# UTO-AZTECAN GRAMMAR

Edited by

Ronald W. Langacker

Volume 1

An Overview of Uto-Aztecan Grammar

## STUDIES IN UTO-AZTECAN GRAMMAR

### Volume 1

An Overview of Uto-Aztecan Grammar

### SUMMER INSTITUTE OF LINGUISTICS PUBLICATIONS IN LINGUISTICS

Publication Number 56

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# Studies in Uto-Aztecan Grammar

# Volume 1 An Overview of Uto-Aztecan Grammar

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#### A PUBLICATION OF

THE SUMMER INSTITUTE OF LINGUISTICS and THE UNIVERSITY OF TEXAS AT ARLINGTON

ISBN Part I 0-88312-070-4

Set 0-88312-069-0

Library of Congress Catalog Card No: 77-7575

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Copies of this publication and other publications of the Summer Institute of Linguistics may be obtained from

Summer Institute of Linguistics Academic Publications 7500 W. Camp Wisdom Rd. Dallas, TX 75211

#### FOREWORD

The present volume is the first of a three-volume set containing grammatical sketches of a variety of Uto-Axtecan languages. This first volume contains An Overview of Uto-Axtecan Grammar, written by the editor and based in large measure on research supported by a National Endowment for the Humanities Senior Fellowship (1973-74). The second volume, Modern Axtec Grammatical Sketches, includes sketches of Tetelcingo Nahuatl by David H. Tugzy; North Puebla Nahuatl by Farl Brockway; Musteca Nahuatl by Richard and Patricia Beller; and Michoscán Nahual by William R. Sischo. The third volume, to be called Uto-Axtecan Grammatical Sketches, will contain sketches of Northern Paiute by John and Joy Anderson; Papago by Dean Saxton; Northern Tepehuan by Burton Bascom; Western Tarahumara by Don Burgess; and Cora by Eugene Pasad. These comments and those in the Overview pertain to all three volumes, which form an integral unit.

This work grows out of a Uto-Aztecan workshop sponsored by the Summer Institute of Linguistics and held in Ixmiquilpan, Kidalgo, Mexico from January through April 1976. I was invited to be the guest director of this workshop and participated from January through March while on sabbatical leave from the University of California, San Diego. In discussions of objectives with the various participants, it soon became apparent that virtually all of them had a serious interest in arriving at some kind of reasonably comprehensive grammatical description of the language they were studying. This interest dovetailed neatly with my own comparative-historical work in Uto-Aztecan, which involves assembling grammatical information about all the daughter languages attested and organizing this information in some coherent and reasonably uniform way. We decided, therefore, that the main activity of the workshop would be the preparation of grammatical sketches for each language involved in a fairly uniform format and notation. This project was successful to the extent that we further decided to revise the sketches for publication, with the result now before you. To these sketches I have added my own Overview, which provides the background information, pertaining both to grammatical concepts generally and Uto-Aztecan traits in particular, necessary for the preparation, interpretation, and appreciation of the incividual sketches.

The practical value for Uto-Aztecan scholars of fairly comprehensive grammatical sketches in simple, straightforward notation and uniform format should be readily apparent. On the other hand, it would be neither feasible nor desirable to impose a notation and format so rigid and detailed an to preclude individual variation and creative responses to linguistic problems. We have therefore tried to steer a middle course. Such things as phonetic symbols and grammatical abbreviations have been standardized, so that, for instance, e will always stand for a mid front vowel (never for a high back unrounded vowel, for which we use i), and IMP will always stand for 'imperative'. Moreover, all of the sketches follow a common broad outline (discussed and illustrated in the Overview) and consider the same general range of phenomena within each section of that outline. Within this outline, however, a considerable degree of variation will be noted. There is little variation in the inventory or ordering of

major sections, but a great deal in the grouping of material into subsections and arrangement and description of material within each subsection. The analysis and treatment of parallel phenomena will sometimes differ in sketches of languages even as closely related as the Aztec dialects. Authors naturally vary with respect to writing style, linguistic sophistication, familiarity with the language, individual interests and objectives, and many other factors. These differences are inevitably reflected in the sketches they have written, and I have not tried to level them through heavy-handed editing. I hope that what has resulted combines the advantages of a uniform format with the strengths of the individual writers.

I would like personally to acknowledge the contributors to these volumes for their interest, cooperation, and dedication through a long and arduous period. All of us would like collectively to thank and acknowledge the various people who have contributed in one way or another to the successful completion of this project. These include Doris Bartholomew, for organizing the Uto-Aztecan workshop and providing substantial help and encouragement at every stage; the language helpers and their communities, for making the resources of their languages available; the families, friends, and workers at the Centro Lingüístico Manuel Gamio in Ixmiquilpan, for their fellowship and cooperation; and all the other people who have contributed in their individual ways to the evolution, preparation, and production of these volumes.

RWL

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#### INTRODUCTION

#### The Uto-Aztecan Family

The Uto-Aztecan language family (abbreviated UA) extends over a vast area of the western United States and Mexico. The northernmost UA language, Northern Paiute, is found as far north as Oregon and Idaho. In the south, members of the Aztecan subfamily are spoken in central Mexico and in scattered areas as far south as Nicaragua. The UA family is large and variegated. Reasonable estimates of its time depth (e.g. in UA-C-CHI and UA-M-ALGB) range up to 5000 years, which would place Proto Uto-Aztecan (P-UA) at approximately the same depth as Proto Indo-European. UA is generally thought to be distantly related to the Kiowa-Tanoan family (ATN-WT-R), but other putative relationships are much more speculative than the Aztec Tanoan hypothesis. Here we will be concerned only with Uto-Aztecan and the relationships internal to it.

The interval classification of the UA languages has a long history (traced in UA-I-CUL, UA-L-PELY, and elsewhere) which is far from its ultimate dénouement. The most generally accented classification is that of Sydney Lamb (UA-L-CUL', which posits eight major subfamilies, all of them coordinate and direct descendants of P-UA. This is the most conservative classification, since it postulates no subgroupings at all beyond the most obvious ones: :t is the one I generally follow in order not to prejudge the results of comparative research, and it is the one we will adopt here. In the long run. however, I believe larger subgroupings will prove justified. In particular at is often useful to make a distinction between Northern Uto-Aztecan (MIA), consisting of four of Lamb's eight subgroups (Numic, Tubatulabal, Hopi, Takic), and Southern Uto-Aztecan (SUA), consisting of the other four (Pinic, Taracabitic, Corachol, Aztecan). This division, offered as a genetic one by Jeffrey Heath (UA-H-MP1), differs from the traditional tripartite division in that SUA groups together the traditional Sonoran subfamily (Pimic, Taracahitic, and Corachol) and Aztecan, giving the former no official status; MUA is equivalent to the traditional Shoshonean or Plateau Shosho tean subfamily.

The following chart lists most of the languages we will be dealing with. It give: a conservative view of their genetic relationships and provides the appreviations we will use for the languages and subfamilies. (P-X will stani for Proto X.) Language names are underscored; other names label subfamilies.

```
Numic (NUM)

Western Numic (WRM)

Northern Paiute (NP)

Mono (M)

Central Numic (CRM)

Shoshoni (SH)

Southern Numic (SRM)

Southern Paiute (SP)

Kawalisu (K)

Tubstulabal (TU)

Hopi (H)
```

```
Takic (TAK)
     Serrano (SR)
     Cupen (CUP)
          Cahuilla-Cupeno (CAC)
               Cahuilla (CA)
               Cupeno (CU)
          Luiseno (L)
Pimic (PMCT
     Papago (P)
     Northern Tepehuan (NT)
     Tepecano (TO)
Taracahitic (TRC)
     Tarahumara (TA)
     Yaqui (Y)
Corachol (CCH)
     Cora (CR)
     Huichol (HU)
Aztecan (AZN)
     Pochutla (PO)
     Classical Nahuatl (A)
```

To the twenty language names in this chart could easily be added oneor two-score more to accommodate various languages that are extinct, sparsely-attested, or relatively close dialects of those listed. Of those that are given in the chart, only Pochutla is definitely extinct, being known only through salvage work by Boas in 1912 (reported in PO-B-DMP). It can be shown (UA-CL-PAV) that Pochutla is coordinate to all the rest of Aztecan, hence it has great comparative importance. While Classical Nahuatl is most conveniently chosen to exemplify the other branch of Aztecan, it does not (apart from age and documentation) have any special status within this second branch, and it cannot be presumed to be the direct ancestor of any of the modern Aztec languages or dialects described in the next volume. Whether Tepecano, described by Mason (TO-M-PL), still survives is uncertain, but it is at any rate only one dialect of the definitely extant Southern Tepehuan. Among the northern languages listed, both Serrano and Cupeno are on the verge of extinction. The others are better off, but in general their status is less secure than that of the southern languages. Notice that Tubatulabal and Hopi are considered by the conservative classification to be language isolates within UA and to constitute subfamilies by themselves. The ultimate validity of this treatment of Tubatulabal and Hopi is dubious.

The four grammatical sketches included in the second volume, Modern Aztec Grammatical Sketches, all pertain to modern Aztec dialects, hence they exemplify the same branch of Aztecan as does Classical Nahuatl. Most of the sketches in the third volume, Uto-Aztecan Grammatical Sketches, pertain to southern languages outside of Aztecan. These include two Pimic languages (Papago and Northern Tepehuan); one dialect of Tarahumara from Taracahitic; and Cora from Corachol. Northern Paiute, from the Western Numic subfamily, is the only NUA representative. In this overview, however, the northern and southern branches of the family will receive approximately equal emphasis (with somewhat fuller exemplification for the northern branch, since the accompanying sketches will extensively exemplify various southern languages).

