

internal classification of the numic languages of uto-aztecan¹

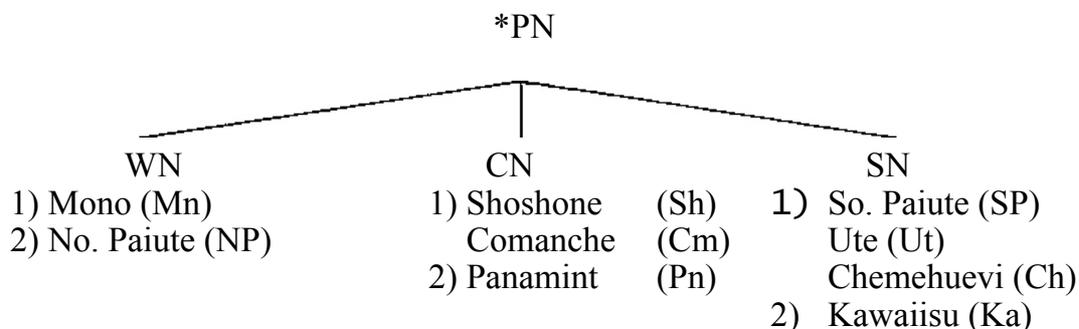
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Background.

Despite the still controversial state of the internal classification of Uto-Aztecan, the linguistic unity of a Numic (or Plateau Shoshonean) branch has never been called into question. Furthermore, KROEBER's (1907) classification of Numic into three coordinate branches - referred to here as Western Numic (WN), Central Numic (CN), and Southern Numic (SN) - remains unchallenged. According to his classification, there are six distinct languages in the Numic group, two in each of three subgroups as shown in *Fig. 1* (Note abbreviations for

Figure 1: Traditional Numic Classification

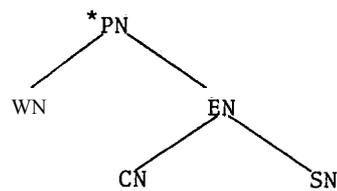


¹ A shorter version of this paper was presented at the XLI International Congress of Americanists, Mexico City, September 2nd-7nd, 1974.

language names). To our knowledge, this classification of Numic is the only serious one that has ever been proposed; however, it has never really been justified on the basis of a rigorous and systematic analysis of comparative data.

Such an analysis - using phonological, grammatical, and lexical evidence - forms the basis for our counter hypothesis that the old classification is untenable and that a more plausible one entails a split of Numic into two coordinate branches: Western Numic (as before) versus Eastern Numic, with a subsequent split of EN into Central and Southern as shown in *Fig. 2*.

Figure 2: Proposed Numic Classification



In evaluating each piece of evidence presented here, it will be necessary to bear in mind that all of the Numic languages are quite closely related and, thus, individual shared features are to be expected which might seem to justify several possible classifications of Numic, e.g. WN and CN grouped as opposed to SN, or WN and SN as opposed to CN - in addition to KROEBER's classification and our own. It will be our contention, however, that both the quantity and, most importantly, the quality of shared features of the proposed Eastern branch, as opposed to the Western one, force the hypothesis of a split of the Numic group initially into two rather than three sub-groups.

Phonology.

An examination of the phonologies of the Numic languages clearly reveals their most salient and pervasive feature to be what SAPIR (1931) originally dubbed medial 'consonant processes' for SP. That term is, in effect, a cover term for (1) a series of morphophonemic alternations at morpheme boundaries, and (2) an analogous series of consonant contrasts occurring internal to morphemes. Space limitations will not permit a detailed explanation, and since SAPIR's analysis of these matters for SP is so well known, we give only one illustration of the three different types of consonant processes in SP : spirantization (or lenis articulation), gemination (or fortis articulation), and (pre) nasalization (See *Fig. 3*).

