (C)V(C) (Miller 2001: 11). Excluding short forms from comparison amounts to declaring that the comparative method is inapplicable to languages with short canonical roots (e.g., many languages of Southeast Asia). Campbell's verdict on Hokan is rather pessimistic: "Given the reservations expressed here concerning the many Hokan studies, but also taking into account Langdon's more promising comparisons (and Kaufman's optimism—see the next subsection), I conclude that it is by no means clear or even likely that there was a proto language from which some or most of the putative Hokan languages diverged long ago, but that this hypothesis is fully worthy of continued research". Regarding Kaufman's (1989) work, Campbell says: "While Kaufman's proposals have stimulated some other linguists to accept more positive attitudes toward Hokan, they can be evaluated appropriately only after he presents the lexical evidence upon which they are based. Therefore, for the present, we are left with essentially the same uncertainty that has always attended the Hokan hypothesis — there certainly is enough there to make one sympathetic to the possibility of genetic relationship, and yet the evidence presented to date is not sufficient to confirm the hypothesis, regardless of which languages are included".

Mixco (1997) reviews the work of Mary R. Haas on Hokan. According to him, "Haas revealed herself to be an exemplar of a truly "neogrammarian" stamina in the face of the most persistently intractable problems that tax the student of the linguistic prehistory of the Americas (or of the world, for that matter). Time and time again, she treats Hokan as a hypothesis worthy of continuing intellectual devotion. At no point does the knotty tangle of obstacles in the path of a definitive reconstruction discourage her from further efforts". Mixco defends Haas' use of metathesis in Hokan comparisons, pointing out that metathesis frequently occurs within the uncontroversial Yuman family.

In his publication of Sapir's Chimariko linguistic material, Berman (2001) lists several comparisons between Chimariko, Proto-Pomo and Proto-Yuman (see Table 8). Berman also notes that Chimariko suffixes *-kˁ* 'motion towards here' and *-m* 'motion towards there' resemble Yuma suffixes *-k* 'towards here' and *-m* 'towards there'. The pair *-k 'hither' / *-m 'thither' also occurs in Achumawi, Atsugewi and Shasta (Zhivlov 2018: 154–157).

Table 8. Chimariko-Pomo-Yuman comparisons, after Berman (2001)

	Chimariko	Proto-Pomo Oswalt	Proto-Pomo McLendon	Proto-Yuman
earth	*ám·a*	**ʔa(h)ma·*	**ʔahmáṭ/ʔamáṭ*	**ʔ-mat*
eat	*hám·a* to eat	**maʔa-*	**maʔá* food	**ma·* eat mush
excrement	*ápx̣a*	**ʔahpʰa*	**ʔahpʰá*	
hair (body) / fur	*hím·ɪ* hair (of any kind)	**zi(h)me*	**cihmé/ci·me*	**-mi(y)(s)*
intestines	*ípx̣a*	**ʔihpʰa*		**pxa* (Kiliwa *pʰaʔ*)
moon	*ála, allaʳ* moon, sun	**ʔala·ša*	*q'alá·(xa) /ʔal·á·(xa)*	**xlʸʔa·*
water	*äqʻǎ*	**ahqʰa*	**ahqhá*	**ʔ-xa*

Good (2002), using material from Californian Hokan languages, attempts to show that Proto-Hokan had a three-vowel system (*i *a *u) rather than a five-vowel system (*i *e *a *o *u), reconstructed by Kaufman (1989). However, Good's comparisons are purely structural, in the sense that no actual cognate sets are discussed. While this is understandable given that Kaufman (1989) does not list the reflexes of his Hokan protoforms, Good's conclusions can be verified or falsified only by looking at actual correspondences as manifested in cognate sets.

Marlett (2007) reviews the evidence for the relationship between Seri, Yuman and Oaxaca Chontal and comes to the conclusion that the relationship has not been demonstrated. Appendix 1 includes a revision of the resemblances between these languages proposed by earlier researchers, with detailed comments on the morphological structure of Seri forms.