Grammatical Skatches

Each of the grammatical sketches in the later volumes, and this overview itself, will follow the overall grammatical outline given below, with at most only minor variations. The titles of sections actually appearing in the sketches are underscored. Other titles, not underscored, show the organization of these sections into larger units — this organization must be taken into account to determine why the sections are ordered and grouped as they are. The individual sketches show too much variation at the level of subsections for a single outline to accommodate it; however, the subsections used in this overview might be regarded as a norm.

```
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     Syntactic Marking
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     Overall Verb Structure
Complex Sentences
     Coordination
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Subordination

Complement Clauses Embedded Questions Relative Clauses Adverbial Clauses

#### Texts

This outline of course represents only one of innumerable ways of organizing grammatical information. It does, however, have a certain amount of logic to it, and since it has evolved through several generations as I have used it in assembling information about UA languages, it can lay some claim to workability and efficacy for the description of languages of this family. Individual authors have adapted it as necessary or convenient in their sketches, particularly at the level of subsections and below, but none have made drastic modifications in the organization into sections just given. While various facets of the outline accommodate UA languages in particular, with appropriate modification it might prove workable for most any language.

To facilitate exposition and in particular the analysis of individual examples, an extensive inventory of grammatical abbreviations and other notations has been adopted. Most of these are mnemonic and straightforward, and the reader should have little trouble with them once the most common ones become familiar. This is one area where, for obvious reasons, authors have not been allowed much freedom. Most of the abbreviations have been drawn by the authors from a common list, and individual authors have adopted only a handful of their own choosing to cover cases not handled by the original inventory; these special individual abbreviations are given by each author in his INTRODUCTION.

Apart from phonetic symbols, which have standard values and should be self-explanatory, \* the notations and abbreviations employed are those listed below (the list is mostly taken from Appendix C of UA-L-NA). Not every abbreviation included in the list is necessarily used in the sketches, but the great majority are used in one place or another.

ABS	<ul><li>absolutive</li></ul>	AFFV	= affective
ABSTR	= abstract	AG	= agent
ACC	= accusative	AGR	= agreement
ACT	= active	AL	= alienable
ADJ	= adjective	AN	= animate
ADJR	= adjectivalizer	APPLIC	= applicative
ADV	= adverb	APPOS	= appositive
ADVR	= adverbializer	ART	= article
AF	= affix	ASP	= aspect
AFF	= affirmative	ASSR	= assertive

<sup>\*</sup>Possibly worthy of mention are Nahuatl tl, a voiceless lateral affricate, and z, which stands for a voiced dental/alveolar affricate (the voiced counterpart of c). Glottal stops are largely automatic in UA at the beginning of words that would otherwise start with vowels, so I will not write them in word-initial position. Partly due to insufficient information, I will also generally omit indications of accent as well as the tone which has developed in certain southern languages such as Cora and Northern Tepehuan.

ATTEN	=	atteruative	GER	=	gerund
AUG	=	augmentative	H		human
XUA	=	auxiliary	HAB		habitual
В		base	HON		honorific
BEN	=	benefactive	EYP		hypothetical
CAUS		causative	IF		infix
CESS		cessative	IMP		imperative
CL		clause	IMPOT	=	
CLSF		Clasuifier	IMPRF		imperfect(ive)
CLT		clitic	IMPRS	_	impersective;
CMPL		comp.ement	INAL		inalienable
CMPLR		comptementizer	INAN		inanimate
CMPND		compound	INCEPT		
CNJ		conjunction	INCHO		inceptive
CNJNCT		conjunct	INCL		inchoative
COLL		coll ective	IND		inclusive
COMPAR		comparative	INDF		independent
COMPL		comp.etive	INF		indefinite infinitive
COND		conditional	INFL		inflectional
CONN		connective	INFR		inferential
CONST		constituent/constituency	INSTR		instrumental
CONSTR		construction	INTIN		intensifier
CONT		continuous/continuative	INTR		introducer
COORD		coordination	INTRNS		introducer
COP		copula	INVIS		invisible
COREF		Coreference	IRR		irrealis
CS		complex sentence	LOC		locative
DAT		dative	MAN		manner
DECL		declarative	MDL		modal
DEF		definite	MOD		modifier
DEM		demonstrative	MOT		motion
DER		derivational	N		noun/nominal
DESID		desiderative	NARR		narrative
DIM		diminutive	NEG		negative
DIR	=	direct	NH		non-human
DIRL	=	directional	NOM		nominative
	=	discontinuous	NR		nominalizer
DIST		distal	NUM		number
DISTR		distributive	NUMR		numeral
DL		dual	NVOL		non-volitional
DS		different subject	OBJ		object
DUB		dubitative	OBLIG		obligatory
DUR		durative	OBLO		oblique
EMB	=	embudded	OM		object marker
EMPH		emphatic			(verbal affix)
EV		evi(.ential	OPT		optional
EXCL		exclusive	OPTV		optative
EXCLM		exc.amation	ORD		ordinal
EXHRT		exhartative	P	=	postposition
EXPL		exp.etive	PASS		passive
FOC		focus	PEJ	-	pejorative
FREQ	=		PERF		perfect(ive)
FUT	=	future	PERS		person
					-

PF	= prefix	SBJNCT	= subjunctive
PHR	= phrase	8F	= suffix
PL	= plural	SG	= singular
PN	= proper name	SM	= subject marker
PNCT	= punctual	~	(verbal affix)
POS	= positive	88	= same subject
POSS	= possessive	STAT	= stative
POSSD	≈ possessed	SUB	= subordinate
POSSR	= possessor	SUBJ	= subject
POT	= potentive/potential	SUBR	= subordinator
PRED	= predicate	SUPPL	= suppletive
PREP	= preposition	TEMP	= temporal
PRES	= present	TNS	= tense
PRIV	- privative	TOP	= topic
PROG	= progressive	TRNS	= transitive
PRON	= pronoun	TRNSR	= transitivizer
PROX	= proximal	UNR	= unrealized
PRSMV	= presumptive	UNSPEC	= unspecified
PRSNTV	= presentative	USIT	= usitative
PRT	= particle	V	= verb
PRTC	= participle	VERT	= vertical
PRTV	= partitive	VIS	= visible
Q	= question	VOC	= vocative
QNT	= quantifier	VOL	= volitional
QUOT	= quotative	VR	= verbalizer
R	= realized	WHQ	= WH question
RCPR	= reciprocal	WHW	= WH word
RDP	= reduplication	XP	<ul><li>extraposition</li></ul>
REC	= recent	YNQ	<ul><li>yes/no question</li></ul>
REF	<pre>= reference/referential</pre>		
REFL	<pre>= reflexive</pre>	lΡ	⇒ first person
REL	= relative/relativizer	SÞ	= second person
REM	= remote	3P	= third person
REPET	= repetitive	**	= morpheme boundary
RESTR	= restrictive	=	= clitic boundary
RSLTV	= resultative	#	= word boundary
RSMV	= resumptive	Ű ]	= clause boundary (initial)
S	= sentence	]	= clause boundary (final)

#### References

The references listed below are far from constituting a full or even comprehensive bibliography of UA. (The bibliography in UA-L-NA comes much closer to this goal.) Included are only those references to which I have occasion to refer in the course of this overview. Associated with each entry is a reference code of the form X-Y-Z, where X is a language abbreviation, Y stands for the last name of the author(s), and Z is mnemonic for the title of the work. The alphabetization below follows this code. Sentences and complex grammatical expressions cited in subsequent sections of this overview are often accompanied by a reference code, together with page number (where appropriate), specifying the source of the example; when no reference is given, here or in the sketches, the author assumes personal responsibility for the data.

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#### PHONOLOGY

UA phonology, though an interesting subject, is not our primary concern in the sketches or this overview. The purpose of the PHONOLOGY section is to present the phonemic inventory of each language and to describe the major phonological processes that are of interest, either for their own sake or because of their interaction with grammar.

#### Phonemes

The following phonemic inventory is generally agreed upon for P-UA:

Voegelin, Voegelin, and Hale (UA-VVH-TCG) also reconstruct \*r and \*n, but \*r is highly restricted and quite dubious, while n, when it occurs in the daughter languages, is probably best regarded as one stage in the lenition of \*m (UA-L-NCG); Miller (UA-M-CS) reconstructs neither \*r nor \*n. \*1 is basically limited to medial position (cf. UA-L-NA-160-161). Miller, following Sapir, reconstructs \*e rather than \*i, but subsequent work makes it clear that \*i is the proper reconstruction (UA-L-VP, UA-CL-PAY).

UA-VVH-TCG and UA-M-CS both give sound correspondences and cognate sets to back up this reconstruction, and the former considers the sound changes leading to the phonemic systems of the daughter languages in some detail. Considering the time depth. consonants have been relatively stable in the evolution of the northern languages. \*1 > n is characteristic of all of NUA, and \*k > q before (original) non-high vowels in all of NUA except portions of Numic, with \*q further evolving to h in Tubatulabal. Among the southern languages. Pimic stands out for an extensive series of consonantal shifts dating back to P-PMC (see PMC-B-PT), among them "s > h, "c > s, "w > g, and "y > d. "1 > r is common to Taracahitic and Corachol. "p generally lenites in the southern languages (except in fortis environments), becoming h (specifically in Corachol), w, v,  $\beta$ , or zero. The Aztecan change \*t > t1 apparently occurred only before \*a (VA-W-OA); it is generally thought that this change was restricted to certain Aztec dialects and occurred relatively late, but there are good grounds for believing instead that it was a very early change reconstructable for P-AZN (UA-CL-PAV). \*k" is often modified in both northern and southern languages, for example becoming w in Tubatulabal and Tarahumara, bw in Yaqui, and \*b in P-PMC.

The P-UA vowel system has been retained virtually without modification in Numic, Tubatulabal, and Pimic. Hopi and P-TAK share \*o > o, which in the former was followed by "u > o. Vowel shifts in Takic were complex (see UA-L-VP), with Serrano eventually developing retroflex vowels. Within the Cupan branch, \*8 (< \*o) became e in Luiseno and continued to i in Cahuilla and Cupeno. \* was lowered to \*e in Proto Cupan; it was retained as such in Cupeno, was fronted to e in Cahuilla, and was rounded to o in Luiseno. All the southern UA languages outside of Pimic show \* > e. In Corachol, this was the first link in a drag chain that also included \*u > i and "o > u. The vocalic evolution of the Aztecan subfamily is rather complex (it is described in great detail in UA-CL-PAV). When Pochutla evidence is taken into account, it becomes evident that \*4 > e follows the same path as in Takic, involving the sequence of changes \* > \* > e, with #0 > o instead in Pochutla under certain conditions, #u > i also characterizes all of Aztecan outside of Pochutla, which does however provide evidence for this change having taken place in stages: \*u > \*i > i. P-AZN \*u > \*i is thus a shared innovation with P-CCH.

Major Phonological Processes

The UA languages show a wide variety of accentual patterns whose reconstruction is anything but obvious. However, Munro (UA-M-TRS) has

recently argued fairly convincingly that some version of a second-syllable stress pattern should be reconstructed for P-UA, perhaps one resembling that of modern Hopi (in which words of more than two syllables are accented on the second syllable unless the first syllable is closed or contains a long vowel -- stress is initial otherwise). Besides this second-syllable (or second-mora) accent, there is evidence for reconstructing an alternating stress pattern, whereby every second syllable (or mora) after the one with primary accent receives a secondary accent (cf. UA-S-SPNL).

Beyond this, the most striking and pervasive phonological processes in UA pertain to consonant gradation, most familiar from Sapir's classic work on Southern Faiute (SP-S-G). It is clear that a two-way distinction can be reconstructed for P-UA between, on the one hand, morphemes that are 'fortis', 'geminating', or 'unaltering', and 'lenis' or 'spirantizing' morphemes on the other hand. Although the evidence is less extensive. it is probable that this can be expanded to a three-way contrast that includes 'nasalizing' morphemes as the third member. Speaking in somewhat oversimplified terms, we can say that these morphological classes are distinguished by their phonological effect on the initial consonant of the morpheme that follows in the same word or phrase. Geminating morphemes either geminate this following consonant or leave it unaltered; nasalizing morphemes have a (pre-)nasalizing (and voicing) effect; while spirantizing morphemes have a voicing and spirantizing effect. This type of system has been partially retained in the Numic languages, even being elaborated by the addition of an 'aspirating' series in Central Numic (in later examples we will use "C. nc, hc, and ( for fortis, masalized, aspirated, and spirantized medial consonants respectively). In Shoshoni, for example, a given morpheme, say -pai 'have', can show up as -"pai [ppai], -"pai [mbai], -"pai [gai], or -pai Bai depending on the morphological class of the noun stem to which it attaches (SH-M-SG). Outside of Numic only remnants of such a system survive. In the guise of sporadic alternations or voiced obstruent phonemes (reflecting thonemicization of the spirantized allophones of voiceless obstruents); certain sound changes such as the lenition of \*p must be viewed against this backdrop. Even within Numic the system has decayed to varying degrees, so that there are grounds, for instance, for positing voiced obstruent phonemes in both Northern Paiute and Kawaiisu. \* The proper phonological treatment of consonant gradation at various points of its historical evolution is beyond the scope of our concerns here (see SP-S-G, SP-CF-SPE, NUM-I-HP, NP-N-HG, UA-L-NA, and UA-L-NCG for discussions of various aspects of the problem). I have argued (UA-L-NA, UA-L-NCG) that P-UA \*k follows the lenition pattern \*kw > \*w > w, so that \*kw is one source of w even in those daughters where this is not the regular reflex. Similarly,  $\frac{w}{n}$  follows either of two lenition patterns,  $\frac{w}{n} > \frac{w}{n} > \frac{w}{n}$ can be accounted for without recourse to the dubious "n. There is also evidence for regarding some occurrences of y and n as spirantized and nasalized reflexes of #c.

<sup>\*</sup>As it pertains to Northern Paiute, this claim (and the resulting phonemic transcription, which is adopted here for consistency with the Northern Paiute sketch) is due to John and Joy Anderson. Not all Northern Paiute scholars agree with this analysis, however.

#### BASIC SENTENCE STRUCTURE

This section pertains to the overall structure of simple positive declarative sentences. Subsequent sections will deal with complex sentences and special sentence types.

Word Order

By 'word order' is meant primarily the order of subject, verb, and direct object, though the position of other elements is worthy of note here to the extent that generalizations can be made. In discussing 'basic' word order, three related but separate notions must be clearly distinguished: 'most neutral word order', 'most common word order', and 'underlying word order'. Underlying order is to be understood in the sense of the deep structure of transformational grammar, and it is not our concern here. What we are concerned with is neutral word order, that which carries no special nuances or semantic value. It is to be expected that the most neutral order will normally coincide with the most common or most frequently occurring one, but this need not always be the case.

UA as a family shows all the classic symptoms of being 'verb-final' (e.g. predominance of postpositions over prepositions, heavy use of derivational suffixes, and the possibility of a relative clause preceding its head); most commonly something approximating SUBJ-OBJ-V is the neutral order, and this can certainly be reconstructed for P-UA. This structure has been preserved most consistently in the northern languages. Shoshoni, for example, has the normal order SUBJ-(ADV)-OBJ-V; Hopi has SUBJ-OBJ-V quite regularly where topicalization is not a factor; and Luiseno, despite considerable freedom of word order, allows and slightly prefers this order.

(L) (l) noo=n=il nawitmal-i ari-que 'I was kicking the girl.'
I=I=PAST girl-ACC kick-PAST

In the southern languages, however, there has been a marked drift in the direction of verb-initial structure, frequently associated with such typological correlates as the innovation of prepositions. Thus in Papago, for instance, while there is some controverey-as to whether the language retains the older verb-final order in underlying structure or now has verb-initial underlying order (see P-H-TWO and P-S-EBWO for opposite sides on this issue), it is generally agreed that V-SUBJ-OBJ order is the most neutral.

(P) (2) bi a=t g parco g wisilo 'Parcho got the calf.' get B\*=PERF ART PN ART calf (P=SS-D-118) PERF

Verb-initial order is quite apparent in many modern Aztec dialects; see A-S-WOC for an examination of the drift toward this order as it is reflected in Classical Nahuatl.

<sup>\*</sup>B will stand for an auxiliary base, i.e. an element with no apparent meaning of its own that serves as point of attachment for an auxiliary clitic sequence.

Deviations from neutral order have varying effects. In a language like Luiseno, with relatively free order, hardly any effect is discernible, so (3) for all practical purposes has the same semantic value as (1).

(L) (3) n.witmal-i=n=il noo ari-qus 'I was kicking the girl.' girl-ACC=I=PAST I kick-PAST DUR

When word order is more fixed, deviations tend to assume semantic significance, most commonly with emphatic value being associated with the constituent displaced to initial position; this emphasis may be exploited for the more specific functions of 'topic' or 'focus' (see <u>Topic</u> and <u>Focus</u> below). The object has been preposed in the Shoshoni example (4), and the subject in the Papago example (5).

- (SH) (4) 1-"ka okai-pi-"ta su-ti ha"ni-yu 'He was getting that EM-ACC cactus-ABS-ACC DEM-NOM get-CONT cactus.' (SH-M-SG-23)
- (P) (5) panco a=t mua g wisilo 'Pancho was the one that killed the PN B=PERF kill ART calf calf.' (P-SS-D-145)
  PERF

Besides a tendency to SUBJ-OBJ-V word order, with optional preposing of a constituent for emphasis, we can safely posit for the proto language the possibility of an 'introducer' element preceding the subject in unmarked order and the presence of a clitic group of some kind in second position, following the subject or a preposed constituent (cf. UA-S-ACR). The introducer is most commonly a conjunction, such as the ubiquitous <u>av</u> 'and' of Classical Nahustl:\*

(A) (6) aw in koyoo-tl k-ilwi-' 'And the coyote said....'
and ART coyote-ABS it-say-PAST (A-H-F-100)

Besides such things as aspect and modality, the clitic group often includes a pronominal element agreeing with the subject, as in the Luisene examples above. Subject pronouns in UA show a tendency to gravitate to second position, historically and often synchronically. In Mono and Tarahumara, for example, this tendency goes so far as to interrupt an initial constituent:

(M) (7) pahapi"ci-na nii a-"ki"ki-na a-na-"pu"ni-"ti bear-ACC I its-feet-ACC it-nearly-see-TNS\*\* 'I saw the bear tracks,' (M-L-G-291)

<sup>\*</sup>I have used A-A-I as a primary source in determining vowel length for Classical Natural.

<sup>\*\*</sup>TNS will be used for the neutral or unmarked tense, usually associated with present or recent past.

(TA) (8) či mu kabu ši-mea 'When are you going?' (TA-B-G-243)

Topic

The 'topic' of a sentence is often informally characterized as that which the sentence 'is about'. It is profitably viewed as a 'point of entry' into the flow of discourse, a signpost at the head of a sentence indicating the path along which the discourse will proceed or the entity to which it will pertain. As such, a topicalized constituent is most commonly sentence-initial. For example, Ellen is topicalized in various ways in the following: Ellen, I saw her last night; As for Ellen, I saw her last night; Ellen I saw last night.

The UA languages apparently have no grammatical element that functions solely as a topic marker, yet the languages employ various devices to identify some constituent as topic. All of those devices apparent from the limited information available involve the topicalized element appearing in initial position. Moving an element out of its normal position to before the subject is one device in languages with fairly rigid neutral order; this is definitely a topicalizing device in Hopi, for example:

(H) (9) i-t titavo-t ni's o'on haki-y a-w titapta-ni this-ACC tradition-ACC I NEG someone-ACC him-to pass-FUT
'I won't pass this tradition on to anyone.' (H-EE-HRW-15)

The extent to which topic is associated with initial position in languages with freer order is an open question.

In some cases we can identify an element as a 'pivot' for topicalization, such that a constituent preceding this pivot is thereby identified as a topic. This is most obviously true in the case of adverbial clauses, which various UA languages allow to follow the initial constituent of the main clause;

(SH) (10) so-ti [nii wini-ku] nii pui-mu
DEM-NOM me stand-while me see-COMPL
'He saw me while I was standing,' (SH-MB-LC-15.13)

Various clitics or particles that are restricted to initial or second position, like the second-position question particle ha of Shoshoni, may indicate that a preceding constituent is topicalized:

(SH) (11) ess ha ns pii 'Is that my mother?' (SH-ME-LC-3.2)
DEM Q my mother

Question words are very often restricted to initial position, or occur there by preference, in which case they often serve as topic pivot, as in Huichol:

(HU) (12) tewi tiitaa-ké p-ii-mi tuisu 'What did the man kill the man what-with ASSR-it-kill pig pig with?' (HU-G-S-60)

Finally, introducer elements such as conjunctions or adverbials can serve as pivot. In Classical Nahuatl, for instance, a topicalized nominal can

interrupt semi-frozen introducer sequences such as aw niman 'and then':

(A) (13) aw in kecalkooaatl niman ki-waal-i'to and ART PN then it-come-said 'Ard then Quetzalcoatl said....' (A-G-L-137)

Adverbial clauses, WH words, and certain particles or clitics can reasonably be attributed rivot status in P-UA.

Pronoun Copies

A grammatical trait universal in UA is the copying of nominal constituents in pronominal form. We will speak of 'pronoun copies' in the narrow sense when this copying is done for certain specific grammatical purposes, the copy being a bound form or clitic. Cases where the copy remains free and is not required for such obvious grammatical purposes are treated below under Presumptive and Resumptive Pronoun Constructions. Both types of copying are related to top:calization in some way that awaits detailed investigation.

The four `masic grammatical constructions for which pronoun copies are invoked in UA are those involving possessives, postpositions, object agreement on the verb, and subject agreement on the verb or in a clitic group. Pronoun copying can be reconstructed for all of these constructions in P-UA. When the pronominal element is itself sufficient to identify the referent, the antecedent can be omitted, in which case we do not have a pronoun 'copy' in the strictest sense of the term. Languages may however permit the antecedent to appear even when uniquely identified by the pronoun, and multiple copies are also sometimes possible:

(CU) (14) ne'=ne qay hiwču-qa [hame=ae=š=pe čem čem-puy-wen]
I=I NEG know-DUR whether=DUB=we=UNR we we-eat-PAST
DUR
PL

'I really don't know whether we ate or not,' (CUP-J-SC-71)

In this Cupenc example, the subject pronoun is copied as a clitic in the main clause, while in the subordinate clause the subject pronoun is copied both as a clitic and as a verb prefix.

Subject copying has been illustrated above in (1), (3), and (14). Object copying is illustrated in (6), (7), (12), and (13). The discontinuous possessive construction in the Mono example (7), pahapi"ci-na a-"ki"ki-na (bear-ACC its-feet-ACC) 'bear's feet/bear tracks ACC', exemplifies a pronoun copy used as possessor affix. The Hopi expression haki-y a-w (someone-ACC him-to) 'to someone/anyone' in (9) illustrates a pronoun copy used as postessitional object. Note that the antecedent is marked accusative when serving as possessor or postpositional object, as shown in (7) and (9); this trait is typical in languages which retain accusative inflection and can be reconstructed for P-UA, but it is not universally retained in the daughters (Takic in per:icular has largely eliminated it).

In the possessive and postpositional examples cited above, the pronoun copy follows its antecedent. It may also precede, as in this Southern Paiute expression:

(SP) (15) a-tu"kwa kani-a 'under the house' (SP-S-G-219) it-under house-ACC

In such cases we will speak of the copy construction as showing 'inversion'. The antecedent and pronoun copy may also be separated by intervening constituents, as in (7), in which case we will speak of it as being 'discontinuous'. (16) is an Aztec example of a discontinuous inverted pronoun copy construction involving a postpositional object.

(A) (16) ii-waan iškič tlaaka-tl ya in maaseewal-li him-with all man-ABS go ART vassal-ABS 'Every man went with (his) vassal.' (A-G-L-145)

Inversion and discontinuity can both be reconstructed.

#### Presumptive and Resumptive Pronoun Constructions

While less common than the bound pronoun copies considered above, free pronouns copying nominal constituents are found in a number of UA languages. When the pronoun precedes, we will speak of a 'presumptive pronoun construction'; when the pronoun follows we will speak of a 'resumptive pronoun construction'. Either type of construction may be discontinuous in the sense indicated above. Here are some Attec examples:

- (A) (17) in iin-tlak al ye'waatl in toonakayoo-tl 'Their food was maize.'

  ART their-food it ART maize-ABS (A-DA-FC10-178)
- (A) (18) aw niman ye iik ye'waatl onkaan on-tla-'toa and then already thus he there away-UNSPEC-say OBJ

on-m-iiš-keca in teek waisteekatl away-REFL-face-stand ART PN

'And then Tecuciztecatl speaks up, presents himself,' (A-G-L-131)

The pronoun <u>ye'waatl</u> is resumptive to 'food' in (17); in (18) it is presumptive and discontinuous to the proper name.

These constructions are somewhat more common when an adverbial constituent is copied by an adverbial demonstrative, as in this Papago sentence:

(P) (19) am o fi-wimid oidag-č-'id 'He helps me in the field.' there B me-help field-CONN-in (P-S-PP-33)

I will also consider as special cases of these constructions instances in which a noun modifier is detached from its head; this modifier can be a demonstrative or a quantifier (including numerals), and while the detached modifier cannot be said to 'copy' the nominal in the same sense as in the cases above, the function of the construction seems very much the same. The detached modifier can precede or follow, as seen in these Papago examples:

(P) (20) hág a=t mua wisilo 'That calf he killed.' (P-SS-D-146) that B=PERF kill calf

- (P) (21) gook o ab hinim g čáčoj 'Two men are coming.' (P-L-FN) two B there go ART men
- (P) (22) ha'i o ab hihim higa-m čičoj 'Some of those men are coming.'
  some B there go that-PL men (P-SS-D-135)
- (P) (23) wisilo a=n=t wo hima wuu 'I'm gonna rope a calf.'
  calf B=I=PERF FUT one rope (P-H-P-205)
  PERF

Present evidence allows us to reconstruct with some certainty for P-UA the presumptive pronoun construction with adverbial demonstratives, quantifiers, and simple demonstratives. Other variants of the presumptive and resumptive pronoun constructions are likely but less secure for the proto language.

# Focus

The 'focus' of a sentence is that portion which is not presupposed in context. If I ask Who killed the cat?, in the answer Martha killed the cat the focus would be Martha, since killed the cat is presupposed given the question. The focus in English sentences in normally indicated by unreduced stress, contrasted with the reduced stress on presupposed elements. A syntactic device for marking focus more clearly is the 'cleft sentence' construction, as in It is Martha that killed the cat. Here the focused element is presented as the main clause predicate with the verb be, and the presupposed material surfaces in a subordinate clause.

No information is available about possible intonational means of indicating focus in UA. Focus may be one value associated with the emphasis a constituent receives when preposed (cf. (5) above), though better data is to be lesired. There are scattered indications that P-UA may have had a focus construction very much like the cleft-sentence construction in English; most lirectly, both Papago and Classical Nahuatl have cleft-like constructions (the ka in (25) could be construed either as 'be' or as an affirmative particle — the difference is mainly one of which historical stage is involved).

- (P) (24) luunas o wud [m=a=t=t wa am hihi]
  Mcnday B be SUBR=B=we=PERF AFF there go
  PERF
  'It was Monday that we went.' (P-L-FN)
- (A) (25) ks ye'waatl [in ni-k-čiya] 'It's him that I've been waiting AFF he SUBR I-him-wait for.' (A-G-L-142)

Various (ther constructions are found in UA for indicating focus. In Cahuilla, for example, we find a special construction using a conjunction to set off the focused material:

(CA) (26) he' man pe-n-mekan-qa' suka'-t-i 'It's me who killed the and it-I-kill-gonna deer-ABS-ACC deer.' (CA-H-K-90)

Focused material can apparently be set off in Tarahumara by special particles, such as the affirmative k"a or nari 'through'.

- (TA) (27) yeruka ani-re=ke rioši kwa ani-re=ke who say-PAST=EMPH god AFF say-PAST=EMPH 'Who said it?' (TA-B-G-295)
- (TA) (28) eng nari ne ngki-mme 'This is what I want.' (TA-B-G-322) this through I want-PRTC

UA focus constructions deserve much closer scrutiny than they have received.

# Other

Among other aspects of basic sentence structure, we will consider here only apposition, and that very briefly. The most striking variety, occurring frequently in the texts of Classical Nahuatl (with possible traces elsewhere in the family), is what I will call 'stylistic apposition'. This is the repetition, in the form of a rough paraphrase, of an element or a sequence of elements, as illustrated already with the verbs in (18). Particularly noteworthy is the fact that the repeated sequence need not form a constituent; in (29) the subordinator and verb are repeated to the exclusion of the subject.

(A) (29) aw in i'kwaak oo-kiisa-ko in co-mo-mana-ko and SUBR when PERF-leave-came SUBR PERF-REFL-present-came

toonatiw 'And when the sun came out, presented itself....' sun (A-G-L-134)

More systematic information on this and other types of apposition would be very welcome.

#### PARTICLES AND CLITICS

Besides clearly nominal and verbal constituents, a sentence in UA will generally contain one or more particles or clitics, which often contribute significantly if not crucially to the semantic organization of the sentence. These particles and clitics are the subject of the present section. For purposes of discussion they can be divided into several categories, largely on the basis of their semantic properties.

Conjunctions and Adverbs

It is common in UA for clauses to be introduced by conjunctions and/or adverbials associated with conjunctions or similar to them in value. Typical would be the conjunction aw 'and' of Classical Nahuatl, illustrated in (6), (13), (18), and (29) under BASIC SENTENCE STRUCTURE. Groups of particles may coalesce into semi-fixed introducer sequences, such as Nahuatl aw miman ye iik, and disruption of such a sequence by another element may mark it as being the topic, as seen in BASIC SENTENCE STRUCTURE (13) and (15). Elements that are preposed, such as the topic or question words, may nevertheless follow a conjunction serving as introducer, indicating that in some sense the introducer is external to the clause. BASIC SENTENCE STRUCTURE (13) illustrates this with respect to a topic; the following examples illustrate it in regard to question words.

- (P) (1) ku=t hidai i mus g wisilo 'And who killed the calf'' and=PERF who PNCT kill ART calf (P-SS-D-145)
- (H) (2) noq in yaw as hiita hin-cak-ni 'And what were you supposed and you QUOT IMPOT what how-do-FUT to do?' (H-VV-H-197)

The Hopi example is particularly interesting, as it shows the topicalized\*
im 'you' directly after the conjunction, with the question word following
two other intervening particles; a language may develop an elaborate set
of priorities for determining which of the initial or preposed elements
will win out over the others.

Of course not all conjunctions are introducers, and not all elements closely related to conjunctions or introducers are themselves to be considered conjunctions in any narrow sense. The following examples illustrate various types of elements that can be grouped in this category.

- (M) (3) ipeht=po'o mahu nii"mi 'But maybe that's an Indian.' (M-L-G-386) maybe=but DEM Indian
- (SH) (4) su-ti winu ki'ma-"nu 'He then came.' (SH-D-PMS-120)
  DEM-NOM then come-COMPL
- (TU) (5) ani-pum-bee alaaw-iba'a-t 'Do you PL want to talk after a Q=yv.u=after talk-DESID-PRES while?' (TU-V-G-172)
  P), a while
- (H) (6) im ason piw a'-ni 'You come back again.' (H-K-L-38) you later also from-FUT there
- (L) (7) pa pi čaam čam-neči-vota-ma-an naačaxan-nay then and we our-pay-can-DUR-FUT food-from 'And then we can pay for food.' (L-H-I-72)
- (HU) (8) neitaame nucu ti-tewaa-ka 'Or shall she be called Neicame
  PN or DISTR-be -FUT instead?' (HU-G-S-38)
  instead called DUR

Polarity

Besides words for 'yes' and 'no', the category of polarity particles and clitics is meant to include other elements indicating affirmation or negation, emphatic morphemes, quotatives, and related notions. This category overlaps with modality, and the division should not be taken too seriously.

<sup>&</sup>quot;im 'you' is topicalized with some regularity and almost always precedes a question word in Hopi, as in im him masciwa (you how be; called) 'What is your name?'. The notions 'vocative' and 'topic' are closely related; note that Steve is ambiguous between the two in Steve, I like him.

Affirmative and emphatic elements in UA present a complex picture both synchronically and dischronically. A number of different proto elements are evidently involved, and they are intimately related to similar elements having modal or aspectual value or serving as conjunctions. Information is fragmentary, and I have not undertaken a thorough investigation, so the following comments are highly tentative, even speculative.

For 'yes', we can probably reconstruct \*ihā, optionally elaborated by the affirmative clitic \*=k\psi\_a, which can yield wa by lenition of k\psi. This reconstruction will account for most of the cognates in Miller's three separate sets 479-481 (UA-M-CS-65) through reasonable phonological developments. Likely reflexes include NP aha, M hihi!. SH haa, SP ii', TU haa, Kitanemuk\* hau (< \*ha-w(a)), CA haa/he/heehe', CU has(hab)/hoo (< \*ha-w</br>
\*Ma-w(a)), L ohoo, P hau'u, NT ihi, TO hii, Pima Bajo\*\* ha(b)u, TA okwa AFF, Opata\*\*\* hewe, HU hu (< \*ho < \*ha-w(a)), Fipil\*\*\*\* eeh. Other possible reflexes could be added.</td>

The element \*=kWa of \*ihá=kWa is one of at least three affirmative or emphatic particles or clitics that can apparently be reconstructed; their precise semantic values and ranges of uses are open to further study. If any difference can be suggested at present, it is that \*te may have been a general emphatic, thus lending itself to a variety of uses, while \*kWa and \*pa were both affirmative and emphatic. Besides the forms meaning 'yes' cited above, elements possibly showing \*kWa include SH me"ku AFF, SR vari' AFF, Kitanemuk naw NEG, CA =ku EMPH, CA -qawa NEG, Y =va EMPH, HU takWee 'really', HU =tikaaku EMPH, Isthmus Nahuat wa' EMPH, as well as others. Forms showing \*pa in an emphatic or assertive use include SP uupa 'yes', CU qay=pa 'no indeed', P we VOL/AFF, NT =ava EMPH/AFF, TA pa/ba EMPH/COMPL, and possibly HU pi-ASSR.

An emphatic \*ta could be justified on the basis of negation alone, considered below. Apart from that, however, we find such likely reflexes as M =tai AFF, H ta'a 'okay', H taa' 'now/let's go!', CA ta' FMPH, CU =t/ta' FMPH, L ta'/taq EMPH, TA ta NEG, \*\*\*\*\*\* A tlas AFF/EXHRT, A intlas 'if'. Some examples may help show how this and similar elements shade off into the domains of modality and conjunctions.

- (M) (9) qatu'u=tai=po'o mahu toqo"qwa 'But that isn't a rattlesnake.'

  NEG=AFF=but DEM rattlesnake (M-L-G-232)
- (CA) (10) čem ta' kil'e čem-hiči-'i 'We didn't go, however.' (CA-H-BSK-24)
  we EMPH NEG we-go-PAST
- (L) (11) giyermo huu'uni-ka-t qay ta' xwaan 'Bill is a teacher, but not PN teach-AG-ABS NEG EMPH PN John,' (CUP-J-SC-105)

<sup>\*</sup>Kitanemuk is a dialect of Serrano.

<sup>\*\*</sup>Pima Bajo is a Pimic language.

<sup>\*\*\*</sup>Opata belongs to the Taracahitic subfamily. Vowel harmonization is involved here and in other reflexes.

<sup>\*\*\*\*</sup>Pipil is a somewhat divergent variety of Aztec.

<sup>\*\*\*\*\*</sup>This particle received its negative value through its use as emphatic clitic in various negative expressions.

- (A) (12) tlas, šo-k-on-miti in pa'-tli 'Drink up the medicine.'

  AFF IMP-it-away-drink ART medicine-ABS (A-G-L-95)
- (A) (13) tlam ni-k-i'ta 'Let me see.' (A-M-IN)
  EXH3T I-it-see

Negation in UA sentences is typically marked by a first- or secondposition element, normally the same as the word for 'no', though sometimes there are differences, \*kg is easily reconstructed as the basic negative morpheme, but the evolution of this and sequences containing it poses interesting problems. Many daughters evidence the elaboration of \*ka to \*ka-y, and of this to \*ka-y-ta; Munro (SHN-M-MN) reconstructs this for NUA, equating \*y (or \*i) with a nominalizer and \*ta with the absolutive suffix (it would actually have to be absolutive plus accusative, since the absolutive by itself reconstructs to #-ti (UA-L-SAP)). Actually, cases of this sequence which attest to a as the final vowel are found in both branches of the family (e.g. TU hasings, Mayo" kaits, Opata ke'eta 'no'), while the other forms, as Munro notes, suggest other vowels. The most likely reconstruction, then, is both \*ka NEC and \*ka-y for both branches of the family and for P-UA; instead of a neminalizer, I would suggest that "-y represents the verb "ya' 'be', to which "ka attached for stronger negation (somewhat like It is not the case that ... ). The emphatic \*=ta was but one of various elements that could fur her be attached to either \*ka or \*ka-y; \*=Ba/=si and \*=tu/=ti are among the shapes suggested by various languages. The examples below exemplify simple negation of the standard UA type.

- (TU) (14) an=bum=nin has alwaw-ina-t 'Aren't you PL talking to me?'
  Q you=me NEG talk-APPLIC-PRES (TU-V-G-139)
  PL
- (L) (15) qay ya'as qay aamo-q 'No, the man isn't hunting.' (L-H-I-22) no man NEG hunt-INS
- (P) (16) pi c=d makai 'He was not a shaman.' (P-M-LPA-45)
  NEG B=be shaman
- (Y) (17) itepo kaa ba'a-m he-he'e 'I don't drink water.' (Y-F-YP-15)
  I MEG water-PL RDP-drink
- (PO) (18) (nen) as n-wi 'I'm not going.' (PO-B-DMP-25, 27)
  I NEG I-go
- (A) (19) k=a'moo ni-tlaal-e' 'I am indeed not a land-owner.' (A-G-L-82)
  A'F=NEG I-land-POSSR

The syntux of negation in UA has not yet received the attention it might. As a first- or second-position element, it has the potential to function as a pivot for topicalization:

<sup>\*</sup>Mayo and Yacui are closely related dialects.

(NP) (20) u-su naana gai nodikwa-ga'yu 'That man is not married.' that-NOM man NEG wife-have (NP-N-HG-228)

In Hopi, the negative qa can be displaced from its neutral, pre-predicate position and precede directly the focused constituent, that which receives the force of negation.

- (H) (21) tiyo kiiyi-t qa wehekna 'The boy didn't spill the water.'
  boy water-ACC NEG spill (H-L-EN)
- (H) (22) tiyo qa kiiyi-t wehekna 'The boy didn't spill the water.'
  boy NEG water-ACC spill (H-L-EN)
- (H) (23) qa tiyo k44yi-t wehekna 'The boy didn't spill the water.'

  NEC boy water-ACC spill (H-L-EN)

Some languages have more than one negative marker. Hopi, for instance, uses so'on in certain modal contexts and nasta in negative possessive sentences, in addition to the regular qs. Kawaiisu uses kedu (the UA \*ka form) in subordinate clauses, but in main clauses the negative marker is yuwaati, from \*yi-waa-ti (be-NEG-PRTC) 'not being' (K-M-FNS). Sentences marked with yuwaati have the peculiarity of apparently being nominalized in form, e.g. the subject is marked accusative and the verb takes a series of endings characteristic of subordinate clauses.

(K) (24) yuwaati ta'nipuzi-a pikee-keeneeneena momo'o-na
NEG man-ACC see-PAST woman-ACC
3P AN
3P AN

'The man didn't see the woman.' (K-M-FNS-308)