Figure 3: Southern Paiute Consonant Processes

/na-/ + /papi/	→	[naβaβiŋ ^w i]	"brothers"
/noo'/ + /pakai/	→	[nooppaʔai]	"carry from place to place"
/niŋ-/ + /piŋ ^w a/	→	[ni ^m biŋ ^w a]	"another's wife"

In this illustration, we have retranscribed SAPIR's data following the more modern practices of Sydney LAMB (1958b) for Mn, Wick MILLER (1972) for Sh, and CHOMSKY and HALLE (1968) for SP itself. Item one shows spirantization of /p/, both across a morpheme boundary and morpheme internal. Item two shows gemination of /p/ and spirantization of /k/. Item three shows nasalization of /p/. We find similar phenomena in all Numic languages, differing in certain details to be outlined below in the context of Numic historical phonology.

In *Fig. 4* are shown the broad outlines of the reconstructed consonant segments of Proto-Numic (IANNUCCI, 1972). Spirantization, nasalization, and gemination are represented for Proto-Numic, as in SP, as shown *C, *nC, *'C.

Figure 4: Proto-Numic Consonants

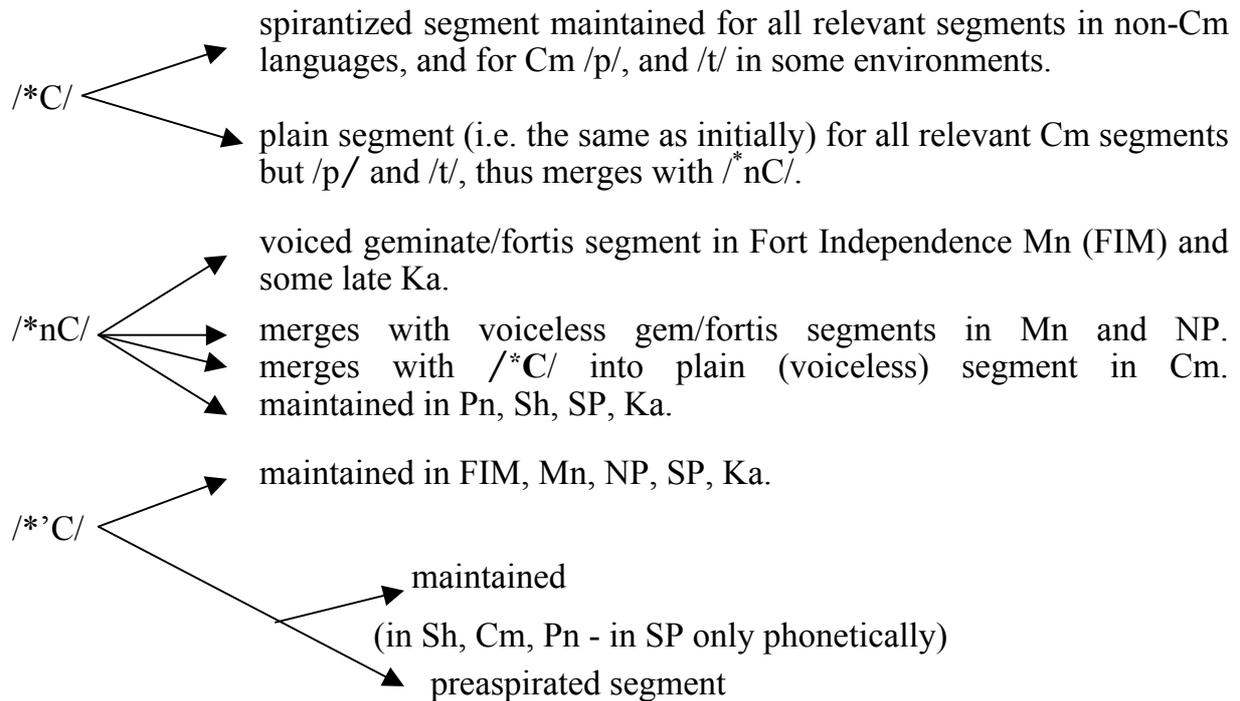
Stops	*p *t *c *k *k ^w *ʔ	(*ʔ only medially)
Spirant	*s	
Nasals	*m *n *n (*ŋ only medially)	
Glides	*w *y *h	

For medial consonant processes: /*C/ /*nC/ and /*'C/

- /*n/ combines only with a following stop or nasal.
- /*'/ combines with stops, nasals, /*w/ and /*y/.
- none of the consonant processes apply to medial /*s/ /*ʔ/ and /*h/.

