NUMBER SUPPLETION
IN NORTH AMERICAN INDIAN LANGUAGES

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Cases of suppletion have traditionally been treated as irregularities of the grammar, as haphazard exceptions defying explanation.[1] Number suppletion, though widespread in North American Indian languages, has been virtually ignored in current typological research.[2] Even in the Athapascan languages where number categorization is common, interest in suppletion has been overshadowed by concern with shape classification. Not until recently has number suppletion been treated in a systematic fashion in any Athapascan language.[3] Yet, the fact that so many references are made to suppletion in Amerindian grammars leads one to suspect that further investigation might produce fruitful typological insights. This paper is an attempt to extract any patterns that would establish a degree of semantic systematicity among verbs which supplete for number.

For the purpose of this study, number suppletion is defined as the replacement of a verb root with a phonologically unrelated form to agree ergatively with the number of the subject of an intransitive and the object of a transitive verb. Only forms characterized by complete root replacement are considered:

(1)

	Singular	Dual	Plural	
Mikasuki	coko:l-	wi:k-	i:ł-	'sit'

	Singular	Plural	
Biloxi	tohó	t^hi	'lie'
Chitimacha	nu:p-	tuw-	'die'
Diegueño	pam	nəkəmic	'get there'
Hopi	paki	yungya	'enter'

Plural stems which show an obvious phonological relationship to their singular roots (whether productive or not) are not included. Excluded from the sample, then, are reduplicated stems:[4]

(2)

Luiseño	čari	'tear off'
	čar-čari	'tear off twice'
	womi	'carry'
	wom-womi	'carry two loads'
	lawi	'make a hole'
	lawá:-lawi	'make many holes'
Yurok	kelomen-	'turn (tr.)'
	ke-kelomen	'turn several things'

| Yurok | ʔekol-
ʔe-ʔekol | | 'hover'
'hover repeatedly' |

		Singular	Plural	
Creek		páfn-i:	paf,pa,n-í:	'fast'
		lást-i:	las,la,t-í:	'black'

Also omitted are plural stems formed by regular affixation processes:

(3)

		Singular	Dual	Plural	
Creek		acim-k- cak-k-	acim-ho-k- cak-ho-k-	acim-ic- cak-k-ak-	'climb' 'catch up'
Mikasuki		ata:ł- ciyah-l-	ata:,s,ł- ciyah-co:-l-	ata,s,ła-:c- ciyah-co:-li-:c-	'know' 'walk'

		Singular	Plural	
Diegueño		-a:	n-a:	'go'
		-kuł	nə-kuł	'climb'
		yaṛ	pə-yaṛ	'run away'

In some instances, the singular and/or plural verb forms preserve ancient morphology which is no longer productive in the language:

(4)

		Singular	Dual	Plural	
Karok		ik-xip	iθ-xip	ʔi-xip	'fly'
		ik-puh	iθ-puh	ihtak	'swim'
		ik-fuk	ʔi-fuk	ʔi-fuk	'climb'

		Singular	Plural	
Choctaw		taka:-li	tak-oh-li	'be hanging'
		lapa:-li	lap-oh-li	'be against vertical surface'

Where such cases are readily identifiable, they, too, have been eliminated from consideration.

A total of 32 languages from 13 distinct genetic groupings were found to have suppletive verbs marking ergative plurality, i.e. the suppletive verb form cross-references the number of the subject of an intransitive and the object of a transitive verb. The languages and their suppletive forms are listed in Table I.[5] Verbs are divided first into intransitives and transitives. The former are further subdivided according to the semantic criteria locative/non-locative and stative/non-stative. The individual lexical items are given in translation to clarify the semantic domain of each verbal category.

TABLE I

Suppletive Verbs

	Intransitive				Transitive
	Locative		Non-Locative		
	Stative	Non-Stative	Stative	Non-Stative	
I. Caddoan					
Pawnee	be to-gether, live, sit	go			
Wichita	be, lie	go			kill
II. Chinookan					
Chinook	be lo-cated, stand		small	cry, die	kill
III. Gulf					
Atakapa	sit, stand	arrive, lie down		die	arrange, borrow,take
Chitimacha	be in neutral position, lie, sit, stand	arrive, come, go		die	kill
Tunica	lie,live, sit		(exist)		(cause)
Muskogean					
Choctaw	be inside, lie, live/ stay, sit, stand	arrive here, arrive there, enter,fall, go	small		hit, pick up, pull off, put down, put inside

TABLE I

(cont.)