Special negative imperative forms are found, like Luiseno tussu;

(L) (25) tussu heelax 'Don't sing.' (L-H-I-184)
NEG sing
IMP

A negative verb suffix may co-occur with the negative particle in Southern Painte:

(SP) (26) ni ka kati-nwa'a 'I was absent,' (SP-S-G-252)
T NEG sit-NEG

There are traces of this in other Numic languages, and "ma might be reconstructed at some level to account for SP -nua'ai, the was of Kawaiisu yuwaati, the na of Hopi nasta, and the basic negative marker mai of Northern Tepehuan, among others. How widespread these various syntactic phenomena are, and the details of the synchronic and diachronic pictures, remain to be determined.

UA languages typically have one or several quotative morphemes that are usually particles or clitics. Their position in a sentence tends to be less fixed than that of other elements, e.g. negation, and they participate in a variety of interesting constructions (see UA-M-SQP for informative

preliminary discussion). Here we will merely cite some typical examples. Note in particular the interaction between quotatives and complement clause constructions involving verbs of saying, or sometimes (significantly) the lack of suc), a verb.

- (SP) (27) mara="su=ya' ya'ai-paa"nia 'He will die, they say.' DEN=NOM=QUOT die-FUT (SP-S-G-96)
- (TU) (28) pin=kič ii-mi 'Then, it is said, he went,' (TU-V-G-171) then=QUOT RDP-go PERF
- (SR) (29)  $k^{\mu}$  m = [huke-t-i]migana-ga-m] qii=kWin QUET deer-ABS-ACC kill-gonna-PL say=QUOT 'H: said they were gonna kill a deer.' (SR-H-D)
- (L) (30) (wuhaal=up ya-qaa) wunaal=kun moya-q\* 'She says she is tired.' she=she say-TNS she=QUOT be-TNS (L-M-PC) tired
- (Y) (31) in kuna 'My husband save it's going to 8i vuk-ne-tia my husband much rain-FUT-QUOT rain a lot. (Y-L-S-105)
- (HU) (32) merikái=cá=niu sewi-tá n-ee-ku-yeisáa-ni=waniu well=EMPH=QUOT one=NOM NARR-away-back-travel-NARR=QUOT and forth 'Vell, one person made a trip in and cut.' (HU-G-S-76)
- (A) (33) m-> 'toa y=in aaškaan tee-tepe cakWal-li REPL-say AFF=ART now RDP-mountain pyramid-ABS

'It is said, indeed, now the mountains are pyramids.' (A-G-L-132)

Modal UA languages typically have a wide array of particles, clitics, and affixes to mark a variety of modal notions, such as 'optative', 'exhortative', 'dubitative', 'potentive', 'impotentive' (see especially P-H-P and H-VV-H), 'conditional', 'evidential', 'interrogative', 'imperative', and so on. Adequate synch onic descriptions of these elements is definitely the exception rather than the rule, and the diachronic picture remains cloudy despite important beginnings by Steele (UA-S-FIP, UA-S-PI, UA-S-ACR), who has posited initial position within the auxiliary sequence as the basic modality position, attempted the reconstruction of certain modal elements. and explored the relation among modality, aspect, polarity concepts, and conjunction. Here I will attempt no more than to illustrate by selected examples the typical range of semantic values of UA modal particles and clitics.

<sup>\*</sup>See UA-LM-PM and L-D-PG-58f. for discussion of examples such as this,

- (M) (34) haqehe=wa'a mahu 'Who is that?' (M-L-G-380)
- (M) (35) poi"poi="sa"q"a i-kiya 'Poipoi ought to give it to me.'/'Would PN=OPTV me-give that Poipoi would give it to me.'
  (M-L-G-389)
- (SH) (36) ni nuha kati-hi-nto'i 'I might/would have sat (but didn't).'

  I TRR sit-definitely-FUT (SH-MB-LC-15.26)
- (SH) (37) ni kia ka"ti 'I think I'm sitting,' (SH-MB-LC-15,25)
  I DUB sit
  DUR
- (H) (38) kir monwi nima 'The chief went home, I gather.' (H-W-VC-283)
  INFR chief go
  home
- (H) (39) [as nim-e'] so'on qa miina-t tiwa-ni
  IMPOT go-COND NEG NEG river-ACC see-FUT
  home must
  'If he had gone home, he would have seen the river.' (H-W-VC-285)
- (SR) (40) k 4: n k a 'Could I est it?' (SR-H-G-20)
  POT=I est
- (SR) (41) na'=7imi xal'a' 'Let's tickle them.' (SR-H-G-188)

  EXHRT=we tickle

  them
- (L) (42) čaam=xu=š=po=k\*a qay se'-se'i=ma noot-i
  we=COND=we=FUT=POT NEG RDF-choose-DUR chief-ACC
  'We shouldn't have chosen a chief.' (L-L-FN)
- (P) (43) čuuwi a=n=t čim gatwi 'I tried to shoot the jackrabbit.'
  jackrabbit B=I=PERF IMPOT shoot (P-H-P-208)
  PERF
- (P) (44) čikpan o=ki higai 'He is evidently working.' (P-SS-D-120) work B=EV he
- (P) (45) huan a=t himho o a čikp 'John has to work.' (P-KM-MRME-87)
  PN B=PERF Work
  must PERF
- (HU) (46) sike mii-ki yia-nee-ni-kee tima 'Would that he might do it.'
  that-SG do-go-FUT-IRR (HU-G-S-61)
- (PO) (47) as wel n-o-kcs-n 'I can't get up.' (PO-B-DMP-27) NEG can I-REFL-get-SBJNCT

(A) (48) maa waal-kalaki 'Come in.' (A-G-L-142)
EXHRT come-enter

# Pronominal

As subjects, objects, or possessors, pronominal elements in UA range in status from fully independent words, to independent particles, to clitics, to affixes. Independent pronouns and affixes will be dealt with elsewhere, but it is important to note that there are no clear dividing lines separating the types. It was noted above (BASIC SENTENCE STRUCTURE, Word Order) that independent subject pronouns show a tendency to gravitate to second position and become semi-fixed, particle- or clitic-like entities. Some of the southern UA languages have alternate series of independent pronouns, some more elaborated and independent and others shorter and more clitic-like; in Classical Nahuatl, for instance, ne'wastl 'I' had the shorter variants ne'was and ne' similarly for the other persons). The line between clitics and affixes, or between particles and clitics, can be similarly nebulous.

Clitic protouns most commonly designate the subject and occur in a clitic or auxiliary group occurring in second position in the sentence. Previous examples in this section have illustrated this abundantly for Tubatulabal, Serrano, Luiseno, and Papago; other languages with subject clitics include Southern Paiute, Kawaiisu, Cupeno, Northern Tepehuan, Tarahumara, Yaqui, and Cora. While subject clitics can clearly be reconstructed for P-UA, the situation is much less clear in regard to object clitics, which are restricted to Southern Numic, Tubatulabal, Serrano, and possibly Yaqui. Non-affixal possessor pronouns which precede the possessed noun are said to be at least weakly proclitic to the noun in such languages as Yaqui (see (31) above) and Shoshoni. Possessor pronouns are enclitics on the possessed noun in both Southern Numic and Tubatulabal: this definitely represents an innovation. In Southern Paiute the possessor clitics are the same as the object clitics, but Tubatulabal has special possessor clitics. The examples below illustrate some of these pronominal clitics; cf. also (5), (14), (24), (31), (40)-(43),

- (SP) (49) un-a="ca=ana=pi kwii 'He took his own arrow.'
  arrow-ACC=PAST=he=REFL take (SP-S-G-197)
  POSSR
- (SP) (50) p."ka-nki-qu-"pa=aqa\*"m'i=ni 'He will kill you for me.' kill-BEN-PNCT-FUT\*he=you⇒ne (SP-E-C-198)
- (TU) (51) hiš=kila'an=din alaaw-ina-t 'We are not talking to you.'

  N3G=we=you talk-APPLIC-PRES (TU-V-G-84)

  DL ACC

  EXCL
- (TU) (52) šoo'oyi=n alaaw-ina-t=ni 'His wife is talking to me.' wife=his talk-APPLIC-PRES=me (TU-V-G-137)
- (TA) (53) ko'-mea⇒ni 'I will eat.' (TA-H-TE-ix) eat-FUT⇒I

(Y) (5h) ien=ne ini-ka's enčim=ne etehoroa-bae itom pasialoa-ka-po betana now=I this-ACC you=I talk-DESID our travel-PERF-in about ACC

'Now I want to tell you about our traveling.' (Y-L-S-155)

Tense/Aspect

Farticles serving to specify tense or aspect are probably to be found in all UA languages. Clitics with this function are more limited, but some tense/aspect marking can probably be reconstructed for the P-UA clitic group. Three of the subfamilies which best preserve the clitic group (Southern Numic, Takic, and Pimic) retain such marking, while in Tubatulabal it is suggestive that a set of fully elaborated suxiliary groups with modal value are mutually exclusive with final-position verb suffixes and with perfective reduplication, which include the basic tense/aspect markings of the language. Thus the bare stem occurs in examples like (55).

(TU) (55) tana=ha=c=tipi=dii tiika-n 'Would he were feeding them.'

COND=night=he=them=also eat-CAUS (TU-V-G-128)

Previous examples in this section of particles and clitics marking tense/aspect are found in (1), (2), (5), (6), (42), (45), and (49). A few further examples follow.

- (TU) (56) meta ii-mi hanii-p 'They already left for home.'
  already RDP-go house-to (TU-B-IN)
  PERF
- (SR) (57) yui=vi=' 'It snowed.' (SR-H-G-142)
  snow=it=PAST
- (CA) (58) iv'ax mu hiw-qal 'He is still alive today.'
  today still live-DUR (CA-H-K-53)
- (CU) (59) tukmay=na=pa hasax 'Tomorrow I'll go.' (CUP-J-SC-68) tomorrow=I=UNR go
- (CU) (60) ne'=op mi-no-puyni-qal 'I was feeding them.' (CUP-J-SC-76)

  I=R them-I-feed-PAST

  DUR
- (NT) (61) kaši=š koi 'Did he already go to sleep?' (NT-B-T-73) already=Q sleep PERF
- (TA) (62) ku ne gu me'te-ma 'I'll return to splitting firewood.' again I wood split-FUT (TA-B-G-325)
- (A) (63) kwiš ok waal-la-mati 'Will they still perhaps come to perhaps yet come-UNSPEC-know know?' (A-G-L-156)

Clitic Constructions

Steele (e.g. UA-8-PI, UA-8-ACR) has plausibly reconstructed for P-UA a clitic/auxil:ary construction that occurred in either first or second position in a :entence. This sequence was structured, with at least three basic positions being recognized: the first position was modal, the second pronominal (for subject agreement), and the third aspectual. Naturally the daughter languages have modified this system in extensive and divergent ways. The modifications touch on the members of the auxiliary group, its internal composition, its position, and the status of all or part of the group as indep-maent, clitic, or affixal.

However, mough languages retain structured clitic sequences bearing enough of a resemblance to the hypothesized one that a reconstruction roughly along those lines seems justified. In addition to previous examples like (5) for Tubatulabal and (42) for Luiseno, Serrano and Papago sentences like the following appear to reflect quite well the basic structure of the proto auxiliary sequence.

- (SR) (64) t xa=vi=' magmc 'He must have heard it.' (SR-H-G-23)
- (P) (65) n=a=p=t am wo hii čukeon-wui
  Q=B=you=PERF there FUT go Tucson-to
  PERF
  'Are you going to Tucson?' (P-SS-D-147)

Other UA languages range from Southern Paiute, with an elaborate clitic structure which has however been extensively modified in various ways, to languages like Hopi, which apparently has none at all to speak of.

# BE/HAVE/DO

Means of expressing 'be', 'have', and 'do' merit special attention for several reasons. A UA language will often have a surprisingly wide variety of means of expressing these or related notions, 'be' in particular. The forms shift and overlap from language to language and from category to category, making clear-cut reconstruction exceedingly difficult. Finally, these notions are of central importance for the understanding of synchronic and diachronic syntactic phenomena. Verbs in the semantic range 'be'/'have'/'do' may be slopted for use as grammatical markers; they often have distinct syntactic properties and define special sentence types; and sometimes certain syntactic constructions, rather than overt predicates, are used to express these notions.

 $\mathbf{BE}$ 

Several basic uses of 'be' should be distinguished; unfortunately information is not always available as to which of these uses a given form can or cannot be put to. 'Be' can occur with a nominal subject but no complement, giving an existential sentence. If it has a complement, this may be of several different types: nominal, adjectival, locative, or adverbial. 'The following sentences illustrate these respective possibilities.

- (SR) (1) haiini-'a-c kwana-wa-' qac 'There was a hunter.' hunt-AG-ABS QUOT=he=PAST be (SR-H-G-50)
- (TA) (2) šuumu=ca hu 'Is it corn?' (TA-B-G-519)
  corn=Q be
- (PO) (3) ina neke-t ket manidu 'This meat is stale.' (PO-B-DMP-26) this meat-ABS be stale
- (Y) (4) im ačai ho'a-po kate-k 'My father is home.' (Y-L-TG-20) my father house-in be-PERF
- (SH) (5) toya-pi i-wai naa-"ka 'The mountain was like this.'
  mountain-ABS this-like be-RSLTV (SH-M-IN)

The most easily reconstructed form for 'be' in UA is zero, which occurs across the family with nominal, adjectival, and locative complements.

- (SH) (6) esi ha kwinaa hi"too 'Is this bird a meadowlark?'
  DEM Q bird meadowlark (SH-MB-LC-3.3)
- (K) (7) sina'asi=ni 'I am a soldier.' (K-Z-D) soldier=I
- (H) (8) i-moosa qööca 'My cat is white.' my-cat white
- (Y) (9) em usi hamut si tutu'uli 'Your daughter is very pretty,' your child woman very pretty (Y-L-S-15)
- (NP) (10) hanu u-su 'Where is he?' (NP-L-M) where that-NOM
- (SH) (11) hi"ni tipo-pa 'What is on the table?' (SH-M-IN) what table-on

For location, a language may favor a posture verb such as 'sit', 'stand', or 'lie' over a neutral verb such as 'be':

(P) (12) aani o an wo'o g n-'o'ohon miisa daam I B there lie ART my-book table on 'My book is lying on the table.' (P-L-FN)

Two posture verbs, "kati 'sit' and "wili 'stand', are easily reconstructed for P-UA and have assumed a variety of roles, as predicates and affixes, in the daughter languages. The former is illustrated in (1), (3), (4), and (13), and the latter in (14).

(TU) (13) iš-t hali-t 'Coyote is living,' (TU-V-G-122)
coyote-ABS live-PRES

(TU) (14) Sui-1 wini-t tugumba-1-aa-p 'The stars are in the sky,' star-ABS stand-PRES sky-ABS-ACC-in (TU-V-G-122)

\*ni can also be reconstructed, possibly with a variety of alternative prefixal elements, but its uses gravitate toward 'do' on the whole,

(TA) (15) ga'ra=ca nii-ma 'Will it be okay?' (TA-B-G-306)

There is good evidence for reconstructing "ti, "ka, and "yi for P-UA or pre-P-UA (cf. UA-L-NA), with "ti being the most archaic of these and "yi the newest. While remnants of each of these can be found still functioning as a main verb, as in the examples that follow, they are best attested in such grammaticized functions as derivational suffixes, tense/aspect suffixes, portions of historically complex stems (e.g. "kati 'sit'), markers of polerity and modality, participial endings, and so on.

- (TA) (16) nehe bire gao oši-mea re-ma 'I'm going to paint a horse.'

  I one horse paint-FUT be-FUT (TA-B-G-500)
- (TA) (17) tabire mu řa'ica-ti re 'You don't have to talk.' (TA-B-G-494)
  NEG you talk-like be
- (TA) (18) & keme k-e 'Also it was black.' (TA-B-M-83)
  a.so black be-PAST
  DUR
- (A) (19) nisaan ti-ka' 'You are here.' (A-DA-FC6-127) here you-be
- (A) (20) te'wast1 ti-ye-s 'You will be.' (A-G-L-131) you you-be-FUT

Besides serving as a main verb in the roles considered above, 'be' shows up in a variety of other guises. There may be special presentative forms:

- (CR) (21) ye' na-kwi 'Here I am,' (CR-P-G-56) here I-PRSNTV
- (A) (22) it-ka' iiwaan ok sen tlaman-tli 'And here is yet another thing.' here-be and yet one thing-ABS (A-G-L-147)

There may be special negative forms for existential or other 'be' sentences,

- (L) (23) sinava-1 pu-maa-ni pu-yaava-qala 'because she has no money'
  money-ABS ts-hand-from its-be-while (L-D-PG-288)
  because absent
- (HU) (24) mawaiki paspas 'There are no tortillas.' (HU-G-S-51) not tortilla

(PO) (25) te ayago mo-ye 'Isn't your mother (here)?' (PO-B-DMP-24)
Q not your-mother
be

'Be' may be marked through a derivational suffix, which derives a verb from members of some other class, as in Tarahumara ono-ru 'be a father' and rosa-re' be white' (TA-B-G-213, 208). A certain suffix may be required with adjectives in predicative but not attributive use, as in some of the Numic and Pimic languages; it is natural to gloss such a suffix 'be'.\*

- (SH) (26) su-ti tu"ku caa-"'e 'That meat is good,' (SH-D-PMS-133)
  DEM-NOM meat good-be
- (P) (27) gi'i-j o g do'ag 'The mountain is big.' (P-L-PN) big-be B ART mountain
- (P) (28) gi'i wud u'uhig 'They are big birds.' (P-CH-SR-182) big be birds

Other devices, not related to 'be', may of course be required when a non-verb is used as predicate, for instance the use in Aztec of subject-marking prefixes normally occurring on verbs:

(A) (29) ne'waatl ni-tlaaka-tl 'I am a man.'
I I-man-ABS

The different forms for 'be' may participate in a variety of special constructions. It has been mentioned that embedding a clause to 'be' renders it emphatic; hence the tendency for emphatic or affirmative particles to derive from 'be' (cf. A-S-CEM). A special case of this emphatic construction is the cleft-sentence construction considered earlier, where the emphasis is directed to a focused nominal (BASIC SENTENCE STRUCTURE, Focus). Besides emphasis, embedding to 'be' may signal aspect or modality, possibly in conjunction with other markings. The Tarahumara construction illustrated in (30), for instance, may simply be emphatic or even neutral semantically, but as a development of this type of 'auxiliary' construction, the use of 'be' with the 'past gerund' ending is said to indicate necessity, as in (31).

(TA) (30) enai muku-k-ame nii-re 'Here he died.' (TA-B-G-474) here die-PAST-PRTC be-PAST

<sup>\*</sup>From the form of this suffix, 'be' is certainly appropriate. -k and -1 in Papago derive regularly from \*ka 'be' and \*y' 'be', for instance.

Papago -'i, Shoshoni -'e, and Northern Paiute -'yu (\*-'V-yi/u) suggest \*'V 'be' for a stage of pre-P-UA antedating that of \*ti, \*ka, and \*yi. There are various other indications in favor of such a reconstruction, e.g. Hopi pausal forms ending in -'V, which were probably originally emphatic; emphasis is often marked by embedding a clause to 'be' (cf. the discussion of the negative \*kayta under PARTICLES AND CLITICS, Polarity).

(TA) (31) piri ce ne ora-sa re 'What do I have to do?' (TA-B-C-492) what then I do-PAST be

GER

In Luiseno, clauses embedded to 'be' and marked with  $-\underline{vo}$ , indicating realization (i.e. present or past), have the value of a present perfect; when marked with  $-\underline{pi}$ , indicating non-realization, they have the value of necessity.\*

- (L) (32) | čaam=up čam-'aamo-vo] miy-q 'We have hunted.'
  Wesit our-hunt-R be-TMS
- (L) (33) | Caam=up Cam-'aamo-pi] miy-q 'We must hunt.'
  we=it our-hunt-UNR be-TNS

Finally, 'be' is often used in possessive locutions (literally 'My N is', which is equivalent to 'I have N'):

- (L) (34) nos=up no-ki miyx-uk 'I used to have a house.' (L-L-FN)
  [=it my-house be-USIT ('My house used to be.')
- (K) (35) nuwaat kahni=ni 'I don't have a house.' (K-M-SPO-13)
  (EG house=my ('My house isn't.')

# HAVE

A varie; y of types of locutions can be used to express possession in languages generally and in UA (of. UA-L-SRLR). The existential type with 'be', illustrated in (34) and (35), is common in UA and can be reconstructed at least for P-NUA. A second type, with a locative expression used to indicate possession, is not commonly found in UA but has been attested;

(CA) (36) i' qiči-l' ne'i-y ni-yik 'This money belongs to me.'
this money-ABS me-ACC me-to (CA-H-K-50)

The mos: common way to express possession in UA involves a predicate roughly meaning 'have', though there is of course considerable variation in the precise semantic value of the predicate as well as in its manifestation. The 'have' predicate may be an overt main verb:

- (CA) (37) hani ne' qiči-ly-i pe-n-yawiška 'I wish I had money.'

  OPTV I money-ABS-ACC it-I-have (CA-H-BSK-19)
- (Y) (38) itepo gwa-ka kari-ta attea 'We own that house.'

  re that-ACC house-ACC own (Y-L-TG-182)
- (HU) (39) ##r## ne-p-ee-ssiya 'I have an arrow.' (HU-G-S-19) arrow I-ASSR-away-have

<sup>\*</sup>The clitic \*up belongs to the main clause (it occurs after the first word in the sentence, which happens to be inside the subordinate clause) and agrees with its subject, which is the embedded clause.

(PO) (40) ampa as n-ko-bia tumin 'because I don't have money' because NEG I-it-have money (PO-B-DMP-24)

A variant of this construction is the somewhat redundant 'I have my N':

- (PO) (41) kiskom ti-bia mo-b'l-u 'How many children do you have?' how you-have your-child-POSSD (PO-B-DMP-29) many
- (L) (42) čsam=čs=po čsm-tukmay-i sy-ma-an 'We will have a basket.'

  we=we=FUT our-basket-ACC have=DUR-FUT (L-L-FN)

The choice of the 'have' verb may depend on the nature of the possessed object, as in Papago, where soign is used for the possession of animals.

- (P) (43) soiga o g panco g wisilo 'Pancho has a calf.' (P-SS-D-119) have BART PN ART calf
- (P) (44) iniga og pancog jiwid 'Pancho has land.' (P-SS-D-119)

Often 'have' is expressed by a derivational suffix rather than a main verb; \*-ka or \*-kai can possibly be reconstructed in this role (also \*-wa).

- (SP) (45) mopi-"kai=aga 'He has a nose,' (SP-S-G-133) nose-have=he