Fig. 5 shows the developments of the three Proto-Numic consonant processes in the various Numic languages. This figure should be understood to apply to stop consonants only (although, in a number of cases, the description also applies elsewhere). We do this for two reasons: first, the stops clearly represent the 'heart' of the problem in all Numic languages, and second, unneeded complexity would be introduced into the chart by the inclusion of nasals, semivowels, and /s/, which would detract from the mnemonic intent of this information.

Figure 5: Historical development of Medial Stop Contrasts



Now consider the implications of the historical developments outlined in *Figure 5*, for the internal classification of Numic. First, WN is set off from the proposed EN branch by an early phonetic loss of nasalization on Proto-Numic prenasalized segments, thus yielding a long fortis voiced segment. Its fortis quality is expected, since segments still prenasalized in other modern Numic languages remain voiced and also fortis. FIM is conservative in this regard, reflecting this early Western stage, thus maintaining a 3-way distinction for medial consonants. Most other modern Western dialects, both of Mn and of NP, have undergone a further change regarding these same Proto-Numic prenasalized segments, such that only a two-way contrast remains : a subsequent loss of voicing has left originally nasalized segments in these Western dialects as long fortis voiceless consonants - thus completely merging with the Proto Numic geminate series (which is reflected as a voiceless geminate/ fortis series in all of Western Numic). We should note that Cm has also lost Proto-Numic prenasalization, but this is a development completely independant of the loss of nasalization in the Western branch. The Western development seems best explained as an early change, preceeding the later Western loss of voicing and the Cm development seems to be quite late within the Central branch (see MILLER, 1973). Ka has also lost phonetic nasalization to some extent, but this is even more recent within SN.

Second, EN alone has undergone a conditioned split of the Proto-Numic geminate series into a geminated series and a preaspirated series. There is a stress shift which then makes this purely phonetic split partially distinctive in CN, but not in SP (IANNUCCI, 1972 and MILLER, 1968 a and b). This stress change can then be seen as one major differentiating force in the subclassification of EN into its two branches, CN and SN. Unfortunately, we do not know how Ka, the other distinct language of the Southern group, fits into this picture regarding preaspiration and stress.

Third, all of EN, but not WN merges Proto-Numic geminate /^{*}y/ and /^{*}w/ with spirantized /y/ and /w/ respectively, thus removing the semivowels from the consonant process picture in all but WN. (WN may also be unique in having a geminate versus spirantized contrast for /s/, but our evidence for this is not solid enough to say for sure, let alone to chart the historical situation with confidence).

The third of the above developments differentiating the hypothesized Eastern and Western branches, although important, is not of particularly broad scope; but the scope and impact of the first and second are not surpassed by any other phonological developments, in the Numic family. We feel, thus, that phonological developments in the Numic languages can not be as convincingly realigned in support of any of the other potentially competing classification hypothesis.

Grammar

There is also strong grammatical evidence of two kinds which supports such a classification. This evidence includes (1) the pronominals employed as possessive adjectives, and (2) the forms of the noun suffix usually called the 'absolute suffix'.

Typical of the pronominal systems of the Numic languages are distinctions among three persons and two numbers singular versus plural. The distinction between inclusive and exclusive is usually marked for first person. Pronominal systems given below will include forms employed for third person only where such inclusion is appropriate. The dimensions of contrast of the Sh pronominal system which are similar to those of other Numic pronoun systems, may be seen along with the case forms of the pronouns in *Fig. 6*. All the languages have a formal difference between nominative and objective case forms of the independent pronouns.