	Intransitive				Transitive
	Locative		Non-Locative		
	Stative	Non-Stative	Stative	Non-Stative	
Creek	be inside, lie, sit, stand	arrive, come, go, go about, go out, run	small	die	kill, put down, put in, put out, take, throw away
Koasati	sit, stand	arrive, come, go, go about, run			hit, put in, take, throw away
Mikasuki	lie, sit, stand	come, go about, run	big, small	die	kill, lay, take, throw away
IV. Hokan					
Karok	lie, sit, stand	go, swim	small	cry, die	carry, put, throw
Yana	sit	go, run			handle, put down
Washo	lie, sit, stand	fall, run			
Pomoan					
S.E. Pomo	lie, sit, stand	float/glide, run/fly, swim, turn, walk/go			carry, give, put
Yuman					
Diegueño	be located, lie, sit, stand	arrive, return	be little	die	
V. Kiowa-Tanoan					
Kiowa	lie, sit	fall off	big, long, small		put, sever

TABLE I

(cont.)

		Intransitive			Transitive
		Locative		Non-Locative	
		Stative	Non-Stative	Stative	Non-Stative	
VI.	**Na-Dene**					
	Haida	sit	fly, go			kill
	Athapascan					
	Chipewyan	lie, sit, stay	get up, go, swim		die	handle, kill
	Hupa	have posi-tion, stand, stay/live	go about, lie down, run/jump		think/know, talk	carry, move
	Kato	have posi-tion, sit	fall, travel			handle, kill, put
VII.	**Penutian**					
	Coos	lie, sit/ live	fly/jump, travel	big, small	die, sleep	kill, put in
	Klamath	lie, sit/ stay, stand	fall, jump, run, sink	short, tall	die, laugh, speak	break in two, give, kill, sever, shoot
	Takelma	sit, stand				
	Tsimshian	lie, sit, stand	come from, enter, escape, go, go out, run	big, extreme, small, ugly	cry, die	carry, eat, kill, put, take
	Zuni	be inside, lie, sit	sit down, stand up		sleep	hold, kill, put down, stand, take
VIII.	**Salishan**					
	Coeur d'Alene	lie, sit	enter, go, jump, travel	big, small	die, stop	kill, take hold of

TABLE I

(cont.)

	Intransitive				Transitive
	Locative		Non-Locative		
	Stative	Non-Stative	Stative	Non-Stative	
IX. Siouan					
Biloxi	be/stay, lie, sit, stand				
X. Tonkawa	be located, stand	come, fall, go, wander	big		drop, pick up, throw
XI. Uto-Aztecan		arrive, go to, enter, go along, fall, run			
Hopi	be around, sit, stand			dance, die	throw, put, eat, kill
Luiseño	be there, stand	fall, fly	large, long/tall, sick, small	die, stop	bring, erect, fill, kill, put in, seize
XII. Yuchi	be here, be lost	go			
XIII. Yukian					
Wappo	lie, sit, stand	come out, go away, run, walk	be dead	sing, sleep	carry, kill

All the languages enumerated in Table I have at least some intransitive suppletive verbs. While many languages have suppletive transitives as well, this category will not be suppletive unless intransitives are also. While it is the case that no language has only suppletive transitives, six languages (Pawnee, Washo, Diegueño, Takelma, Biloxi, Yuchi) have suppletive intransitives but no suppletive transitives.

Intransitive verbs are further grouped into locatives[6] and non-locatives, and then into statives and non-statives. The first column lists locative statives or verbs specifying position ('sit', 'stand', 'lie', 'be located',

etc.). The locative non-statives of the second column are verbs denoting motion ('come', 'go', 'arrive', 'swim', 'fly', etc.). The third column is made up of non-locative statives such as 'big', 'small', 'tall', 'short', etc. The final column lists non-locative non-statives, verbs like 'talk, 'die', 'cry', and 'sleep'.

Immediately apparent from the chart is the fact that many languages have suppletive forms in the two locative categories but not in the non-locative columns. The intransitive suppletive forms of 11 languages (Pawnee, Wichita, Koasati, Yana, Washo, S.E. Pomo, Haida, Kato, Takelma, Biloxi, Yuchi) fall entirely within the realm of locative verbs of motion and/or position.

Among locative intransitives, it is possible to detect a slight tendency for locative statives to be suppletive while locative non-statives are not. Four languages (Chinook, Tunica, Takelma, Biloxi) have suppletive positionals but no corresponding suppletive verbs of motion. In no instance, however, is there a language with suppletive verbs of motion but no suppletive positionals.

An examination of the non-locative non-statives of the fourth column reveals one verb, 'die', which appears far more frequently than any other. There are 17 languages listed with suppletives in this column; 'die' occurs in 14 of them. If a language has only one suppletive in this category, it will most likely be 'die'. In six languages (Atakapa, Chitimacha, Creek, Mikasuki, Diegueño, Chipewyan) 'die' is the only verb in this category.