- (H) (46) pam nahi-'ta 'He has medicine.'

Finally, 'have' is sometimes expressed by zero.

- (P) (47) pi o ha kii g pančo 'Pancho doesn't have a house.'
  NEG B NEG house ART PN (P-SS-D-128)
- (Y) (48) inepo kari-ne 'I will have a house.' (Y-L-S-44)
  I house-FUT

The semantic domain of 'do' includes such related notions as 'happen', 'make', 'build', 'act (like)', 'become', etc. 'Do' is not always clearly distinct from 'be' in UA in terms of either form or semantic range."

'Do' can of course be expressed by independent main verbs. Note that

'do' in particular tends to incorporate a demonstrative or question word in the northern languages.

<sup>\*</sup>For discussion of the relation between 'be' and 'do', see Ronald W. Langacker, 'Functional Stratigraphy', in Robin E. Grossman et al. (eds.), Papers from the Parasession on Functionalism, p. 351-397, Chicago, Chicago Linguistic Society, 1975.

- (SP) (49) aka-"ni-paa=na=ni 'How shall I act with him?' (SP-S-G-210) how-do-FUT=him=I
- (H) (50) pam pan-ti 'He did that.'
- (P) (51) ri a=n has n-jun-him 'I wasn't doing anything.'
  NEG B=I something REFL-do-DUR (P-L-FN)
- (CR) (52) ha'ine sa-u-ruure 'What are you doing to each other?'
  what you-REFL-do (CR-MM-CE-x)
  PL
- (PO) (53) te ti-čua 'What are you doing?' (PO-B-DMP-36) what you-do

Among the derivational suffixes in this domain, likely reconstructions are "-tu 'become' and "-ta 'make', but a great deal of shifting has occurred in the daughter languages, producing a complex picture needing closer study.

- (SH) (54) tosa-tua-"nu 'It turned white.' (SH-M-IN)
  white-become-COMPL
- (SP) (55) mia"p'i-ci-a wana-tu-"pikai 'made a little net'
  little-ABS-ACC net-make-REM (SP-S-G-249)
  PAST
- (TU) (56) kaazu-l-uu'u-t 'He is making clay pots.' (TU-V-G-130)
  clay-ABS-make-PRES
  pot
- (CU) (57) memyu-lu 'speak English' (CU-HN-M-128) white-act man like
- (P) (58) tuk kii-t 'build a tall building' (P-L-FN) ligh house-make
- (TO) (59) ni-hoon-ta' 'I will marry.' (TO-M-PL-340)
- (CR) (60) nau-ta 'make wine' (CR-P-G-45) wine-make
- (A) (61) ni-tleaks-ti 'I am born,' (A-G-L-46) :-man-become

# NON-DISTINCT ARGUMENT PHENOMENA

The synchronic and diachronic analysis of non-distinct argument phenomena in UA is discussed reasonably fully in UA-L-NA (see also UA-LM-PM and NP-AAL-NSO). Here we will be content with a very brief summary.

The 'arguments' of a predicate are its nominal complements, most basically its subject and direct object. When the subject and direct object of a predicate are coreferential, the sentence is reflexive or reciprocal. When a subject or direct object is semantically implied but is not identified by reference or lexical content, it is said to be 'unspecified'; this is the case, for instance, with the (underlying) subject of a passive or impersonal sentence. The subject and object are said to be 'non-distinct' when either they are coreferential or one of them is unspecified; under either circumstance they do not contrast, and only one lexical/referential identification is given in the sentence despite there being two semantic arguments. Coreference and unspecificity are thus regarded as special cases of the more general notion of non-distinctness. This conception explains why reflexive markings are so often extended to passive sense, as well as various other syntactic changes in the history of UA (see the references cited above).

# Unspecified Arguments

P-UA had three verb prefixes whose explicit function was to indicate unspecificity of the subject or object. \*ta- indicated an unspecified subject, \*ti- an unspecified object, and \*ni- an unspecified human subject presupposed to be coreferential to the object (also unspecified). These examples illustrate these prefixes in their original function:

- (SH) (1) ta-kahni-pai 'One has a house.' (SH-M-IN)
  UNSPEC-house-have
  SURJ
- (SH) (2) tii-poo-"nu 'Ne wrote.' (SH-D-PMS-59)
  UNSPEC-write-COMPL
  ORI
- (A) (3) ne-tlaso'tla-lo 'There is loving of one another.'
  UNSPEC-love-IMPRS (A-R-AM-30)
  COREF

Most daughters have lost one or more of these prefixes, and when retained they have often been modified. Only Shoshoni and Classical Nahuatl retain all three; "ni- has become passive and reflexive in Shoshoni, and in Nahuatl "ti- and "ta- (reflected regularly as tee-" and tla-) have become realigned in function and mark unspecified human and non-human objects respectively through a change dating back to Proto Aztecan.

<sup>\*</sup>The P-UA vowel may have been long in this form, as it is in both Shoshoni and Nahuatl. I did not attempt to ascertain vowel length for the reconstructions in NA-L-NA.

# Reflexive

P-UA had a reciprocal verb prefix \*na- and a paradigm of specifically reflexive verb prefixes: \*na- for IP SG; \*ta- for IP PL; \*i- for 2P SG; and \*mo- for all other persons. The reflexive prefixes have been lost in all the northern languages, and \*na- has generalized to indicate both reflexive and reciprocal in those languages where it has been retained (Numic and Nopi). \*na- RCPR disappeared in all the southern languages (outside of Taracahitic), with the result that the reflexive prefixes have generalized to assume reciprocal and reflexive sense.

- (H) (4) nd' naa-tahota 'I hurt myself.' (H-VV-H-200)
- (H) (5) pama naa-pa'anwa-ya 'They helped each other.' (H-L-EN) they REFL-help-PL
- (A) (6) cn-m-iiš-keca 'He presents himself.' (A-G-L-131)

  \*\*eway-REFL-face-stand present
- (A) (7) li-mo-lwi-'-ke' 'They said it to one another.' (A-G-L-131) :t-REFL-say-PAST-PL

In addition to these verb prefixes, P-UA had two reflexive pronouns: \*a-nak\*ayi, which was reciprocal, and \*pi-nak\*ayi, which was locative and emphatic. (mly greatly modified remnants of these two pronouns survive.

- (SR) (8) ama' pu-nuk qaç4i 'He's all alone.' (SR-C-PC) he him-REFL be
- (TA) (9) tabire tumu anagu čigo-ši 'Don't rob each other.' (TA-B-G-410)

  NEG you RCPR rob-IMP

  PL PL

Innovation, loss, and modification of reflexive pronouns is an exceedingly complex subject in UA grammar that is only partially sketched in UA-L-NA.

# Passive/Impersonal

An 'impersonal' sentence is one with unspecified semantic subject. A 'passive' sentence can be defined as an impersonal sentence in which the underlying object becomes the surface subject. The unity of passive and impersonal constructions is quite apparent in UA, where the same verb suffix is commonly used for both (intransitive) impersonal sentences and (transitive) passive sentences:

- (TU) (10) anan-iiwa-t 'There is crying.' (TU-V-G-99)
- (TU) (11' aašin-iiwa-t 'He is being bathed.' (TU-V-G-99) bathe-IMPRS-PRES

The P-UA passive/impersonal suffix reconstructs as \*-ta-wa, where the first syllatle (apparently optional by P-UA times) can be equated with

- \*ti-'be', and where the second syllable (derived from an abstract nominalizing suffix) had the effect of ablauting the preceding vowel to i.\* Reflexes of this suffix are found scattered throughout UA. The reflexive and reciprocal prefixes, which originally had no passive function, have assumed such function primarily where a general passive inflection has been lost.
  - (SH) (12) ta"mi na-pui-ka 'We are seen,' (SH-D-PMS-111)
    we REFL-see-RSLTV
    INCL

This close relation between passive and reflexive marking is explained if passives are analyzed as having unspecified underlying subjects, as in impersonal sentences, and if coreference and unspecificity are regarded as special cases of non-distinctness. Positing unspecified underlying subjects for passive sentences also explains the marginality of the equivalent to English by-phrases in UA passives; many languages allow no such expressions at all, and others permit them but employ them only infrequently. This is expected if passives with such phrases come from a more complex semantic structure in which the basic passive structure is elaborated by further, optional semantic material.

Other types of constructions with passive or quasi-passive force are not uncommonly found in UA. One of them involves an unspecified subject accompanied by some indication of plurality for this subject:

(H) (13) taaqa-t niina-ya 'The man was killed.' (H-L-EN)

Another involves a copular construction with a nominalized or relativized verb:

(P) (14) hagai siiki o aani wuq n-mi'-a 'That deer was killed by me,' that deer B I be my-kill-NR (P-H-PC)

Passive/impersonal constructions, like the others discussed in this section, have seen many changes and innovations in the daughter languages; see UA-L-NA for further details.

#### QUESTIONS

# Yes/No Questions

Simple questions expecting 'yes' or 'no' answers are often marked only by intonation, as in some dialects of Hopi and in Cahuilla, or left unmarked.

<sup>\*</sup>I would retain this reconstruction, including the first syllable as reflecting 'be', as the most likely P-UA form on the basis of the southern languages and P-UA \*ii 'be' even should the tenuous northern evidence for the first syllable (only the Southern Paiute form was intended as evidence for this) be discounted, as suggested in UA-H-RL.

(CA) (1) et-hiči-qa nawxwa-yka 'Are you going to town?'
you-go-DUR town-to (CA-B-IN)

In general rather little information is available concerning the intonation of interrogative sentences. It does however seem reasonable to reconstruct an unmarked or intonationally marked yes/no question pattern for P-UA, one which coexisted with a pattern employing an interrogative morpheme of some kind.

Most commonly yes/no questions are marked in UA by means of a clitic or particle occurring in first or second position. The interrogative use of this clitic or particle may be a special case of its more general dubitative or modal value. The word for 'what' is another source of question particles, as seen in Yaqui haiss 'what/Q' and Pochutla te 'what/Q'. The other question markers show considerable variety, and there may be several forms in different dialects (as in Hopi) or even in the same dialect (as in Mono, apparently). Sometimes (es in Northern Paiute and Tarahumara) the question marker can occur in either initial or second position, perhaps with a slight difference in form. \*Ta is one recurrent shape for the question marker, and another is s/s/g/c, with the following vowel as variable as the consonant; the former is more common in the northern languages, and the latter in the southern branch, but there is considerable overlap.

- (SP) (2) tan wa=tu'a=ana ato'a 'Is it his tooth?' (SP~S-G-92) tooth=DUB=his be
- (TU) (3) an=bi tika-t 'Are you eating?' (TU-V-G-137)
  Q=you eat-PRES
- (L) (4) cm=su owo's-q 'Are you working?'
  you=Q work-TNS
- (P) (5) r=a=p čikpan 'Are you working?' (P-H-G-165) C=B=you work
- (TA) (6) aca mu we nara-ma 'Will you cry a lot?' (TA-B-G-547)
  DUB you much cry-FUT
- (TA) (7) wa'ru=ca mu boša-re 'Did you eat a lot?' (TA-B-G-44) big=DUB you eat-PAST
- (PO) (8) te as ti-ba se tilan 'Don't you have a chicken?' what NEG you-have one chicken (PC-B-DMP-25)
- (A) (9) FWiš ok wasl-la-mati 'Will they still perhaps come to know?'
  IUB yet come-UNSPEC-know (A-G-L-156)
  OBJ

As one might expect, yes/no questions can be answered just by 'yes' or 'no' or else by this together with a full or partial repetition of the proposition. The Luiseno question in (10), for instance, could be answered positively just by ohoo 'yes', or else by such variants as (11)-(12).

- (L) (10) wunaal=su ya'aš yawmuna tukma-l 'Is the man carrying a that=Q man carry basket-ABS basket?' (L-L-FN)
- (L) (ll) ohoo yawmuna=p (tukma-l) 'Yes, he is carrying (a basket).'
  yes carry=he basket-ABS (L-L-FN)
- (L) (12) ohoo ya'ač=up yawmuna (tukma-1) 'Yes, the man is carrying yes man=he carry basket-ABS (a basket).' (L-L-FN)

Detailed information on responses to questions is generally lacking, however.

Detailed information is also generally lacking on special types of yes/no questions. One such type is the negative yes/no question, illustrated in (8), (13), and (15); at least in Hopi, the nature of positive responses to positive and negative questions can differ, as seen in the contrast between (14) and (15).

- (TU) (13) ana-haa-giluuc hak kim 'May we come?' (TU-V-G-128)
- (H) (14) im tiyo-yta owi ni tiyo-yta you son-have yes I son-have 'Do you have a son?' 'Yes, I have a son.' (H-M-PC)
- (H) (15) im qa mana-yta as'a pay ni' mana-yta you NEG daughter-have yes just I daughter-have 'Don't you have a daughter?' 'Yes, I have a daughter.' (H-M-PC)

A second type is the 'alternative question', which requests the hearer to indicate which of two or more specified alternatives is correct.\*

(L) (16) wunaal=su kari-ka-t man tenal-ka-t 'Is he a musician or a he=Q 'play-AG-ABS or treat-AG-ABS doctor?' (L-L-FN)

What amount to tag questions are sometimes to be found:

- (CA) (17) pa'-pe-em-niffa'-ne'em haa ki'i 'Will they pay for it, or not?' there-it-they-pay-FUT or NEG (CA-F-MV-30)
- (L) (18) awaal=up wa'i-q man=au qay 'The dog is barking, isn't it?' dog=it bark-TNS or=Q NEG (L-L-FN)

(Note that these tag constructions overlap with negative and alternative questions.) Luiseno also has a 'response' question construction marked with the particle ha, which does not otherwise occur:

<sup>\*</sup>Actually, simple yes/no questions may be better regarded as special cases of the more general category of alternative questions, the case that arises when the two alternatives are clauses one of which is the negation of the other. It is an open question how far this analysis can be pushed for yes/no questions marked by dubitative or other modal slements, however.

(L) (19) gayiina=p paa-na nive'-qa ha a-tkwayax chicken=it water-in be-TNS Q its-dead

'The chicken is in the water.' 'Dead?' (L-D-PG-117)

The distribution in the UA family of these and similar constructions remains to be determined, as do the details of their composition and use.

# WH Questions

WH questions are those that employ a question word such as who, what, when, where, etc., words which generally begin with wh in English. A description of these questions requires both an inventory of the question words together with their morphological properties and a characterization of the syntattic properties of the sentences in which they occur.

The WH question words in UA are invariably related in one way or another to the corresponding indefinite pronouns. The relationship may be tenuous, more apparent through internal reconstruction than synchronic description, or it may be virtual or full identity. In Luiseno, for example, hax is used for both 'who' and 'someone', miking for both 'when' and 'someotime', and so on down the list; the identity extends so far as to allow full ambiguity in interrogative sentences such as these:

(L) (20) hax=su owo'a-q 'Who is working?'/'Is someone working?'
who=Q work-TNS

A given WH word may have different forms depending on various factors. Certain question words in Papago have special, shortened forms that occur in clause-initial position.

- (P) (21) su=t hidai i mua g wisilo 'Who killed the calf?'
  and=PERF who PNCT kill ART calf (P-88-D-145)
  PERF
- (P) (22) loo o fiid g ff-'o'ohon-ga 'Who sees my book?'
  who B see ART my-book-POSSD (P-L-FN)

More commonly, the words for 'who' and 'what' are inflected for number or case, as are other nominals.

(SP) (23) i<sup>n</sup>pi-a=ana ti"ka-paa 'What will he eat?' (SP-S-G-209) what-ACC=he eat-FUT

The forms "haka 'who' and "hita 'what' are readily reconstructable for P-UA, but reconstruction of other WH words is considerably more problematic.

UA languages typically require WH words to be preposed to initial position, though there are exceptions like Luiseno, where the WH word can apparently occur in any position (though it shows a tendency to be preposed):

(L) (24) Sammsums oy miča haal-an 'Where shall we look for you?'
we=Q=we you where seek-FUT (L-D-PG-100)
ACC

In those languages where the WH word is preposed, what counts as initial position for this purpose must be carefully defined. If there is an introducer, such as a conjunction, the WH word will normally follow it, as in (21). It may also follow a topicalized nominal, as in (25), or otherwise serve as pivot for topicalization, as in (26).

- (H) (25) ya sawya-m hiiti-y so-swa-nwi 'What do bats eat?'

  O bat-PL what-ACC RDP-eat-HAB (H-EE-HRW-42)
- (SH) (26) osi haka-ti wa'i-"pi 'Who is that woman?'
  DEM who-NOM woman-ABS (SH-MB-LC-6.2)

The tentative reconstruction of the two sequences \*INTR-TOP-AUX-WHW-X and \*INTR-WHW-AUX-X would not be unreasonable.

Some languages, like Luiseno, require in WH questions the question marker that occurs in yes/no questions. Others, like Shoshoni, do not allow the marker in WH questions (hence ha is lacking in (26) -- cf. BASIC SENTENCE STRUCTURE (11)). In still other languages, like Mono, the marker is apparently optional in WH questions.

- (M) (27) haqehe=wa'a ki"ma~t±h± 'Who is coming?' (M-L-G-380) who=Q come-PRTC
- (M) (28) ha"ni'i qatu'u haqe'e a-hawa-tihi 'Why doesn't anyone scold why NEG someone him-scold-PRTC him?' (M-L-G-232)

One factor helping to determine the shape of WH words in certain daughters is the reanalysis of question markers as being part of the WH word when they occur in sentences like (27). In Yaqui, for example, the question clitic =sa was reanalyzed as part of a WH word to form haisa 'what' (which was subsequently adopted as a new yes/no question marker). The segmentability of =sa can still be justified synchronically in some cases on the basis of examples like (29) and (30).

- (Y) (29) (haisa) hakun≍sa sii-ka 'Where did he go?' Q where=Q go-PERF (Y-L-TG-138-139)
- (Y) (30) hakun biča saha-k 'Where did they go?'
  where toward go-PERF (Y-L-S-126)
  PL

What happens when the WH word is part of a larger syntactic constituent? A variety of cases can arise. When the question word belongs to a sub-ordinate clause, it may be extracted and surface in the main clause in the position where question words normally appear.

- (L) (31) mariya=şu hiš ma'ma-q čaam-i [čam-mičaxani]
  PN=Q what want-TNS we-ACC our-do
  ACC
  'What does Mary want us to do?' (L-L-FN)
- (TA) (32) piri mu [ne iči-me-o] mae 'What do you think I will what you I plant-FUT-SUBR think plant?' (TA-B-G-103)

When the WH element is part of a complex word, by taking a postposition or being incorporated in a verb, the entire word may be preposed, or left behind if preposing is not required, but in either event the word will not be broken up (cf. BE/HAVE/DO (49)).

- (P) (33) ku=t hasču-kaj i mua g pančo g wisilo and=PERF what-with PNCT kill ART PN ART calf PERF 'With what did Pancho kill the calf?' (P-88-D-145)
- (H) (34) ±m hin-caki 'What are you doing?' (H-W-TD-178) you how-do

If the WH expression itself consists of more than one word, it may be discontinuous, as when the attraction of subject pronouns to second position causes a pronoun to intervene between the two words:

- (TA) (35) ču mu kipu řari-mea wata 'How many bows will you buy?'

  | you | buy-FUT bow (TA-B-G-43)
  | how many
- (35) also illustrates discontinuity between a WH expression serving as noun modifier and the noun it modifies. (36) shows that discontinuity does not always result in such cases.
  - (SH) (36; haka-n punku isi 'Whose horse is this?' (SH-M-IN) who-GEN horse this

When a question word enters into a pronoun copy construction, either possessive or postpositional, discontinuity between the question word and its copy is common.

- (M) (37) ha"qaa iyoho a-"pu"ku pi"tà-tàhà 'Whose dog is this coming?' who here his-dog arrive-PRTC (M-L-G-107)
  ACC
- (L) (38) hax=gu wunaal po-ki 'Whose house is that?' (L-L-FN) who=Q that his-house
- (L) (39) hax=su om po-'eeš pwebla-yk hati'a-q
  who=Q you him-with town-to go-TNS
  'Who did you go to town with?' (L-L-FN)

#### IMPERATIVES

# Positive Imperatives

Except as discussed below under Modal Imperatives. UA imperative sentences do not take regular markings for tense. Quite commonly the imperative form of a verb is simply the bare stem.

- (M) (1) miya 'Go.' (M-L-G-387) go
- (L) (2) hati'ax 'Go.' (L-H-I-184)

Tenseless forms are also used when there is a special imperative marker. Most commonly such a marker is suffixel, with -'V attested in both northern and southern languages, but a prefixal marking is found at least in Mono, Huichol, and Aztecan.

- (M) (3) nopi-"wee a-'ika(-"na'i) '(You) go into the house.' house-in IMP-enter-EMPH (M-L-G-387)
- (TU) (4) pa'aginaa-hai taatwa-l-a 'Hit the man (after a while).'
  hit-FUT man-ABS-ACC (TU-V-G-114)
  IMP
- (H) (5) co'omti-'i 'Jump.' (H-K-L-98)
- (CA) (6) ne-'-tee-' 'Look at me.' (CA-B-IN)
  me-you-see-IMP
- (P) (7) bihi-ñi 'Get it.' (P-S-PP-32) get-IMP
- (Y) (8) si'ime kari-ta tu'ute-'e 'Clean the whole house.' (Y-L-S-28) all house-ACC clean-IMP