Figure 6: Owyhee Shoshone Pronominals (after MILLER, n.d.)

person	Nominative	Objective	Genitive
1 sg.	ni	ni, nii	ni, nian
1 du. excl.	niwih	nihi	nihin
1 du. incl.	tawih	tahi	tahan
1 pl. excl.	nimmih	nimmi	nimmih
1 pl. incl.	tammih	tammi	tamman
2 sg.	in	in, immi	in, immih
2 du.	miwih	mihi	mihin
2 pl.	mimmih	mimmi	mimmih
3 sg./pl.	--	u, ma	un, man

One pronominal set of each language functions as pronominal bases for postpositions. Again, for a few examples from Sh, see *Figure 7*. In Sh and in Pn, these enclitics seem to be nearly identical to the nominative form of the independent pronouns. According to SAPIR (1931) in SP, the nominative forms of the pronouns are "...used... as bases for attached postpositions."

The need for a set of pronouns to be employed as genitives is

Figure 7: Owyhee Shoshone Pronouns **-kuppa** 'inside' (after MILLER, n.d.)

nikuppa	inside me
niwihkuppa	inside us (du. excl.)
tawihkuppa	inside us (du. incl.)
nimmikuppa	inside us (pl. excl.)
tammikuppa	inside us (pl. incl.)
ikuppa	inside you
miwihkuppa	inside you (du.)
mimmikuppa	inside you (pl.)
ukuppa	inside him, them, ...

resolved in a different way in each of the three branches of Numic. The genitive form of the pronouns in CN and SN is intimately related to the objective form. In SP and Ch, the genitive function is included among those of the objective pronoun. In spite of some confusion with the nominative, in Sh and in Pn the genitive seems to be the objective form plus the genitive suffix **-n** and in Cm, the tendency is for the **-i** suffix of the objective to be replaced by **-t** in the genitive. Thus CN is the only one of the branches of Numic to have a formal distinction between independent pronouns in the genitive as opposed to the nominative and the objective.

Having seen that in the proposed Eastern branch the nominative pronoun functions as the pronominal base for postpositions and that the objective pronoun serves as the basis for the genitive pronoun, we turn to the Western branch. In Mn and in NP sets of cognate pronominal prefixes function as possessive adjectives, and also as objects for certain postpositions in NP. *Figures 8 and 9* show the pronouns of Mn and of NP. Only the languages of WN have this set of prefixes.

Figure 8: Mono Pronouns (after NICHOLS, 1973)

person	Nominative	Objective	prefix
1 sg.	ni	ni^{mi}'kaa	i -
1 du.	ta	tami[']kaa	--
1 pl. excl.	ni^h'k^waha	nii[']mi[']kaa	nii[']
1 pl. incl.	taa[']k^waha	ta(n)i[']mi[']kaa	ta(n)i[']
2 sg.	i	i[']mi[']kaa	i[']
2 pl.	ih[']k^waha	i('n)imi[']kaa	i(n['])i['] -
3 sg.	---	---	a(')-, t(')-
3 pl.	---	---	a(n)i[']-, ti(n)i[']-

Figure 9: Northern Paiute Pronouns (after NICHOLS, 1973)

person	Nominative	Objective	prefix
1 sg.	ni	ni(ˆ)ka	i -
1 du. (rare)	ta	ta(ˆ)ka	ta (ˆ) -
1 pl. excl.	niˆ mi	ni(ˆ)mi	[ni(ˆ)-] (gen.)
1 pl. incl.	taˆ mi	ta(ˆ)mi	mi-, [ti(ˆ)-] (gen.)
2 sg.	i	i[']mi	i[']
2 pl.	(iˆ)mi	mi(ˆ)mi	mi['] -
3 sg./pl.	---	---	---

WN shares this feature with another non-Numeric Uto-Aztecan language Hopi. The pronominal prefixes in Hopi (*Figure 10*) serve as possessive prefixes and are involved in the pronominal bases for the postpositions.

Figure 10: Hopi Pronouns (after WHORF, 1946; bracketed items from R.F.)

person	Nominative	Objective	Poss.	P. Base
1 sg.	ni[']	niy	i-	ini⁻, [ni⁻]
1 pl.	itam	itamiy	ita[']-	ita[']m^h- , [ta⁻]
2 sg.	im	in	i⁻	i⁻
2 pl.	ima	imiy	im⁻-	im⁻-
3 Sg.	---	---	[-[']a-t]	a⁻-
3 pl.	---	---	[-[']a-m]	am^h-

Thus it seems that the set of pronominal prefixes in pre-Numic has been lost in EN but maintained in WN. The existence of such a set in WN sharing form and function with such a set in a more distantly related language but not with other Numic languages is strong evidence for an initial EN/WN split.