Marlett (2008) gives a very useful critique of Bright's (1956) Seri-Salinan comparisons. He concludes that "[w]hen the least likely candidates are eliminated, the percentage of "correlates" between Seri and Salinan is lower than between Seri and the Otomanguean data presented as "Supanec." This would suggest that the points of comparison may be coincidences—not evidence of a genetic connection. ... Seri and Salinan should be listed as isolates until adequate evidence of a relationship with some language is published and evaluated".

In his book "California Indian Languages", Victor Golla gives a brief survey of "The Hokan Phylum" (Golla 2011: 82–84) as well as a sketch of the linguistic prehistory of Hokan languages (Golla 2011: 242–248). Golla summarizes his position on the Hokan and Penutian hypotheses in the following way: "My position on the historical validity of these hypothetical relationships is somewhat more positive than that of such methodological conservatives as Lyle Campbell (1997), although considerably more cautious than that of such enthusiasts as Paul Radin (1919), Morris Swadesh (1959), and Joseph Greenberg (1987), or even Edward Sapir in his less restrained moments (as, for example, in Sapir 1921c). While the categories "Hokan" and "Penutian" are undoubtedly meaningful—no one would ever classify Shastan as Penutian or Klamath-Modoc as Hokan, and the consensus is now clear that Chumash and Yukian belong to neither (nor to a phylum of their own)—we continue to debate the nature of the historical relationships these categories imply. … I hope, however, that I make clear the highly speculative nature of such hypotheses, and I try to indulge my predilection for them only when, in my view, they appear to cast some useful light on the past" (Golla 2011: 239).

Jany (2013) is a comprehensive bibliography on Hokan languages. The author takes a neutral stance on the question of their genealogical relationship.

Haynie (2014) is a publication of one of the chapters of the author's PhD thesis (Haynie 2012). The work applies a sophisticated statistical methodology to the question of deep relationship between California languages, comparing the initial segments of words in search for recurrent sound correspondences. The results are rather unfavorable for the Hokan hypothesis: "Both in its measure of relationship strength and in its evaluation of statistical significance, this test of linguistic relationships among California languages offers no support for Hokan or Penutian" (Haynie 2014: 439). It must be noted, however, that the limitation of comparison to initial segments does not suit well languages with developed prefixation, where prefixes can easily get fossilized. Consider the following words for 'tongue' from Haynie's wordlists: Achumawi *iplē·*, Cocopa *mpał^{y}* and Southeastern Pomo *bal* (Haynie 2012: 283). It is clear that the historically relevant comparison in this case should include Achumawi *p*, Cocopa *p* and Southeastern Pomo *b* rather than Achumawi *i*, Cocopa *m* and Southeastern Pomo *b*.

Jany (2017) reviews features of polysynthesis in the so-called Northern Hokan languages and comes to the conclusion that "[s]tructural similarities stem from language contact rather than from genetic affiliation".

Zhivlov (2018) gives a systematic survey of some aspects of reconstructible Hokan morphology, namely person and number markers, lexical prefixes, plural infixes, and directional suffixes. The article ends with the following conclusion: "While it has been frequently pointed out that areal diffusion in Northern California makes it hard to distinguish between genetic relationship and borrowing (Jany 2016), some results of the present study suggest a more optimistic outlook. Thus, if the hypotheses offered in this paper are correct, some features of Proto-Hokan (plural infixes and a simple directional system opposing 'hither' and 'thither' forms) are better preserved by languages outside of the Northern California linguistic area." (Zhivlov 2018: 158).

In his monograph on Esselen, Shaul (2019) provides evidence for the Hokan affiliation of this language. In Shaul's own words, "When I began the research for this reworking of Esselen, I was skeptical about the Hokan hypothesis. I am no longer: Kaufman's comparative treatment of Hokan (2015) gave me ways of explaining things in Esselen that I could not otherwise explain". Shaul gives Esselen reflexes for Kaufman's Hokan reconstructions and adds a number of Hokan reconstructions of his own.