- (HU) (9) ke-n-aa-ti-ye'aa 'Come up here.' (HU-G-S-90)
  IMP-NARR-toward-up-come
- (PO) (10) S-ite na kone-bol 'Look at the boy.' (FO-B-DMP-25) IMP-see ART boy-DIM

As these examples show, reference to the understood subject 'you' is most commonly lacking in positive imperatives: independent subject pronouns and subject clitics are omitted; in Aztecan the imperative prefix ši— occurs in lieu of the otherwise expected subject prefix; with ke— the subject prefix is omitted in the singular in Huichol, and optionally in the plural; also the object-subject prefix combination is omitted in Cahuilla in the unmarked situation, namely where the subject is 'you' and the object

<sup>\*</sup>In Hopi the vowel is a copy of the stem-final vowel; this form of the verb is probably to be equated with the pausal form. The source of -'V is not very clear at present. It is not improbable that it represents reanalysis of the second person singular subject clitic, which would have approximately that shape and would commonly be attached to the verb in imperatives, which are usually verb-initial. Another possibility is that it reflects the primitive verb 'be' referred to earlier (BE/HAVE/DO) and contributed emphasis.

is third person singular.

(CA) (11) paxa-ni-' e-'aš 'Stable your horse,' (CUP-J-SC-50) enter-CAUS-IMP your-pet

Reference to the subject can sometimes be made in positive imperatives. In Mono this is claimed to render the imperative emphatic, and one suspects this is commonly true, but information is not generally available.

- (M) (12) 44 a-hipi 'You drink it!' (M-L-G-388)
  you IMP-drink
  (it?)
- (SP) (13) ipi=' !Drink.' (SP-S-G-235) irink=vou
- (HU) (14) (se-)ke-n-e-u-seiya 'See him PL.' (HU-G-S-28)
  you-IMP-NARR-away-RESTR-see

There may be other means to render an imperative emphatic, in particular by means of a special affix or clitic, as shown in (3) and the following sentences:

- (SP) (15) caa=a"ka 'Sing!' (SP-S-G-236) sing=EMPH
- (H) (16) pam pohko soma-'a-y 'Tie that dog!' (H-W-L-51) that dog tie-IMP-EMPH
- (L) (17) saamsa=ku 'Well buy it then!' (L-D-PG-55) buy=EMPH
- (TO) (18) ši-daaiwa 'Sit down!' (TO-M-PL-345) INTNS-sit

When the subject is plural, this may be marked in a variety of ways, A special plural clitic can be used:

- (M) (19) miya-"na'i="kwaha 'You PL go!' (M-L-G-389) go-EMPH=PL
- (SP) (20) ti"ka="ka=ya 'Eat PL,' (SP-S-G-236)
  eat\_PL=PL

There may be a special plural imperative affix, as in Papago:

Another possibility is for a plural suffix to be added to the imperative singular form:

- (L) (22) hati'ax-am 'Go PL.' (L-H-I-184)
- (A) (23) ši-k-poowa-kaan 'Count it PL.' (A-B-NA)
  IMP-it-count-IMP
  PL.

One peculiarity of positive imperatives, at least in certain northern languages, is that direct objects sometimes lack accusative inflection. This is apparently true of Cahuilla, some dialects of Hopi, and Southern Paiute, as shown in (11), (16), and (24).

(SP) (24) pa"ka-qu=ana satii-ci ana 'Kill the dog.' (SP-S-G-235) kill-PNCT=it dog-ABS ART

This is true in Serrano in the maximally unmarked type of imperative, namely in a positive main clause with second person singular subject and third person singular non-pronominal object.

- (SR) (25) paa' pat paa-t 'Drink the water.' (SR-C-IO-3) drink that water-ABS
- (SR) (26) qai=t pga' pata-i paa-t-i 'Don't drink the water.'

  NEG=DUB drink that-ACC water-ABS-ACC (SR-C-IO-3)

Tubatulabal distinguishes a future imperative, e.g. (4), and a non-future imperative. With the latter, non-pronominal objects lack accusative marking.

(TU) (27) pa'agina-h taatwa-l 'Hit the man,' (TU-V-G-113) hit-IMP man-ABS

# Negative Imperatives

A negative imperative may simply derive by negating a positive imperative, as in (28).

(TA) (28) teri ave-ši 'Don't PL roast it.' (TA-B-G-278)
NEG roast-PL
IMP

More commonly, however, there are syntactic or morphological differences. We have seen in (25)-(26), for example, that polarity can affect accusative marking on accompanying nominals. A special form of negative marking may be used, such as <u>kedu</u> in Kawaiisu, normally restricted to subordinate clauses, or a negative suffix in Southern Paiute that normally occurs on nouns rather than verbs.

(SP) (29) kacu=ni k±'4-a"p'a=ni 'Don't bite me.' (SP-S-G-253) NEG=me bite-NEG=me

There may be a special negative imperative particle:

- (M) (30) mino'o="kWaha nopi-"wee ika-nehe 'Don't PL go in the house.'

  NEG=PL house-in enter-SUBR (M-L-G-389)

  IMP

As some of these examples show, negative imperatives show a higher degree of nominalization or subordination than do positive imperatives.

The most distinctive overall tendency, however, is for negative imperatives to be marked through modal elements, including future tense (which in UA at least is generally regarded as 'potential' or 'unrealized' rather than strictly 'future'). Thus in Hopi, for instance, negative imperatives translate literally as negative future declaratives; Cahuilla uses an exhortative suffix -na or the future -nem in negative imperatives; and in Classical Nahuatl the imperative prefix 11 is used in conjunction with a negative exhortative particle combination.

- (H) (32) in ciro-t qa mi'a-ni 'Don't shoot the bird.'
  you bird-ACC NEG shoot-FUT
- (CA) (33) qawa me-'-tetiyax-nem taxlis-t-em-i 'Don't tell the people.'
  NEG them-you-say-FUT person-ABS-PL-ACC (CUP-J-SC-47)
- (A) (34) maaka'moo ši-čooka-kaan 'Don't PL cry.' (A-M-IN)

  NEC IMP-cry-IMP

  EXHRT PL

# Modal Imperatives

We have seen that modals of various kinds can be used for negative imperatives. However, the use of modal elements for imperatives is not restricted to the negative. A wide variety of modal elements are used in UA for optative, exhortative, or the effective equivalent of simple imperative sentences, and a modal imperative of some kind -- perhaps a range of such imperatives -- must surely be reconstructed for P-UA, though the details swait further investigation. Here I simply cite some representative examples. (See also PARTICLES AND CLITICS, Modal.)

- (SP) (35)  $i^n$ pai=ana ai-paa 'Let him say.' (SP-S-G-268) EXHRT=he say-FUT
- (TU) (36) taatwa-1=ma=c kim 'Let the man come.' (TU-V-G-129)
  man-ABS=EXHRT=he come
- (H) (37) ra' as ama-mam warik-ni 'Let me run with them.'/'I would

  | IMPOT them-with run-FUT like to run with them.' (H-VV-H-198)
- (SR) (38) na' paa' 'Let's drink.' (SR-H-G-188)
  EXHET drink
- (CA) (39) pe-'-temi-na kimu'-l-i 'Shut the door.' (CA-F-MV-32) it-you-shut-EXHRT door-ABS-ACC

- (L) (40) lok=xu=n=pu noo riiku miix-ma 'Would that I were rich.'
  EXCLM=COND=I=FUT I rich be-DUR (L-D-PG-164)
- (Y) (41) yuku-ta ne enči nu-'ii'a 'I (order) that you bring rain.'
  rain-ACC I you bring-SBJNCT (Y-J-I-42)
  ACC
- (A) (42) tlaa ki-kaki-kaan 'Let them hear.' (A-M-IN)
  EXHRT it-hear-IMP
  pt.
- (A) (43) maa ni-nooca-ni 'Let me call,' (A-M-IN)
  EXHRT I-call-SBJNCT
- (A) (44) maaka' ti-miki-kaan 'Let us not die,' (A-M-IN)

  NEG we-die-IMP
  EXHRT PI.

#### NOUN MORPHOLOGY

This section implies a rough division between derivational and inflectional noun morphology, but it is for convenience of presentation and should not be taken very seriously. Such things as case, number, absolutives, possessive morphology, and postpositions will be dealt with in later sections dealing with nominal constituents. Here we are concerned with derivational processes that derive noun stems from other noun stems or members of other grammatical classes.

# N + X = N

Among the derivational suffixes in UA are some that derive nouns from other noun stems. One such class comprises suffixes that might be termed 'affective'; they contribute such notions as 'diminutive', 'sugmentative', 'honorific', and 'pejorative'. Of these 'diminutive' is by far the most pervasive in UA. Pejorative suffixes are quite rare, sugmentative suffixes (related to 'big') are mostly restricted to parts of NUA, and the honorific, restricted to Cora and Aztecan, is a specialization of the diminutive. The basic diminutive suffix reconstructable for P-UA is \*-ci; there is evidence that the full form of this was actually \*-ci-Ma, with the \*-ci of P-UA deriving from an accusative suffix of pre-P-UA and the \*-ma contributing diminutive sense. There is also evidence for reconstructing the diminutive sequence \*-ma-ya-la or something similar. (See UA-L-SAP for these reconstructions.) These may be the only affective suffixes reconstructable as such for P-UA.

- (M) (1) pu"ku-"ki"na 'damn dog' (M-L-G-200) dog-PEJ
- (K) (2) <u>iki-ci</u> 'little hat' (K-Z-D) hat-DIM
- (TU) (3) akam'a-bi=ná'in 'my little grandson' (TU-V-G-154) grandson-DIM=my

- (TU) (4) punzi-bišwi-t-a 'one with big eyes ACC' (TU-V-G-163)
  eye-AUG-ABS-ACC
  POSSR
- (H) (5) mana-wya 'little girl' girl. DIM
- (L) (6) po-k"a'-may 'his daughter's child' (L-KG-SG-79) his-mother's-DIM 'ather
- (L) (7) tuk-vut 'mountain lion' wildcat-AUG
- (TO) (8) og-mri 'godfather' (TO-M-PL-326) father-DIM
- (PO) (9) mo-man-cin 'your godmother' (PO-B-DMP-17) you:-mother-DIM
- (A) (10) siwia-cin-tli 'honorable woman' (A-G-L-55) wom:n-HON-ABS
- (A) (11) čiči-toon 'cur' (A-B-NA)
  dog-PEJ
- (A) (12) ička-pool 'big sheep' (A-A-I-159) sheep-AUG/PEJ

Another set of suffixes deriving nouns from nouns is largely restricted to the southern languages. These are suffixes of 'place', 'abstract', or 'collective', the latter two notions in particular being closely related and sometimes expressed by the same morpheme (also used in Nahuatl for 'inalignable').

- (TO) (13) nav-tam 'place of nopal' (TO-M-FL-326)
- (TA) (14) sete-ina 'sandy place' (TA-B-G-24) send-place
- (Y) (15) ho'a-ra 'town' (Y-J-I-37) hotse-COLL
- (Y) (16) youm-ra 'lumanity' (Y-J-I-28)
  max-ABSTR
- (A) (17) toolteeka-yoo-tl 'the Toltec nation' (A-A-I-333)
  Toltec-COLL-ABS
- (A) (18) thaka-yoo-tl 'humanity' (A-A-I-476)
  ma:-ABSTR-ABS

(A) (19) ii-naka-yoo 'his flesh/body' (A-G-L-133)

Three other kinds of suffixes deriving nouns from nouns in UA are those roughly characterized as 'possessor', 'person from', and 'former/deceased'. It is to be expected that a possessor suffix would derive from a verbalizing 'have' suffix followed by a nominalizer, and there are indications that this is the correct dischronic analysis in UA. The ke of Mono -kee'tu, the optional wa of Tubatulabal -waganan, and the -wa of Nahuatl -wa' can all be related to 'have' suffixes.

- (M) (20) iti-"tu-na qwaci-ke"tu 'one having a long tail' long-PRTC-ACC tail-POSSR (M-L-G-227)
- (TU) (21) yuumuugu-vaaganan 'oak-tree owner' (TU-V-G-163) oak-POSSR
- (A) (22) siwaa-wa' 'married man' (A-B-NA)
  woman-POSSR
- \*-ya is a likely reconstruction for 'person from'.
  - (L) (23) paala-yam 'people from Pala' (L-H-I-123)
    PN-people
    from
  - (TA) (24) ga'o-i 'person from upriver' (TA-B-G-26) upriver-person from
- \*-kwaya-pi can be reconstructed at some level for 'former/deceased', where \*-kwaya is related to forms for 'sick/die' and \*-pi is a perfective participle. A good case can be made that the following all belong to the set:
  - (K) (25) muwa-geepi 'deceased father' (K-Z-D) father-deceased
  - (TU) (26) piyaa-bai'i=n 'his wife's last surviving brother'
    wife's -last=his (TU-V-G-155)
    brother surviving
    kin
  - (SR) (27) -pash-čui'v 'deceased older brother' (SR-H-D) older-deceased brother
  - (P) (28) woog-bad 'former road' (P-S-IN)
    road-former
  - (P) (29) ñ-cogi-bat 'my deceased father' (P-M-LPA-33) my-father-former

# V + X = N

The most important of the UA nominalizing suffixes is probably the active participial suffix \*-ti. It derives nominals referring in one way or another to the subject of the verbal activity.

- (NP) (30) kucu-tika-di 'buffalo eater' (NP-L-M)
  buffalo-eat-PRTC
- (SH) (31) sia-"ti 'plant, growing thing' (SH-D-PMS-91) grow-PRTC
- (CR) (32) nawa-ri 'robber' (CR-P-G-17) steal-NR
- (HU) (33) kuuku-ri 'chile' (HU-G-S-32) hot-NR

Its importance lies not so much in its simple nominalizing use illustrated in (30)-(33), but rather in its complex history and the pervasiveness of this element in many facets of UA grammar throughout the family.

The origin of this participle is the verb "ti 'be' previously discussed (cf. BE/HAVE/DO). From the basic sense 'be' derives the use of "ti as a marker of durative, progressive, or habitual aspect:

(SH) (34) i kati-ti 'You are sitting.' (SH-M-IN)
you sit-PROG

This aspectual use of \*-ti is found not only in main clauses, but also in adverbial clauses and, more importantly here, clauses modifying nouns:

(SH) (35) we'i-"pi-niwi [nawoi-"ti] 'two crying women' (SH-M-SG-92)
worman-ABS-DL cry-PRTC
DL

The nominalizing use, as seen in (30)-(33), develops from this modifying clause use and results from cases in which the modified noun happens to be zero. Once established as a nominalizing suffix, it may eventually be generalized and adopted as a nominal suffix, used even on nouns not synchronically derived from verbs. We can call such a suffix an 'absolutive' suffix, and indeed the absolutive suffix reconstructable for P-UA is precisely \*-tile (cf. BASIC INFLECTIONAL ELEMENTS, Absolutive). All of these uses, from an original main verb 'be' to absolutive suffix, are well attested in UA and can be reconstructed for the proto language.

The active use of  $-t\dot{z}$  as a nominalizing suffix is now confined to Numic and, to a lesser degree, various southern languages. Widespread in the southern languages is a newer active participial suffix, -ka-me or some reduced version thereof; -ka is a general stative suffix deriving ultimately from \*ka 'be', and -me (\*-mi in P-SUA) is the participial proper.

(TO) (36) da-kam 'sitter' (TO-M-PL-325) sit-PRTC

- (TA) (37) garičik bete-ame 'resident of Garichic' (TA-T-TED-32)
  PN dwell-PRTC
- (CR) (38) muiwa-kan-kime 'with the one who is born' (CR-P-G-70) be-PRTC-with born

Contrasting with the active participle is the perfective participle \*-pa, which as a nominalizer typically designates the object of the verbal activity. It can be reconstructed in this role for P-NUA, though shifts have occurred and some of the evidence is based on internal reconstruction. Whether it can be pushed back to P-UA is an open question; it may bear some relation to a particle \*pa possibly reconstructable as 'and/after'.

- (SH) (39) sia-"ki-"pi 'planted thing' (SH-D-PMS-28) grow-CAUS-PERF PRTC
- (TU) (40) otolooh-ina-pii-l tahambiš-i 'the one who makes the old man groan-CAUS-AG-ABS old-ACC groan' (TU-V-G-160) man
- (H) (41) tiipe-vi 'cooked sweet corn' (H-K-L-205)

\*-pi is also the source of the Proto Cupan aspectual suffix \*-ve R found on subordinate verbs.

Besides these participial endings, a variety of nominalizing suffixes are to be found. An agentive suffix \*-ni is suggested by Shoshoni and Nahuatl; \*-a and \*-ka are other possible reconstructions among those suffixes deriving nominals that designate agents or subjects.

- (NP) (42) pi-a 'mother' (NP-N-HG-61)
- (SH) (43) tekwa-ni 'headman, one who talks for others' (SH-D-PMS-90) talk-AG
- (H) (44) tiki-nwi-qa 'one who always cuts' (H-W-L-42) cut-HAB-AG
- (SR) (45) hiiñ-ia'-c 'hunter' (SR-H-D) hunt-AG-ABS
- (L) (46) yuu-l čeeni-ka-t 'barber' (L-L-FN)
  hair-ABS cut-AG-ABS
  ACC
- (A) (47) čiiwa-ni-me' 'doers' (A-S-ALM-29) do-AG-PL
- (A) (48) kal-pîš-ki 'steward' (A-A-I-424) house-guard-AG

(A) (49) kal-piš-ka-cin-tli 'honorable steward' (A-B-NA) house-guard-AG-HON-ABS

Another type of nominalization is an 'abstract' nominalization, which designates the verbal activity itself rather than a participant in that activity. "-ta, "-wa, and possibly the combination "-ta-wa are among the likely reconstructions in this role,

- (H) (50) warik-iw 'running' (H-W-L-55)
- (L) (51) čam-pa'i-la 'our drinking' (CUP-J-8C-125)
  our-drink-ABSTR
- (P) (52) firmančing 'my knowledge' (P-M-LPA-23) my-know-ABSTR
- (TO) (53) ko'k-dara 'sickness, plague' (TO-M-PL-325)
- (TA) (54) biči-wa 'faith' (TA-T-TED-31)
  have-ABSTR
  faith
- (Opata) (55) naideni-ragWa 'goodness' (UA-B-NR-703) good-ABSTR
- (CR) (56) kWai-ra 'meal' (CR-P-G-16) eat-NR
- (A) (57) čooki-lis-tli 'weeping' (A-S-ALM-30) cry-ABSTR-ABS

Other nominalizations include those designating the instrument, place, object, or result of the verbal activity. All of these are common in UA, with \*-na and \*-i being likely reconstructions for place and object nominalizations respectively. \*-na has assumed a wide range of nominalizing functions in Numic, including abstract nominalization.

- (M) (58) qatu'u a-"miya-"na 'his failure to go' (M-L-G-232) NEG his-go-NR
- (SH) (59) kati-noo 'chair' (SH-D-FMS-91) sit-INSTR
- (SP) (60) nono"si-paa-"na=ni 'what I will dream' (SP-S-G-125) dream-FUT-NR=my
- (TU) (61) noh-iš-t 'roasting pit' (TU-V-G-158) roast-INSTR-ABS
- (TU) (62) noh-i-1 'the thing reasted' (TU-V-G-166) reast-NR-ABS

- (H) (63) yamak-pi 'bridge' (H-W-L-49)
- (SR) (64) ficetkin-ihWa-t 'key' (SR-C-IN)
- (CU) (65) nam-yaxə-la'a-š 'bridge' (CU-HN-M-138)
- (P) (66) řái-kud 'singing ground' (P-M-LPA-23) sing-INSTR
- (P) (67) juuk-i 'rain' (P-SS-D-22) rain-NR
- (TO) (68) som-kear 'needle' (TO-M-PL-324)
- (A) (69) pano-waa-ni 'bridge' (A-A-I-462) cross-IMPRS-AG INSTR
- (A) (70) tla-kwa-loo-yaan 'dining room' (A-B-NA)
  UNSFEC-eat-IMPRS-place
  OBJ
- (A) (71) kak-čiiw-kaan 'shoemaker's shop' (A-B-NA) shoe-make-place

#### VERB MORPHOLOGY

In this section we are concerned only with processes that derive verbs from members of other classes. Other aspects of verb morphology will be dealt with later.

# N + X = V

The most common derivational processes forming verbs from nouns in UA involve affixes (including zero) with such meanings as 'be', 'have', 'become', and 'make'. These were discussed and illustrated under BE/HAVE/DO. The examples below exemplify some of the other kinds of denominal verbalizing suffixes to be found.

- (NP) (1) ya kumi-wa'a 'Now the sky is clear/there are no clouds.'
  now cloud-lack (NP-L-M)
- (M) (2) mo"qo-ya 'put/have shoes on' (M-L-G-257) shoe-wear
- (SP) (3) was-"ku=ca=ni kapaa-ka 'I received two horses.' two-ACC=PAST=I horse-acquire (SP-S-G-134)

- (TU) (4) ung.a-gayi-t 'He is gathering salt,' (TU-V-G-132) salt-gather-PRES
- (P) (5) tath-pi 'remove the roots from' (P-M-LPA-20)
  room-remove
- (P) (6) ona-mad 'go for/go get salt' (P-SS-D-35) sal:-go
- (TA) (7) na iso-ti 'cover with dust' (TA-B-G-625) dust-apply
- (A) (8) te-:ia 'petrify' (A-B-NA) rock-CAUS
- (A) (9) te-sia 'stone' (A-G-L-47)
  rock-CAUS

## Other

Verbalizing suffixes attached to adjectival stems generally mean 'be', 'become', or 'make' and were considered under BE/HAVE/DO,

In addition, UA languages often have a verbalizing process that applies to locatives, directionals, or other adverbials. With a directional of some kind the derivational marker may be zero, with the value 'go', and regular verbal suffixes can sometimes be attached. The proper synchronic analysis of some of the patterns illustrated below requires better data and careful study.

- (SP) (10) t-u"p'a-"pikai 'went through it' (SP-S-G-218)
  it-through-REM
  PAST
- (SP) (11) 1 \* pai "ka 'go down' (SP-S-G-138) c.own-go
- (SP) (12) :paa-"n'i-yi=ni 'I stay right here.' (SP-S-G-138) here-be-PRES=I
- (K) (13) naga-va'a-duwa-kidi si'ina 'He came right up to me.'
  ma-at-to-PAST he (K-B-PK-5)
- (H) (14) i.-ki-y a-wi' 'He went to my house.' (H-W-L-17) mr-house-ACC it-to
- (H) (15) pam i-ki-y e-v-ni-ni 'He will be at my house.' h≥ my-house-ACC it-at-be-FUT (H-W-L-30)
- (SR) (16) imi' ta=m' payika' (mii-v) 'You will go away.'

  /ou DUB≑you away go-FUT (SR-H-G-10)
- (L) (17) čiam⇒ča wam' paala-yk 'We're going to Pala now,' we=we now PN-to (L-D-PG-35)

- (TA) (18) říkí-bu 'lower' (TA-B-G-599) below-VR
- (TA) (19) murube-wa 'approach' (TA-H-TE-xvi)
- (HU) (20) sika mpai-ti-ni-kee 'if it were thus' (HU-G-S-57) if thus-be-FUT-IRR

#### ADJECTIVE MORPHOLOGY

# X + Y = ADJ

It is not clear just what adjectives are, in UA or in languages generally. While most would treat them as basically verbal in character, morphologically they are often noun-like, and this is particularly noticeable in UA. They may derive from nouns, verbs, or other adjectives or they may be underived. Undoubtedly they constitute a variegated class, and there may not always be grounds for distinguishing them from members of other classes.

It is not uncommon for most of the adjectives in a UA language to be derived (synchronically or dischronically) from members of other classes and to have recognizable derivational markings, leaving only a few apparently underived adjectives. It may be hard to distinguish these underived adjectives from stative verbs; note these two Hopi examples:

- (H) (1) moosa qati 'The cat is sitting.'