There appears to be no obvious linguistic relationship between 'die' and the locative predicates mentioned above. Presumably the explanation is a cultural rather than a purely linguistic one. In some societies, including many North American Indian communities, the concept of dying involves the spirit's journey to another land and might well be considered a verb of motion. Then, too, verbs of dying are often taboo and thus susceptible to lexical replacement.[7] Consider the English euphemisms 'pass over', 'pass away', and even 'kick the bucket' which are at the same time, verbs of motion.

Inspection of the transitive column of Table I reveals that, almost without exception, these predicates involve the semantic idea of motion. Verbs such as 'put', 'take', 'carry', 'throw', 'drop', recur throughout the column. These verbs might more aptly be categorized as causatives, a fact reflected in the morphology of many languages, i.e. some transitives are produced by the addition of a derivational morpheme (variously labeled 'causative', 'transitivizer', etc.) to the semantically corresponding intransitives:

(5)		Singular	Dual	Plural	
	Creek	oss-	wolk-	isoss-	'go out'

	Singular	Dual	Plural	
Creek	ossa-<u>ic</u>-	wol-ho-<u>ic</u>-	sossa-<u>ic</u>-	'put out'
	ley-<u>k</u>-	ka:-k-	apo:-k-	'sit'
	tak-ley-<u>c</u>-	tak-ka:-<u>y</u>-	takk-apo:-<u>y</u>-	'put down'
Mikasuki	tala:-<u>k</u>-	sal-<u>k</u>-	sal-ka-:<u>c</u>-	'lie'
	tala:-<u>l</u>-	sal-<u>l</u>-	sal-<u>li</u>-:c-	'lay'

In Creek the intransitive 'go out' is suppletive; the corresponding transitive 'put out' is made up of the intransitive root with the causative suffix. 'Put down' is derived in a similar manner from 'sit', with the locative prefix 'down' and the causative suffix in the singular, the transitive suffix -<u>y</u> in the dual and plural. The Mikasuki example illustrates a similar formation. The only difference between the two stems is the use of an intransitive or transitive suffix; the roots are identical. Analogous relationships have been reported in Zuni, where some transitives, i.e. causatives, are derived from stative positionals, e.g. 'to erect' is formed from 'is standing'. Although there are numerous transitives which bear no resemblance to intransitive counterparts, the two verb classes share close semantic and syntactic ties. Therefore, if a given intransitive is suppletive, it is likely that the semantically corresponding transitive (causative) will be suppletive as well.

The verb 'kill' occupies a special status among transitive suppletives due to its high rate of occurrence. It is the only lexical item in this category in four languages (Wichita, Chinook, Chitimacha, Haida). In languages with several transitive suppletives, 'kill' ranks as one of the most frequently occurring verbs. Since it has already been noted that 'die' is commonly suppletive, it is not surprising that the causative 'kill' suppletes as well. While the verbs 'die' and 'kill' have distinct roots in the singular in the Klamath example in (6), the plural of 'kill' is clearly derived from the plural suppletive of 'die'. In Mikasuki and Chipewyan, 'kill' is formed by affixing the causative marker to the suppletive forms of 'die':

(6)		Singular	Plural	
	Klamath	gleg	č'o:q'	'die'
		siwg	<u>h</u>esc'o:q'a	'kill'
	Mikasuki	il-	oks-	'die'
		ili-:<u>c</u>-	oksi-:<u>c</u>-	'kill'
	Chipewyan	łɛɣá-ni:-δer	'I died.'	
		łɛɣá-ní:-dɛ́	'We died.'	
		łɛɣá-ni-<u>ł</u>-θer	'I killed him.'	
		łɛɣa-ni-<u>ł</u>-dɛ́	'I killed them.'	

The fewest number of suppletive forms is found in the intransitive

non-locative stative category. With only one exception (Diegueño) a
language will not have suppletive non-locative statives unless it also
has suppletive transitives.[8]

Suppletive non-locative statives typically fall into the semantic
domain of size, 'big' and 'small' being the most common. The data here
suggest that 'small' may be statistically more prevalent than 'big',
but the sample is too limited to draw any firm conclusions. Among the
languages which have only one suppletive in this category, five
(Chinook, Choctaw, Creek, Karok, Diegueño) contain a suppletive plural
for 'small', whereas only one (Tonkawa) has a suppletive plural for
'big'.