Shaul (2020a) provides similar evidence for the Hokan affiliation of Salinan. He defines a "Hokan common core", consisting of 279 reconstructions with wide distribution in Hokan. Out of these, 126 have reflexes in Salinan. These reflexes are listed in Appendix A together with Proto-Hokan reconstructions, but without reflexes in other Hokan branches. This makes it difficult to verify proposed Hokan etymologies of Salinan words. One more problem is that Shaul's works on Salinan (2020a, 2020b) completely ignore one of the two phonologically reliable sources of Salinan data — J.P. Harrington's fieldnotes (the other reliable source — William Jacobsen's fieldnotes — is less extensive). With data that are largely unreliable in respect to their phonology, it is much harder to establish regular sound correspondences.

Lyle Campbell's (2024) new monograph "The Indigenous Languages of the Americas: History and Classification" has a section on the Hokan hypothesis. Compared to the similar section in Campbell (1997), it contains a detailed discussion of Terrence Kaufman's work on Hokan. Among Kaufman's 1118 Hokan comparisons, Campbell finds 242 which occur only in a single linguistic area, 15 with considerable semantic difference in the languages compared, 58 onomatopoetic forms, 17 nursery forms, 23 possible borrowings, as well as a number of short forms and words found also in languages beyond Hokan (Campbell 2024: 348–352). Campbell does not deny, however, that there is a core of very stable words found in most of Hokan languages. These words "must include at least forms with the following meanings: arm/shoulder, ashes, body/meat/deer, bone, dog, earth/ground, eye, grease/fat, hand/give, knee, many, skin, sleep, stone, tail, tongue, and water" (Campbell 2024: 386). He entertains the idea that "the thirty or so words mentioned above that seem like possible cognates that turn up across many of the "Hokan" languages might be inherited not from some Proto-Hokan, but from some Ur-American language of long ago, maybe even one spoken by some of the first inhabitants in the New World". Another possible option is "to suspect that these thirty or so words are not evidence of a Hokan genealogical connection among those particular languages but rather are instead pan-Americanisms", i.e. "those seemingly similar forms that appear to pop up repeatedly in broad comparisons of American Indian languages not known to be related to one another, probably a collection of accidentally similar forms, loanwords (maybe including some Wanderwörter), unrecognized onomatopoeia, sound symbolism, and the like" (Campbell 2024: 353). However, Campbell makes no attempt to demonstrate that these "core" Hokan comparisons actually occur in other Native American language families, and without such a demonstration the idea that they go back to a deeper level than Hokan remains speculative. Campbell's overall assessment of Hokan remains pessimistic: "I, however, remain very

skeptical about Hokan in general. Nevertheless, there are those tantalizing recurrent similarities that need explanation, and it would be difficult to reject Kaufman's work entirely, and so research on possible Hokan connections should continue. However, my strong belief is that if there ever was a Hokan genetic unity, it was so far in the past and so much has changed in the languages since then that it will never be possible to confirm a genetic relationship among those languages on the basis of the information that remains today" (Campbell 2024: 353).

6. Conclusion

There are two possible answers to the question of why there is still no convincing demonstration of Hokan relationship — or, vice versa, no convincing attempt to explain away all similarities as due to contact. One possibility is that the problem lies in the nature of evidence — it is so meager that the comparative method cannot be applied (either because the languages are not related or because of the great time depth of the family). This is essentially the view of Poser (1995: 140), when he says that "[m]any of the links were originally posited on the basis of very slim evidence, consisting of unsystematic similarities in a very small number of words". Cf., however, the opposite point of view voiced by Kaufman (1989: 64): "It is a common observation that there is a very small number of etymologies (usually characterized as being "about thirty") that have reflexes in most of the Hokan families and isolates, and that there do not seem to be any more new and good sets forthcoming. This is not a totally appropriate characterization nor does it show a very constructive attitude. A number of new correspondences and etymologies have been dug up in the course of the binary comparisons referred to above, and one should not expect proto-forms to survive in most of the daughter languages. A random scatter is quite good enough and is in any case what is to be expected".