- (H) (2) moosa qööca 'The cat is white.'

Indeed it is not unreasonable to analyze them as stative verbs, and whether or not a special subclass of such verbs should be distinguished and labeled 'adjectives' depends on whether or not this subclass displays special morphological or syntactic properties, as it does, for example, in Kopi when functioning as attributive modifier:

- (H) (3) moosa qati-wta-qa 'sitting cat' cat sit-STAT-AG
- (H) (4) qöca-mosa 'white cat' white-cat

Apparently underived adjectives like <u>qööca</u> are at one end of a continuum. The other end of this continuum is occupied by modifiers derived through fully productive syntactic or derivational processes, such as the relativization or nominalization of Hopi illustrated in (3). In the case of adjectives derived from verbs, the derivational suffix is usually an active participial suffix, related to durative aspect, or a perfective participial suffix or perfective aspect marker. The various participial

endings discussed under NOUN MORPHOLOGY are all attested in this role, and the formal similarity between adjectives and nominals is probably due in large part to the fact that these same participial endings become extended almost as a matter of course to the role of nominalizers, as described previously. In the examples that follow of adjectives derived by means of these aspectual and participial elements, not all of the morpheme boundaries and glosses necessarily have full synchronic validity, though their dischronic accuracy may be assumed; reanalysis has certainly affected some of these elements (e.g. Iniseno polocy is undoubtedly monomorphemic synchronically), which thereby fall in intermediate position on the continuum, being derived in form but perhaps not by active synchronic processes. In some cases (e.g. Mono cawi and Shoshoni pia) a participial ending may optionally or obligatorily appear on an element that is evidently inherently adjectival, one that could not appear in predicate position without a verbalizing suffix (cf. BF/HAVE/DO).

- (M) (5) casu-"tu nopi 'good house' (M-L-G-337) good-PRTC house
- (SH) (6) ni pia(-"ti) pu nku-i pui-"ka 'I see the big horse."

  I big-PRTC horse-ACC see-RSLTV (SH-M-SG-74)

  ACC
- (SH) (7) st.-ti nahna-"pi tuna-"pi'i 'that grown boy' (SH-D-PMS-118)
  DFM-NOM grow-PERF boy-ABS
  PREFC
- (TU) (8) pročá-pái-1\* tán-t 'the white rock' (TU-V-G-174)
  b:-AG-ABS rock-ABS
  write
- (H) (9) po:om-vi 'pierced with holes' (H-W-L-49)
  bo:e-PERF
  PRTC
- (CU) (10) a-wax-ve\*\* 'dry' (CU-HN-M-136) its-dry-R
- (L) (11) pp=loo=v\*\*\* 'good' its=good=R
- (L) (12) yo-t 'big' big-ABS

<sup>\*</sup>This agentive suffix derives historically from the perfective participle, and the absolutive derives historically from the active participle (also in (12)).

<sup>\*\*</sup>The 'realised' aspectual suffix (also in (11)) derives historically from the perfective participle.

<sup>\*\*\*</sup>This segmentation is somewhat speculative. Cf. loovi 'be good/fine'.

- (TA) (13) bewa-r-ame 'hard' (TA-B-G-210) hard-be-PRTC
- (A) (14) palan-ki 'rotten' (A-B-NA)
- (A) (15) tli1-ti-k 'black' (A-B-NA)
  black-become-PERF
  (N)

There are additional devices for deriving adjectives from members of other classes. Some languages show a suffix  $-\underline{i}$  which may be related to the object nominalizer (cf. NOUN MORPHOLOGY), or other nominalizing or aspectual elements.

(SR) (16) a-mimk-i 'dead' (SR-C-IN) its-die-ADJR

While uncommon, suffixes deriving '-able' adjectives from verbs have been attested:

(L) (17) čip-kawu-t 'brittle' (L-KG-SG-110) break-able-ABS

Among the processes deriving adjectives from nouns, we find such semantic values as 'like', 'lacking', and 'having/full of/characterized by'.

- (M) (18) qatuhu mahu toqo"qwa-ni sunawi-tihi NEG DEM rattlesnake-like appear-PRTC 'That doesn't look like a rattlesnake,' (M-L-G-232)
- (H) (19) ciro-'eway 'bird-like' (H-M-INO) bird-like
- (H) (20) in Wa-wss. 'bloody' (H-M-INO) blood-ADJR
- (SR) (21) kwa'kii-t-in 'child-like, childish' (SR-C-IN) child-ABS-like
- (L) (22) ataax-vi-š 'unpopulated' (L-KG-SG-108)
  person-PRIV-ABS
- (L) (23) ataax-mawi-s 'pregnant' (L-KG-SG-107) person-having-ABS
- (L) (24) yuu-ku-t 'hairy' (L-KG-SG-109) hair-having-ABS
- (P) (25) s-'ona-g 'full of salt' (P-H-G-137) POS-salt-having

- (TO) (26) ištu-suudi-g 'watery, covered with water' (TC-M-PL-327)
  FOS-water-having
- (TA) (27) čabo-ame 'bearded' (TA-T-TED-43) teard-PRTC
- (TA) (28) řee-tiri 'like a rock' (TA-B-G-30)
- (A) (29) as-yo' 'watery' (A-G-L-57)
  water-having
- (A) (30) ista-k 'white' (A-G-L-56)
- (A) (31) E:w-tik 'green' (A-G-L-56)
  grass-ADJR

## Miscellaneous

The inflection and syntactic properties of adjectives will be discussed when nominal constituents are considered (cf. ADJECTIVES). Here we deal with a miscellary of other morphological phenomens pertaining to adjectives. Reduplication is very commonly associated with adjectives in UA. Some adjective stems are inherently reduplicated, as in (32)-(33), or the reduplication may indicate plurality of some kind or intensity.

- (L) (32) kono-kno-š 'green' (L-KG-SG-53)
  RDP-become-ABS
  green
- (A) (33) s:=see=k 'cold' (A=A=I=426)
  RDP=ice=ADJR
- (SH) (34) Tá-tái-tá 'very small thing' (SH-D-PMS-24)
  RDP-small-PRTC
  INTNS
- (CA) (35) maxa-t sa-smat-neki-s 'slim canes' (CUP-S-SR-140)
  :ane-ABS RDP-slim-ADJR-ABS
  PL
- (CU) (36) x-'welva-m 'old DISTR PL' (CU-HN-M-127)
  RDF-grown-PL
  DISTR
  PL
- (P) (37) či·i-čiw 'long DISTR PL' (P-SS-D-110)
  FDP-long
  IISTR
  FL
- (A) (38) šo-šoloč-tik 'very wrinkled' (A-DA-FC10-95)

  FDF-wrinkle-ADJR

  TNYMS

Various devices other than reduplication can situate an adjective along a dimension of polarity or intensity. Formally these devices include (possibly proclitic) particles, prefixes, suffixes, or consonant gradation. Semantically they range from positive to negative, and from intensification to attenuation.

- (M) (39) cawu-'u\* 'very good' (M-L-G-220) good-INTNS
- (SH) (40) ke caa-<sup>n</sup>ti 'no good' (SH-M-SPR) NEG good-PRTC
- (SH) (41) tipi caa-nti 'very good' (SH-M-SPR)
  very good-PRTC
- (H) (42) pici-wya 'narrow' (H-VV-PT-279) wide-DIM
- (CA) (43) tes-nek 'yellow' tess-nek 'real yellow' (CA-S-G-80)
  yellow-ADJR
  INTNE
- (L) (44) yo-ma-1 'largish' (L-KG-SG-109) big-DIM-ABS
- (P) (45) pi wiho 'not true' (P-M-LPA-45)
  NEG true
- (P) (46) si s-toa 'very white' (P-M-LPA-63)
  INTNS POS-white
- (P) (47) pi si s-wigi 'not very red' (P-L-FN)
  NEG INTNS POS-red
- (TA) (48) waru-be 'very big' (TA-H-TE-xv) big-AUG
- (A) (49) a'-kWal-li 'bad' (A-G-L-64) NEG-good-ABS
- (A) (50) se-see-pa-tik\*\* 'very cold' (A-DA-FC10-95)
  RDP-ice-INTNS-ADJR

As might be expected, color terms often have special properties setting them off from other adjectives. Quite often these are derived from nouns in UA, as in various Nahuatl examples cited above, and they show a somewhat greater tendency than other adjectives to be reduplicated. Special formatives, like Cahuilla -neki (cf. (35), (43)) and Mono -pono recur in a variety of color terms without any clearly identifiable meaning.

<sup>\*</sup>The quality of the vowel is determined by the final vowel of the stem.
\*\*Cf. the emphatic \*pa reconstructed in PARTICLES AND CLITICS, Polarity.

(M) (51) puhi-pono-wa 'blue PL' (M-L-G-259) blue-ADJR-PL

Serrano adjectives are said to always end in  $-\frac{1}{2}$  or  $-\frac{1}{2}$  (SR-C-IN).

- (SR) (52) pir-vir-vi-'n 'gray' (SR-C-IN)
  RDP-gray-(?)-ADJR
- (SR) (53) pir-vir-či-k 'light gray' (SR-C-IN)
  RDP-gray-(1)-ADJR

Finally, we should mention that various languages have patterns for deriving adverbs from adjective stems.

- (SH) (54) cas-<sup>n</sup>ku 'well' (SH-D-PMS-133) gocd-ADVR
- (L) (55) alexvi-č-i 'badly' (L-KG-SG-124) bad-ABS-ADVR
- (P) (56) siw-ma 'bitterly' (P-SS-D-144)
  bitter-ADVR
- (TA) (57) sera-rega 'fine' (TA-B-G-259)
  prestty-MAN

Note that the Shoshoni and Luiseno adverbielizing suffixes could be analyzed as accusatives [cf. BASIC INFLECTIONAL ELEMENTS, Accusative]. The Papago and Tarahumara suffixes can also derive adverbs from nouns and possibly other classes.

(P) (58) a-b-m-ma 'like a coyote' (P-M-LPA-27)
POS-covote-ADVR

The details and productivity of these patterns are not very clear at present. It is perhaps more usual in UA to use adjectives adverbially with no special morphology.

### COMPOUNDS

UA languages differ considerably in the degree to which they employ compounding. The range is from languages which hardly employ it at all and show a limited number of patterns to those in which compounding is a major if not predominant lexical phenomenon showing many patterns. To determine with assurance the status of compounding in the proto language, it will be necessary to go beyond the evidence provided by current compounds in the daughter languages and find a substantial inventory of older compounds, no longer recognizable as such, through internal and comparative reconstruction of stems. However, it is fair to assume provisionally that the most widespread contemporary Un compounding patterns probably reflect at least approximately the range of major patterns found in P-UA. We will restrict our attention to noun and verb compounds.

Noun Compounds

One fairly common pattern for making noun compounds is ADJ + N = N. Semantically, the adjective always modifies the noun.

- (NP) (1) aca-puku 'red horse' (NP-N-HG-274)
  red-horse
- (SH) (2) tuu-"ti-"pi 'black rock' (SH-M-NN-9)
  black-rock-ABS
- (H) (3) wiko-taqa 'big man' (H-VV-D-17) big-man
- (A) (4) tlaso'-šooči-tl 'precious flower' (A-G-L-155)
  precious-flower-ABS

The most prevalent pattern for noun compounds is of course  $N_1 + N_2 = N$ . Here there are a variety of subtypes that differ in the nature of the semantic relation between  $N_1$  and  $N_2$ . Four of these are common enough to be noted. ' $N_2$  made of  $N_1$ ':

- (M) (5) ti\*pi-"wi"tuwa 'stone bowl' (M-L-G-325) stone-bowl
- (L) (6) wi-kun-la 'large net sack' (L-KG-SG-41)
  hemp-sack-ABS
- (TO) (7) bid-vakk 'adobe house' (TO-M-PL-323)
- (PO) (8) elu-ĕam-t 'corn tortilla' (PO-B-DMP-23) corn-tortilla-ABS

'No located at No!:

- (SH) (9) soko-"tihiya 'squirrel' (SH-C-LV-39) ground-deer
- (CU) (10) kewi-'alwi-t 'raven' (CU-H-G-225)
- (P) (11) čiňi-wo 'beard' (P-M-LPA-16)
  mouth-hair
- (PO) (12) ten-con 'beard' (PO-B-DMP-23)
  mouth-hair

'No part of N1':

(NP) (13) kamá-tuku 'jackrabbit meat' (NP-N-HG-247) jackrabbit-meat

- (Y) (14) wok-hiapsi 'sole of the foot' (Y-J-I-58) foot-heart
- (HU) (15) kij-tenie 'doorway' (HU-G-S-31)
- (PO) (16) iš-kwai 'forehead' (PO-B-DMP-23)
  face-head

'N, for N,':

- (NP) (17) har-gunne 'quiver' (NUM-L-HIT-144)
- (K) (18) tomo-kahni 'winter house' (K-Z-D) winter-house
- (H) (19) q6h-ki 'fireplace' (H-W-L-23)
  fir:-house
- (A) (20) tla. 'to'-kag-aa-tl 'drink of rulers' (A-DA-FC10-93)
  UNS FEC-say-AG-water-ABS
  OBJ
  ruler

Many other types of noun compounds are of course attested in UA, but these appear to be the most common.

Verb Compounds

The most prevalent major classes of verb compounds in UA are MOD + V = V, N + V = V, and  $V_1 + V_2 = V$ . The first of these is not nearly so prevalent as the other two. The modifier may be an adverb or an adjective used as an adverb, but elements such as quantifiers, negation, and even postpositional phrases are attested:

- (M) (21) ews-tihoi 'dig a lot' (M-L-G-370) much-dig
- (M) (22) cawu-"qa"ma 'taste good' (M-L-G-362) good-taste
- (SP) (23) a'ti-na<sup>n</sup>ka-"pikai=""kwa 'heard it well' (SP-S-G-83) gcod-hear-REM-it PAST
- (A) (24) a'.nemi 'be dead' (A-G-L-80)
  NEG-live
- (A) (25) ne-m-toka 'consider useless' (A-A-I-457) bally-follow

- (A) (26) on-mo-tle-ko-maayaw 'It plunged into the fire.' (A-G-I-133) away-REFI-fire-in-threv
- (A) (27) mo-sen-tlaali-'-ke' 'They gathered together.' (A-G-L-106)
  REFL-one-put-PAST-PL

Exponents of the pattern N+V=V divide themselves into subclasses on the basis of the type of semantic relation the noun bears to the verb. This may be a subject, object, locative, or instrumental relation. Of these, the object relation is most prevalent:

- (TU) (28) punzi-gaa'aza-t 'He is boiling the mush.' (TU-V-G-89) seed-boil-PRES
- (TA) (29) buši-bota 'pluck out eyes' (TA-B-G-635)
  eye-loosen
- (CR) (30) una-kwa 'eat salt' (CR-P-G-47)
- (A) (31) ni-naka-kwa 'I eat meat.' (A-G-L-85)

### Subject:

- (SH) (32) pii-toi 'bleed' (SE-C-LV-39) blood-emerge
- (SP) (33) tava'-man'\*"si-yi 'sun rises' (SP-S-G-86)
- (TA) (34) eye-mu 'lose one's mother' (TA-B-G-640)
- (A) (35) te-kiyaw 'It rained rocks.' (A-G-L-147) rock-rained

## Locative:

- (NP) (36) pa-habi 'swim' (NP-N-V-246) water-lie
- (SF) (37) to"ci-pa"ka"ki-yi=ni 'I have a headache.' (SP-S-G-86) head-have-PRES≃I pain
- (TU) (38) hani-hali-t 'He is visiting.' (TU-V-G-89) house-sit-PRES
- (Y) (39) boo'o-ho'a 'travel' (Y-J-I-56) road-live

### Instrumental:

- (NF) (40) cia-ya'i 'starve' (NP-N-HG-228) hunger-die
- (TU) (41) taa-muu'ugu-t 'He is thirsty.' (TU-V-G-90)
- (TA) (42) seka-čo 'strike with hand, applaud' (TA-B-G-637) hand-strike
- (CR) (43) ha-mwe 'drown' (CR-P-G-46)

The use of 'die' as the second member of a verbal compound, especially for a certain range of meanings of which the above examples are illustrative, is a pervasive trait of UA with both noun-verb and verb-verb compounds.

Subclateification of verb-verb compounds is perhaps not as straight-forward as that of other kinds. However, it makes some sense to divide compounds following the pattern  $V_1+V_2=V$  into those in which  $V_1$  and  $V_2$  are 'coordinate', those in which  $V_1$  is the object of  $V_2$ , and those in which the two component verbs bear some type of adverbial relation to one another. It should be noted that compounding is probably one stage in the evolution of independent verbs into verbal affixes, so here in particular the boundary between compounding and affixation will not always be sharp, being essentially a matter of degree of grammaticization.

Cases where  $V_1$  and  $V_2$  seem truly coordinate are difficult to find, and the status of this type and its prevalence in UA are open to question. (44) is one possible example.

(L) (44) wa'-uui 'yelp like a coyote' (L-KG-SG-42) bark-howl

It is somewhat more common for  $V_1$  to function as the object of  $V_2$ . Sometimes, is seen in the two Aztec examples below, compounds coexist with periphrasti: locutions employing the same elements and expressing the same meanings; this reflects an early stage in the evolution of a grammatical suffix, a development that might be considered consummated when the affix no longer exists as an independently occurring predicate.

- (SP) (45) ti"ka-"mau"p'a 'be through eating' (SP-S-G-81) eat-finish
- (A) (46) ni-k-neki [ni-k-čiiwa-s] 'I want to do it.'
  I-it-want I-it-do-FUT
- (A) (47) ni-k-čiiwa-s-neki 'I want to do it.'
  I-it-do-FUT-want

Adverbial relations between  $V_1$  and  $V_2$  can be of various sorts.  $V_1$  can specify the manner of  $V_2$ . In Mahuatl this subtype is marked by a special construction employing the connective -kaa- between the two verb roots.

- (M) (48) waci-"yatuha 'whisper' (M-L-G-249) be-talk hidden
- (SP) (49) satu-a<sup>n</sup>paka-y<del>i</del> 'talks hoarse' (SP-S-G-82) be-talk-PRES hoarse
- (A) (50) ki-kwalaan-kaa-'itta 'looks at him angrily' (A-B-NA) him-be-CONN-see angry

Related to this manner subtype is the instrumental, in which  $V_1$  is the instrument of  $V_2$ . This includes cases where  $V_2$  is 'die', discussed above.

- (TU) (51) uui-muu'ugu-t\* 'He is drowning.' (TU-V-G-90)
- (H) (52) itihi-moq-qa'e 'because he felt hot' (H-W-TD-81)
  be-die-since
  hot
- (L) (53) pii'-moki 'kill by bewitching' (L-KG-SG-42) bewitch-kill
- (Y) (54) hiabih-muuke 'suffocate' (Y-J-I-56) breathe-die

The other types of adverbial relation between  $V_1$  and  $V_2$  are temporal, and they divide naturally into cases where the actions of the verbs are sequential and cases where they are simultaneous (cf. ADVERBIAL CLAUSES, Temporal Clauses). Instances best interpreted as ' $V_1$  then  $V_2$ ' can be found, e.g. (55), but it is more usual for sequential compounds to mean ' $V_2$  then/for/in order to  $V_1$ '.

- (SH) (55) pui-tama 'look at stealthily' (SH-D-PMS-109)
- (M) (56) ooki-miya 'go celebrate' (M-L-G-357) celebrate-go
- (Y) (57) ne-to'o-sii-ka 'went and left me' (Y-J-T-12) me-leave-go-PERF

When the two verbal actions are simultaneous, the distinction between ' $V_1$  while  $V_2$ ' and ' $V_2$  while  $V_1$ ' is rather tenuous. To the extent that it can be made, the latter is the normal interpretation, though the former is also attested. In line with this tendency, we note that Classical Nahuatl has a special compound construction, with connective  $-\underline{\text{ti}}$ -, which reflects the latter

<sup>\*&#</sup>x27;Breathe' is probably the basic sense of what is glossed 'smoke', and drowning of course is a special type of suffocation. Cf. (54).

interpretation at least in diachronic terms (the exponents of  $V_2$  are fixed and grammaticized, and have taken on specialized aspectual senses); this connective ultimately derives from \*t\(\delta\) 'be', and its use in these compounds reflects an earlier adverbial clause construction in which \*t\(\delta\) was suffixed to the subordinate verb (cf. NOUN MORPHOLOGY, V + K = N). A cognate construction if found in Huichol, also with specialized aspectual senses.\*

- (SP) (58) kae-"paki-"pakai 'sang while on (his) way' (SP-S-C-80) sing-walk-REM PAST
- (P) (59) mili-nod 'turn while running' (P-M-LPA-54) run-bend
- (CR) (60) tawa-yi 'go around drunk' (CR-P-G-46) be-go drunk
- (A) (61) koč-t-ok 'lie sleeping' (A-B-NA) sleep-CONN-lie
- (A) (62) o'-tli ki-to-toka-ti-nemi 'She goes along following the road-ABS it-RDP-follow-CONN-go road.' (A-DA-FC10-94) along
- (HU) (63 yeike-ta-ya 'begin to trail someone' (HU-G-8-98)

## BASIC INFLECTIONAL ELEMENTS

## Absolutive

Absolutive suffixes are one of the more distinctive and characteristic features of UA grammar. An absolutive suffix, in UA terms, is an ending with no apparent scannic value that appears on nouns in citation forms but may drop when a noun is subjected to various morphological processes, such as affixation, compounding, or reduplication. The P-UA absolutive suffix was \*-ti, deriving ultimately 'rom \*ti 'be' through the evolution sketched in NOUN MORPHOLOGY, V + X = N. It is likely that P-UA \*-ti was retained before the accusative \*-a, and possibly before the plural \*-mi, but lost when any other morphological elements were attached.\*\*

<sup>\*</sup>The vowel in both Nahuatl and Huichol reflects \*u rather than \*i according to regular sound changes, but confusion and interchange of these two sounds is common in UA.

<sup>\*\*</sup>It is likely that a noun retained its absolutive when it was the last member of a compound but lost it when it was the first member; see examples (4), (6), (8), (10), and (20) of COMPOUNDS. In the Serrano example (2), the vowel  $\underline{\mathbf{i}}$  of the plural suffix is reanalyzed from the absolutive.

- (TU) (1) hanii-l-a 'house ACC' (TU-V-G-145) house-ABS-ACC
- (SR) (2) pööq-t-im 'roads' (SR-C-IN)
  road-ABS-PL

The history of the UA absolutive has been complex. The ABS-ACC sequence \*-t-a has been reanalyzed as a single-morpheme absolutive suffix in some languages and as a single-morpheme accusative in others (cf. UA-L-SP, UA-L-SR, and UA-L-SAP). \*-t\u00e1 has been lost or replaced in some daughters or adapted to other uses (such as plural marking in Cora and Huichol). Sometimes it is reanalyzed as part of the noun stem. Phonological changes have modified its appearance or split it into a number of alternative absolutive endings, and its descendants have been liable to grammatical and semantic realignment affecting their occurrence. In various daughters other suffixes have been shifted to absolutive use to replace the original \*-t\u00e1, in particular the perfective participle \*-p\u00e1, the diminutive \*-c\u00e1, and possibly certain plural markings.

As a result, the contemporary UA languages vary greatly in the details of their absolutive inflection. Some languages (e.g. Huichol) have no absolutive inflection, or at best only remnants of it. Those that retain it typically have more than one absolutive ending, the choice among them being determined in various ways. In Classical Nahuatl, for instance, the choice among -tli, -tl, and -ii (all from \*-t-a) was phonologically determined. To some degree the choice may be determined semantically, as in Shoshoni, where -"ci (from \*-ci DIM) is restricted to terms for small animals and bugs, but such semantic correlations are almost always tendencies rather than strict rules. The nouns of a language normally must be marked lexically for which absolutive they require, and it is typical for at least some nouns not to take any absolutive.