The Numic languages have a set of nominal suffixes which correspond to the Nahuatl **-tl** absolutive suffix. There is some question about whether these should be called absolutives in Numic but their function is not relevant in the present paper. We present evidence concerned only with two aspects of these suffixes : the various allomorphs which are productive in the branches of Numic, and the semantic groupings of nouns with which these suffixes occur.

In all the Numic languages for which lexical material was available to us, are found noun suffixes of the shapes **-pi** and **-pɨ** which are productive, i.e. separable. Mike NICHOLS (1973) calls to our attention still another proto-Numic absolutive suffix ***-pa**. We would first prefer to alter the vocalism of this reconstruction since there is a regular phonological correspondence of SH /ai/ with Mn /e/ with NP /a/ which NICHOLS has reconstructed ***ai**. This yields the Numic ***-pai**. The reflexes of this suffix are not productive in Sh nor in SP but such exists in frozen forms in those languages. This suffix is still productive in NP and example NP forms are provided in *Figure 11*. Column I contains frozen forms in **-pa** (<***-pai**), and Column II, forms with separable **-pa**.

Figure 11: Northern Paiute Nouns in -pa (NICHOLS 1973)

	I		II
tapa	sun	kumi-pa	cloud
tɨpa	pine nut	ɕo'a-pa	ghost
kaipa	mountain	hi'k^wa-pa	wind
tippa	mouth	kuɕi-pa	bird
hupa	soup	tasso-pa	stocking
		ko'i-pa	mountain sheep
		kau-pa	leg

An examination of LAMB's vocabulary of Mn shows the following similar lists of forms of nouns showing the frozen ***-pai**, which is reflected in Mn as **-pe**, in Column I of *Figure 12* and nouns with which it is productive in Column II. Neither CN nor SN share this productive nominal suffix with WN.

SN and CN have as another allomorph of this nominal suffix, the form **-ɕin** (not to be confused with the pan-Numic diminutive suffix **-ɕi**). There are forms in both Sh and in SP in which this suffix is productive and further, it

enters into combination with **-pi** to yield **-piçin**, which is also productive in SN and CN. Neither NP nor Mn have the nominal suffix **-çin**. Thus there are two facts about the nominal suffixes which distinguish WN from CN and SN : reflexes of a ***-pai** noun suffix that are productive in WN but not in CN or SN, and the presence of the nominal suffix **-çin** in CN and SN alongside its corresponding absence in WN.

Figure 12: Mono Nouns in -pe

	I		II
soo'yape	ant	tih-'ahsih-pe	ice
qope	face	kuh-kuhih-pe	smoke
ço'ahpe	ghost	too-pe	winter
tihpe	mouth	tiqu'o-pe	clover
tipa	pine nut	hihkwah-pe	wind
hupawa	meat juice	taçinuh-pe	star
	(cf. N.P.'soup')	to-pe-	sun
çiihpa'	bird	tooh-pe	cloud
		pohina-pe	chief
		pa-hqah-pe	leaching basin

Data available on semantic correlates of the so-called absolutive suffixes is uneven in quantity and in quality but some suggestive outlines seem to emerge. Typically, the nouns with separable absolutive suffixes fall into a few clearcut semantic groupings, such as animate nouns, plants and plant parts, etc. There is also a group of miscellaneous nouns taking such suffixes, that may not be easily classified semantically into domains. It is a situation which one would expect when a grammatical system is breaking down : limited regularities and some unclassifiable irregularities. Rather arbitrarily grouping those nouns into classes, one may find the following domains (1) kin terms; (2) plants and plant parts; (3) animate nouns; (4) natural phenomena/topographical features; (5) artifacts; and (6) body parts and products. The languages for which the best lexical material is available are Mn, Sh, and SP, thus representing all three Numic branches. Nouns for which the absolutive suffixes are productive in Sh and SP include some which fall into each of the above classes (*Figure 13*), with Sh showing only a few in class 1. Mn on the other hand has several such nouns in classes 2, 4, and 5, a few in classes 1 and 6, but none in class 3. Data on the other languages is so sketchy as to be unuseable even for the rough approximation drawn from the semantic classes used here.