Another possible answer, which I find more compelling, is that the problem lies with the methodology used by the majority of the proponents of Hokan. From this point of view, two types of studies can be delimited. One type uses the method of mass comparison, i.e. comparisons of words based on superficial resemblances rather than on sound correspondences. Studies of this type include Sapir (1917, 1920c, 1925) and Gursky (1974, 1995). At the time of Sapir, there was no alternative to mass comparison in Hokan studies, since there were no phonologically accurate materials on most Hokan languages, and consequently, no possibility to apply the comparative method. As noted above, Gursky used mass comparison because he thought that applying the comparative method on the level of Proto-Hokan would be premature. While mass comparison can be useful as a first step in collecting the materials for further application of the comparative method, its usefulness is limited, and no conclusive demonstration of distant language relationship can be achieved by this method.

The second type of studies, mostly authored by Mary Haas and her students, applies a methodology which for the lack of a better name I will call "partial comparative method". The difference of this methodology from the standard comparative method was not commented upon previously. The traditional comparative method is a cyclic procedure. It involves finding sound correspondences, looking for complementary distributions between them, and then assigning each correspondence or a group of correspondences to a phoneme of the protolanguage. The next step involves getting rid of comparisons that do not fit in the system and adding new comparisons that do show systematic, even if initially unexpected, correspondences. Then one should revise the correspondences in search of new complementary distributions. The initial set of comparisons is thus constantly revised in order to arrive at more precise protoforms. As a result one gets a coherent system of sound correspondences. The "partial

comparative method" is different. It requires listing sound correspondences found in the data and sometimes grading them by frequency. No attempt is made to revise the correspondences in order to fit them into one system. This allows a reasearcher to retain multiple intersecting correspondences without complementary distributions. Cf. the following subset of Seri-Yuman correspondences in J. G. Crawford (1976: 321–322): t ~ *t, t ~ *ṭ, t ~ *s, t ~ *š, s ~ *s, s ~ *š, š ~ *s, š ~ *š, š ~*t, š ~ *ṭ. The traditional comparative method would require either finding complementary distributions or rejecting some of the correspondences together with lexical comparanda containing them. Another feature of the "partial comparative method" is the looseness when it comes to the formal accountability of compared words. This is obvious in all those cases where entire wordforms are brought into comparison as evidence for the correspondence of individual segments only, with no account being offered for the residue.

The crucial stages missing in the "partial comparative method" are searching for complementary distributions and rejecting those comparisons which do not fit the system. As a result of this, such studies contain many quite improbable or downright wrong comparisons, which is one of the reasons why the Hokan hypothesis lost its appeal to many researchers in the following decades.

Only a small minority of Hokan studies attempt to apply the traditional comparative method. Leshchiner & Nikolaev's (1992) use of the comparative method, while seemingly more sophisticated than the "partial comparative method" of Haas and her students, is marred by inconsistencies in sound correspondences and semantic looseness, which is why their results cannot serve as a proof of Hokan hypothesis.

The only study so far to consistently employ the traditional comparative method is Kaufman (1989), but the absence of actual data makes it quite difficult to verify its results.

Overall, while the genetic nature of relationship between Hokan languages seems plausible in the light of some works reviewed above, especially that by Sapir and Kaufman, none of the studies published so far can be said to constitute a definite proof of the Hokan hypothesis. Still, most of these studies contribute at least something to the growing list of probable comparisons between Hokan branches. The fact that in many of Hokan studies such comparisons are buried beneath a heap of "etymological rubbish" should not discourage us from trying to verify or falsify these comparisons in the light of currently available data.

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М. А. Живлов. Хока I: обзор исследований по сравнению хоканских языков

В статье рассматривается история хоканской гипотезы, от её формулировки Диксоном и Крёбером в 1912-1913 годах до наших дней. Несмотря на более чем сто лет исследований, до сих пор нет единого мнения относительно обоснованности хоканской гипотезы. В статье утверждается, что одной из причин этого является тот факт, что многие попытки сравнения хоканских языков использовали нестандартную методологию, в которой исследование останавливается на перечислении наблюдаемых фонетических соответствий, вместо классического сравнительного метода, требующего поиска дополнительных распределений и достаточно полной реконструкции фонологии праязыка.

Ключевые слова: сравнительный метод; языки хока; индейские языки; генеалогическая классификация языков.