The primary number division signaled by suppletive verbs is
binary---singular vs. plural. A threefold distinction---singular-
dual-plural---is considerably less common. Though the binary opposi-
tion is referred to as singular vs. plural, in some cases the semantic
dual collapses with the singular, and in others, the plural. Consider
the case of Chipewyan:

(7)   Chipewyan

    (a)   nį-dáih 'Sit down! (sg)'; ní:-kɛ 'We are sitting
        down. (du)'; du-ł-t'θi 'Sit down! (pl)'

    (b)   ná-s-θer 'I am staying. (sg)'; ná-uh-θer 'You are
        staying. (du)'; ná-í-dɛ 'We are staying. (pl)'

    (c)   θi:-tį 'I am lying. (sg)'; θí:-tɛz 'We are lying.
        (du or pl)'

In (7a) there are distinct roots marking three numbers, singular-dual-
plural. In (7b) the singular and dual roots are identical, in contrast
to the plural. The final example (7c) shows the coalescence of the dual
and plural in opposition to the singular. Only (7a) constitutes ternary
number marking; (7b) and (7c) are binary distinctions. What is con-
sidered here is the number of oppositions, not the particular pattern-
ing of the dual semantic category.

Table II lists the languages which were discovered to mark
ternary number with suppletive verbs:

TABLE II

Number Marking

	Singular vs. Plural	Singular-Dual-Plural		
		Intransitive		Transitive
		Position	Motion	
Biloxi	X	lie, sit, stand		
Chipewyan	X	sit		
Choctaw	X	sit	enter, fall, run	put inside
Creek	X	sit, stand	enter, go about, run	put out, throw away
Karok	X	be, sit, [die] lie		put
Klamath	X		run (paucal)	
Koasati	X	be located, sit, stand		
Mikasuki	X	sit	run	throw away
Pawnee	X		go	
S.E. Pomo	X	lie, sit, stand	crawl, run, walk	

X = numerous items

The primacy of binary marking is demonstrated by the fact that a language does not mark three distinct numbers unless it also marks only singular-plural in other verbs. In other words, no language has as its only suppletive forms verbs delimiting three number categories. If a language has verbs with a

three-way number distinction, other verbs making binary distinctions will be present also.

Within the ternary category, intransitives mark a three-way contrast while transitives do not, but the reverse is not the case. The only languages in Table II with threefold marking in transitives make a similar distinction in intransitives. Again, these verbs are invariably locatives and the semantic causatives of their intransitive counterparts. Note the parallel to the overall patterning of suppletion discussed earlier. Perhaps with more data it will be possible to make finer distinctions within the intransitive category. It may be that verbs of motion will exhibit ternary marking while verbs of position will not, or vice versa, but with the information at hand, such an hypothesis is premature.

In summary, it has been noted that locatives are more susceptible to suppletion than non-locatives, and intransitives more than transitives. More specifically, the following statements can be made about languages exhibiting number suppletion:

(8) (a) Intransitives will supplete when transitives do not, but the reverse is not true.

(b) Among intransitives, locatives (verbs denoting position and motion) will have suppletive forms when non-locatives do not, but not vice versa.

(c) The verb 'die' is unique in that it frequently tends to be the only suppletive form in the non-locative non-stative intransitive category.

(d) If transitives are involved, they will most likely be the causatives of the related locative intransitives.

(e) The verb 'kill' parallels 'die' in that it may occur as the sole representative of the non-locative category.

(f) Non-locative statives denoting size are most likely to be suppletive, 'big' and 'small' occurring most frequently.

(g) The basic number distinction is binary---singular vs. plural. Singular-dual-plural may be marked in locative predicates but not non-locatives, and in intransitives but not transitives. The reverse, i.e. a three-way contrast in non-locatives but not locatives and in transitives but not intransitives, does not occur.

Although the data presented in this study are by no accounts exhaustive and the conclusions drawn, tentative, the patterns repre-

sented are systematic enough to question the notion that suppletion is inherently irregular and unpredictable.

NOTES

1 Research for this paper was supported by a Dissertation Fellowship from the University of Kansas. An earlier draft was read at the 1977 winter meeting of the Linguistic Society of America, Chicago.

2 Even the most comprehensive typology of North American Indian languages (Sherzer 1976) fails to mention number suppletion.

3 Cook (1974) details number suppletion in Sarcee and discusses the historical development of number categories.

4 The commas found in the Creek and Mikasuki data isolate infixes.

5 Genetic affixiations are based on Voegelin and Voegelin (1977).

6 Locatives include both position and motion verbs, i.e. those predicates occurring with a complement of location.

7 For a discussion of taboo words see Smith (1975).

8 An intuitively more satisfying correlation between intransitive non-locative statives and intransitive non-locative non-statives is tenuous since Choctaw, Kiowa, and Tonkawa have suppletive non-locative statives but no non-statives. They do, however, have suppletive transitives.

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