Figure 13: Semantic Domains of Nouns with Productive Absolutive Suffixes

	domains	Mn	Sh	SP
1.	kin terms.	a few	a few	X
2.	plants	X	X	X
3.	animals		X	X
4.	nat. phen.	X	X	x
5.	artifacts	X	X	X
6.	body parts	a few	X	X

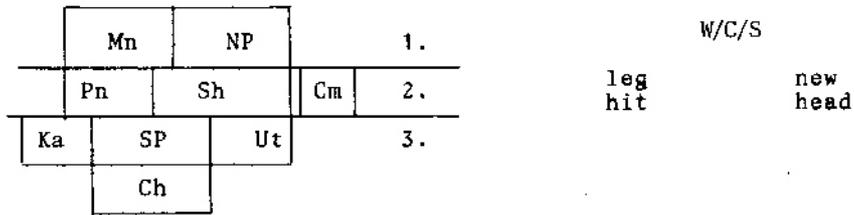
There seems to be a difference between Mn and the other languages in that no animate nouns and only a few body part terms take the absolutive suffix in Mn. This is further evidence that there is a linguistic unity shared by CN and SN but not by WN. This leads us to predict that, as fuller lexical data becomes available, there will be some discernable differences with respect to the distribution of the absolutive suffixes across semantic classes, and that they will be similar in outline to those described here : that is, WN differing more in this regard from either CN or SN than CN and SN differ from each other.

Lexicon.

The lexical data discussed here is largely the product of an examination of the comparative word lists which were the basis of the phonological evidence presented above. The original list consisted of about 300 cognate sets, but for this study, sets for which morphemes were not available in one of the three branches were not included. Where there was one lexical item for a given meaning in some of the languages and one or more in other languages, corresponding isoglosses were drawn on schematic dialect maps. The bulk of the comparisons are not shown by these isoglosses since the association of form and meaning was common to all three Numic branches for 204 lexical sets.

The quality and the quantity of the data supporting the isoglosses lends weight to the proposed classification. The most heavily attested isogloss sets off WN from the proposed EN Group (*Figure 14*). Note from the complete lists of glosses included with these schematic dialect maps that the support for the E/W split includes kin terms, body parts, and basic verbs - an indication of an apparently greater time depth separating WN and EN than that separating CN and SN.

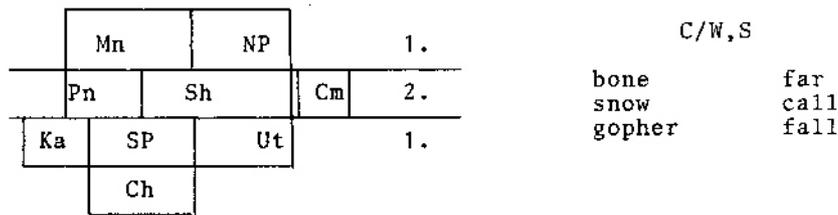
Figure 16



'new'

1. **piti**
2. **'iki**
3. **'ai**

Figure 17



'snow'

1. **nipa**
2. **takka**

If, in fact, the breakup of Numic had produced three coordinate sub-groups, one would expect rather equal numbers of lexical items supporting the distinction of each branch from the remaining two, with the bulk of the lexical replacements showing support for a three-way split. This seems not to be the case as we examine the isoglosses above.

Another source of classificatory data was found in the process of this lexical study. A few lexical items were maintained in all the branches, but had undergone a semantic shift in one of the branches. Such an item is **nopi** meaning 'house' in WN but 'shelter, wind break' in EN. Four such items were found supporting the West/East split. No clearcut examples of this *type* were found supporting any other classification.

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