Languages vary as to which circumstances dictate loss of the absolutive. The primary possibilities are these: with accusative inflection; with plural inflection; with a postposition; when possessed; with a derivational suffix; when non-final in a compound; and when reduplicated. Classical Nahuatl dropped the absolutive in all these cases (except that it lacked accusative inflection). Every other daughter with absolutives drops it in some of these circumstances, but they differ as to which ones, as lexical items in a single language sometimes also do. There are nevertheless some strong tendencies; the absolutive is virtually always retained with accusative inflection, virtually always drops in a compound or with a derivational suffix, and is usually lost with a possessor affix. Sometimes omission of the absolutive is optional. The examples that follow illustrate retention or loss of the absolutive in the different cases. With accusative inflection:

- (SH) (3) huu-"pi-ta 'stick ACC' (SH-D-PMS-98) stick-ABS-ACC
- (H) (4) kii-hi-t 'house ACC' house-ABS-ACC

<sup>&</sup>quot;This is true in simple cases. If a noun is possessed, the absolutive may drop for that reason, whether in the nominative or the accusative.

## With plural in lection:

- (SH) (5) te'ne(-"pi'i)-nii 'men' (SH-D-PMS-96) ma.1-ABS-PL
- (A) (6) pic-lo-tl 'pig' picoo-me' 'pigs' (A-B-NA) pig-ABS pig-PL

## With a postposition:

- (TU) (7) hanii-l-a-miik 'toward the house' (TU-V-G-152) house-ABS-ACC-toward
- (L) (8) huu-la 'arrow' huu-tal 'with an arrow' arrow-ABS arrow-with
- (A) (9) aa-tl 'water' aa-pan 'on the water'
  water-ABS water-on

# When possessed:

- (SP) (10) simi-"pi=ana 'her vulva' (SP-S-G-116) vulva-ABS=her
- (H) (11) kii-hi-'at 'his house' (H-W-L-23) house-ABS-his
- (CU) (12) Fi-s 'house' pe-ki 'her house' (CUP-J-8C-95) FOUSE-ABS her-house
- (CR) (13) ita-ri 'bed' ru-ita 'his bed' led-AES (CR-P-NE-313) his-bed (CR-P-G-13)
- (A) (14) te'-tli 'father' no-ta' 'my father' (A-B-NA) fether-ABS my-father

#### With a derivational suffix:

- (TA) (15) koya-či 'hat' koya-ta 'put on a hat' (TA-B-G-608)
  hat-ABS hat-put
- (PO) (16) "ac-om 'dog' tas-pol 'little dog' (PO-B-DMP-17) dog-ABS dog-DIM
- (A) (17) m.il-li 'field' mil-e' 'land-owner' (A-B-NA) f.eld-ABS field-POSSR

## When non-fina. in a compound:

(L) (18) pas-ls 'water' pas-guks-t 'elk' water-ABS water-deer-ABS (L-MB-RRO-16)

(A) (19) tepe-tl 'hill' tepe-yawal-li 'circle of hills' hill-directe-ABS (A-G-L-76)

When reduplicated: \*

- (M) (20) po-pohina-pe 'chiefs' (M-L-G-284)
  RDP-chief-ABS
- (A) (21) konee-tl 'child' koo-kone-' 'children' (A-A-I-429) child-ABS RDP-child-PL

## Plural

UA languages normally distinguish only between singular and plural, though a dual category has been innovated in the northern languages outside of Takic. Plural marking tends to be restricted to animate nouns, and such a tendency can clearly be reconstructed for the proto language, along with the (animate) plural suffix \*-mi and plural reduplication. These two markings have been remarkably stable in the evolution of UA languages, and reflexes have been retained as plural markers throughout the family. Double plural marking, with both reduplication and \*-mi, is also common and can no doubt be reconstructed.

- (SP) (22) pu-<sup>n</sup>pu<sup>n</sup>ku-ŋ<sup>w</sup>±-taŋ<sup>w</sup>a 'our horses (individually owned)'
  RDP-horse-PL=our (SP-S-G-258)
  DISTR INCL
- (H) (23) moo-moro-m 'burros' (H-J-RTN-2)
- (SR) (24) muuča-m 'worms' (SR-C-IN)
  worm-PL
- (CA) (25) na-nxani-č-em 'men' (CUP-J-SC-151)
  RDP-man-ABS-PL
- (P) (26) baa-ban 'coyotes' (P-SS-D-109)
  RDP-coyote
- (Y) (27) baakoč-im 'snakes' (Y-J-I-15) snake-PL
- (HU) (28) ne-maa-ma'ii-ma 'my grandsons' (HU-G-S-31) my-RDP-grandson-PL
- (A) (29) koo-koyoo-me' 'coyotes' (A-G-L-30)
  RDP-coyote-PL

<sup>\*</sup>Reduplication, since it affects the beginning of a word, does not normally cause the absolutive to drop. Even in Nahuatl dropping of the absolutive might be attributed to the following plural suffix; since the glottal stop ('saltillo') is usually not written in the classical texts, this point tends to be obscured.

A variety of other plural suffixes have been innovated, primarily in Corachol and Aztecan. The diminutive \*-ma (cf. NCUN MORPHOLOGY, N+X=N) has become a plural suffix for kinship terms in Cora and Huichol, as illustrated in (28). The absolutive, the diminutive \*-ci, and the accusative \*-kV have also apprently been adopted as plural endings.

- (H) (30) koo-kon-t 'squirrels' (H-J-RTN-2)
  RDP-squirrel-PL
- (CR) (31) \*.te-ci 'lice' (CR-MM-CE-viii)
- (HU) (32) wa-'ita-ri 'their mats' (HU-G-S-83)
- (HU) (33) Nasa-ci 'deer I'L' (HU-G-8-31)
- (A) (34) s.waa-' 'women' (A-G-L-59)
  weman-PL
- (A) (35) ta'-tin 'fathers' (A-B-NA)
- (A) (36) t\_a-'kWilo-'-ke' 'scribes' (A-B-NA)

  UNSPEC-write-AG-PL

  O3J

  Suribe

Besides reduplication and suffixation, plural can be marked on nouns in a variety of other ways, none terribly common in UA. Occasionally there is full or partial suppletion:

(HU) (37) nunuci 'child' tii-ri 'children' (HU-G-8-31)

Accentual shift is attested, as is consonant gradation:

- (CR) (38) sairu 'fly' sa'irú 'flies' (CR-MM-CE-viii)
- (TO) (39) huyva 'star' huppa 'stars' (TO-M-PL-330)

A particle (actually the plural suffix from a truncated demonstrative) can mark plurality in Northern Paiute:

(NP) (40) mag gucu 'the cows' (NP-L-M)
PL cow

Indications of plurality may have specialized semantic value or be associated with special lexical classes or grammatical constructions. We have seen that -ma in Cora and Muichol is basically restricted to kinship

terms. A special plural suffix may be used with possessed nouns:\*

- (PO) (41) mo-čolu-gam 'your brothers' (PO-B-DMP-17)
  your-brother-POSSD
  PL
- (A) (42) no-picoo-waan 'my pigs' (A-S-ALM-13) my-pig-POSSD PL

\*-me has specialized as an 'intensive' plural in Tubatulabal and is restricted to possessed nouns.

(TU) (43) yaabi-mii=n 'her very many skirts' (TU-V-G-156) skirt-INTNS=her PL

Other special categories are dual, distributive, and collective (see also NOUN MORPHOLOGY, N + X = N).

- (M) (44) pa-"pa'oo-"pi 'pebbles here and there' (M-L-G-285)
  RDP-pebble-ABS
  DISTR
- (SH) (45) satis-ni-hwi 'two dogs' (SH-D-PMS-97) dog-DL
- (TU) (46) o-wopu-1 'the many gooseberries (in one place)'
  RDP-gooseberry-ABS (TU-V-G-57)
  COLL
- (H) (47) passa-viti-y 'fields DL ACC' (H-W-L-22) field-DL-ACC
- (H) (48) tiási-q518 'patch of weeds' (H-VV-D-22) weed-COLL
- (A) (49) kwaw-tla' 'grove, forest' (A-S-AIM-44) tree-COLL

## Accusative

The evolution of accusative suffixes in UA is outlined in UA-L-SAF and will be sketched only very briefly here. \*-ci can be reconstructed for P-UA as an archaic accusative ending basically restricted to parts of the pronominal system. A never but still archaic suffix, \*-kV, was primarily associated with noun modifiers. The regular accusative suffix used on nouns in P-UA was \*-a. \*-a remains as an accusative ending in Shoshoni, Southern Numic, and Tubatulabal. It combined with the nasalizing feature of nasalizing stems in Mono to yield the accusative -na through reanalysis, and the sequence \*-t-a (ABS-ACC) was reanalyzed in various languages as being an absolutive

<sup>\*</sup>Pochutla -gam and Nahuatl -waan probably both derive from \*-wa-mi (POSSD-PL).

morpheme -ta and in others an accusative -ta. A never accusative suffix found in the northern languages, variously -i/-yi/-y/-ya, can probably be reconstructed as F-NUA \*-ya and derives from a third person singular possessor suffix of F-UA, which explains why this ending is found primarily on possessed nouns in Tubatulabal and Hopi. All of the northern languages retain accusative marking as an active process. Accusative inflection has largely been lost in the southern languages outside of Yagui.

- (M) (50) i-nopi-na thy house ACCt (M-L-G-104) my-house-ACC
- (SH) (51) sati-a 'dog ACC' (SH-D-PMS-99) dog-ACC
- (SH) (52) toya-pi-"ta 'mountain ACC' (NUM-M-PC)
  rountain-ABS-ACC
- (SH) (53) pu<sup>n</sup>ku-i 'horse ACC' (SH-M-NN-132) horse-ACC
- (SP) (54) raa-ya\* 'water ACC' (SP-S-G-216)
  water-ACC
- (TU) (55) čaami-yi=n 'her acorn gravy ACC' (TU-V-G-145) soorn-ACC∓her gravy
- (H) (56) passa-t 'field ACC' <u>ii-pasa-y</u> 'your field ACC' field-ACC your-field-ACC
- (SR) (57) ná-kava-yá-m' numia'n 'You broke my knife.' (SR-H-D)
  ny-knife-ACC=you break
- (CA) (58) wiwi-č-i 'acorn mush ACC' (CUP-J-SC-31)
  scorn-ABS-ACC
  mush
- (L) (59) anon-yi 'coyote ACC' (L-D-NP-210) ccyote-ACC
- (Y) (60) nee kaa maria-ta biča-k 'I didn't see Mary.' (Y-L-S-31)
  I NEG PN-ACC see-PERF

Nouns car sometimes be marked accusative in other ways. A particle <u>ka</u> (actually the accusative suffix of a truncated demonstrative) serves this function in Northern Paiute, and a similar construction has been reported for Tarahumara.

<sup>&</sup>quot;The y is intrusive and separates the two vowels a.

- (NP) (61) ka taba 'the sun ACC' (NP-N-HG-286)
  ACC sun
- (TA) (62) ke pegro ne a-re řipura 'I gave the axe to Peter.'

  ACC PN I give-PAST axe (TA-B-G-18)

The accusative may be zero, as with reflexively possessed nouns in Tubatulabal:

(TU) (63) čaami 'his own acorn gravy ACC' (TU-V-G-145) acorn gravy

-ci and -ni(ni) are also found on possessed nouns in Tubatulabal (they may be related to -yi (cf. (55)) through consonant gradation):

(TU) (64) maeša-ci=p 'their sack ACC' (TU-V-G-147) sack-ACC=their

In Luiseno, accusative inflection is marked on some nouns by loss of the final a (which derives historically from \*-a ACC!) from the absolutive endings -ta, -ča, and -la.

(L) (65) paa-la 'water' paa-l 'water ACC'
water-ABS water-ABS
ACC

Besides nouns, accusative inflection can appear on pronouns, noun modifiers, postpositions functioning as conjunctions, and nominalized subordinate clause verbs; these will be dealt with in appropriate following sections. Nominals can be marked accusative in a variety of syntactic roles, most basically, of course, when they serve as direct object, as in (57) and (60). While some languages use postpositions with indirect objects, others mark them the same as direct objects, and this (which is probably the P-UA state of affairs) implies accusative inflection in languages which have it:

(SH) (66) ni satii-a cuhni-"pih-a u"tu-hkwa 'I gave the bone to the dog.'
I dog-ACC bone-ABS-ACC give-PNCT (SH-M-SG-22)

Possessors and postpositional objects are commonly marked accusative in the pronoun copy construction (see BASIC SENTENCE STRUCTURE, Pronoun Copies; POSSESSIVES; POSTPOSITIONS).

- (M) (67) ini'i-na ii-"tii"na 'you white men's food' (M-L-G-333) white-ACC your-food man PL
- (Y) (68) sawa-ta betuk\* 'under a tree' (Y-L-TG-180) tree-ACC under

<sup>\*</sup>Etymologically (if not synchronically) betuk consists of be 'it' and tuk 'under'.

Finally, suborlinate clause subjects are sometimes marked accusative in some languages (see the sections on complex sentences for details).

(Y) (69) hu kari [im ačai-ta hinu-ka-'u] 'the house my father this house my father-ACC buy-PERF-SUBR bought' (Y-L-TG-100)

### Other

By and large, the accusative is the only case explicitly marked in UA. The nominative case is normally unmarked; no distinction is made between dative and accusative; and oblique cases (including dative in some languages) are marked by prepositions or postpositional suffixes, which will not be considered case inflections and will be treated separately (POSTPOSITIONS). There are however a few instances in which it is not totally unreasonable to speak of nominative inflection, and genitive and vocative inflection is attested.

The few instances where one might wish to speak of nominative case are those in which the occurrence of accusative inflection involves the dropping of some element that appears in the nominative but is not (at least in origin) strictly speaking a nominative case marking. For instance, the a of the Iuiseno absolutives -ta, -la, and -ča is truncated to mark accusative case, as in (65), so one might well be inclined to consider this a a nominative case marking of limited distribution. Northern Paiute has what in effect is a nominative case marking particle:

(NP) (70) su wida ka tihija-nu nama nobi-ga-'yu
NOM bear ACC deer-with together house-have-VR
'Bear was living with Deer.' (NP-N-HG-216)

This nominative  $\underline{su}$  derives historically from a clitic in Numic meaning 'just' that was attached to demonstratives and other elements if these were not marked accusative (by  $-\underline{ks}$ ); the 'articles' left by truncation of demonstratives thus include nominative  $\underline{su}$  and accusative  $\underline{ka}$ . There are a few other cases of restricted 'nominative' inflection in UA.

A genitive case of sorts is found in Shoshoni and Tubatulabal. Its historical status is presently unclear.

- (SH) (71) tuni-"pi-'a-" kahni 'the boy's house' (SH-D-PMS-60)
- (TU) (72) lanii=n taatwa-l-a'an 'the man's house' (TU-V-G-138) louse=his man-ABS-GEN

A vocative is found in Classical Nahuatl:

(A) (73) tee-teo-yé '0 gods!' (A-G-L-139) RIP-god-VOC

Certain kinship terms in Hopi have special vocative forms, e.g. tasts for -na 'father'.

#### POSSESSIVES

Sentences predicating possession were considered under BE/HAVE/DO. In this section we are concerned with expressions of possession within a nominal, in particular cases where the head noun is possessed.

Morphology

In all UA languages, simple possessive expressions of the type 'my N', 'his N', etc. consist of a head noun in conjunction with a possessor pronominal element of some kind. In parts of Numic and Taracahitic, the possessor pronoun is a particle which precedes the possessed noun and may be proclitic to some degree. In Southern Numic and Tubatulabal the possessor pronoun is enclitic to the head. In the rest of UA the possessor is affixal, and specifically is prefixal with one striking exception. In both Pimic and Corachol, all the possessor pronouns are prefixes with the exception of the third person singular, which is a suffix; the same is true in Hopi except that there the third person plural possessor is also a suffix. The type of pattern shown by Pimic and Corachol is the most likely reconstruction for P-UA, though it is unclear how tightly the pre-nominal pronouns were bound to the head. The following is a rough guess as to the form of the possessor pronouns in P-UA; it should be regarded only as a first approximation:

	SG	PL
1P	*i-n	*i=ta(=mi)-
2P	*≟(-m≛)-	# <u>i-mi-</u>
3P	*-y <b>≟</b>	*pá-má-

- (SH) (1) in tua 'your son' (SH-M-NN-10) your son
- (TU) (2) hanii=n±'in 'my house' (TU-V-G-137) house=mv
- (H) (3) itaa-ki 'our house' ki-'at 'his house' ki-'am 'their house' our-house house-his house-their
- (CA) (4) e-pa 'your aunt' (CA-B-IN)
  your-aunt
- (CU) (5) ne-ye 'my mother' (CUP-J-SC-95)
  my-mother
- (L) (6) cm-ki 'your PL house' (L-H-I-48)
  your-house
  PL
- (P) (7) im-ki 'your PL house' ji'i-j 'his mother' your-house (P-M-LPA-31) mother-his (P-M-LPA-32) PL

- (TA) (8) ce-ne oše-ri 'my letter' (TA-B-G-180)

  ACC-my write-NR
  (7)
- (Y) (9) in čuu'u 'my dog' bem bači 'their corn'
  m/ dog (Y-J-I-29) their corn (Y-J-I-11)
- (HU) (10) ne-tumiini 'my money' tumiinie-ya 'his money' (HU-G-S-30) my-money money-his
- (A) (11) no-kon 'my pot' (A-B-NA)

The UA tanguages exhibit a variety of devices to indicate possession when the possessor remains unspecified. There may be a special unspecified possessor prefix (cf. NON-DISTINCT ARGUMENT PHENOMENA);

- (NT) (12) ga-téaané-dami-ga 'someone's boss' (NT-BL-SO)
  UNSPEC-order-AG-POSSD
  POSSR
- (HU) (13) ra-tumiini 'someone's money' (HU-G-S-30)
  UNSPEC-money
  POSSR
- (A) (14) tee-ta' 'someone's father'
  UNSPEC-father
  POSSE

A third person singular or plural possessor pronoun may be used with the value of an unspecified possessor:

- (H) (15) yi-'am 'one's mother' (H-W-TD-171)
  mother-their
- (CA) (16) pe' he-qa' 'that grandmother' (CA-S-AM-54)
  DEM his-grandmother

The lack of any possessor pronoun may serve the same function:

- (NP) (17 usu oqa'a-bi wasa-kwi 'She will wash someone's baby.'
  she baby-ABS wash-POT (NP-AAL-NSO-10)
- (P) (18) soi-ga 'someone's pet' (P-M-LPA-33)
  pet-POSSD

Special devices may also be used when the possessor and subject are coreferential. There may be special possessor affixes for the reflexive; in Papago and Huichol, these are the same as the reflexive verb prefixes:

(HU) (19) tewi kuciira kani-i-kwei-tia-ni yu-'iwa man machete NARR-him-carry-CAUS-NARR REFI-brother 'The man gave his own brother a machete.' (HU-G-S-50)

Special reflexive particles or clitics are found in Numic:

- (NP) (20) usu ti ona'a wasa-k"i 'She will wash her own baby.' she REFL baby wash-POT (NP-AAL-NSO-10)
- (SH) (21) piil tilka-lna 'his own food' (SH-D-PMS-84)
  REFL est-NR
- (SP) (22) pu<sup>n</sup>ku-ŋwi-a=pi ko-ko'i-yi 'kills his own horses' horse=PL-ACC=REFL RDP-kill-PRES (SP-S-G-188) DISTR

Marking reflexive possession is one use of reflexive pronouns in Takic (see UA-L-NA):

(SR) (23) xwaan=vi=' pu-nuk a-'aš-ti hiihi
PN=he=PAST him-REFL his-pet-ACC see
'John saw his own dog.' (SR-C-PC)

The use of zero for reflexive possessors is attested in both Tubatulabal and (for third person) in Hopi:

(TU) (24) nik ag-dawiik hanii 'I saw my own house.' (TU-V-G-144)

I RDP-see house
PRRF

Finally, the marking may be the same as for non-reflexive possession.

(L) (25) xwaan kwaaviču-q po-'aač-i 'John is taking care of his (own)
PN take-TNS his-pet-ACC pet.' (L-H-I-80)
care
of

From the examples above, it is evident that possessed nouns typically lose their absolutive suffix in UA (cf. BASIC INFLECTIONAL ELEMENTS, Absolutive). This may even be true when the possessor is zero, as seen in (24). In some cases the absolutive is replaced by a special suffix which appears to have no other function than to indicate that the noun is possessed. \*-va can be reconstructed in this role for P-UA, and its reflexes are widespread in the family (cf. (12), (18), and examples below). Some languages have innovated other possessed suffixes, and they may tend to occur with certain particular types of nouns. Luiseno -ki, for instance, is basically restricted to nouns indicating things not normally possessed. Southern Paiute has a series of alternative possessed suffixes for such categories as body parts, things owned, and things not normally possessed.

(SP) (26) poo-i"n'i=ni 'the trail I own' (SP-S-G-122) trail-POSSD=my

- (SP) (27) tipi-"pi-a-ya=nimi 'our country ACC' (SP-S-G-120) country-ABS-POSSD-ACC=our EXCL.
- (CU) (28) ne-tema-ki'a 'my land' (CU-HN-M-124) my-land-POSSD
- (L) (29) c-'exva-ki 'your sand' (L-H-I-73) your-sand-POSSD
- (L) (30) ro-paa-w-i 'my water ACC' (L-KG-SG-89) ny-water-POSSD-ACC
- (P) (31) us=ga-j 'his tree' (P-M-LPA-33)
  tree-POSSD-his
- (TO) (32) viv-ga-d 'his tobacco' (TO-M-PL-333) tobacco-POSSD-his
- (TA) (33) ke-mu seka-ra 'your hand' (TA-B-G-180)
  ACC-your hand-POSSD
  (7)
- (Y) (34) a tami-wa-m 'his teeth' (Y-F-YP-13) his tooth-POSSD-PL
- (PO) (35) no-b'l-u-gam 'your sons' (PO-B-DMP-17)

  /OUR-son-POSSD-POSSD

  PL
- (A) (36) no-siwaa-w 'my wife' (A-B-NA)
  my-woman-POSSD

## Syntax

Previous examples have been restricted to pronominal possessors. When the possessor is non-pronominal, special syntactic constructions must be used, since a non-pronominal noun phrase cannot function as an affix or clitic. The nost common syntactic construction to accommodate non-pronominal possessors is the pronoun copy construction, in which the possessor is copied as a possessor pronoun (cf. BASIC SENTENCE STRUCTURE, Pronoun Copies). The possessor nominal is often marked accusative in languages with accusative inflection. It normally directly precedes the possessed noun, but inversion is common and discontinuity sporadically attested. It is not at all uncommon for the pronoun copy construction to be used (optionally) even when the possessor is itself a pronoun. The pronoun copy construction, with accusative marking and the possibility of inversion, can clearly be reconstructed for 2-UA.

(M) (37) ppi"poi-na=taa"kWaha a-"nopi-"wee
PW-ACC=we his-house-in
INCL
'We are in Poipoi's house,' (M-L-G-383)

- (TU) (38) uku=n hanii-1-in 'the edge of the house' (TU-V-G-138) edge=its house-ABS-GEN
- (H) (39) i-koon a-y tiwaya-'at 'my husband's niece' (H-VV-AL-315) my-husband-ACC niece-his
- (SR) (40) nii ni-niaa' 'my basket' (SR-H-D) I my-basket
- (CU) (41) ne-ye pe-ki 'my mother's house' (CUP-J-SC-95) my-mother her-house
- (P) (42) higai wisilo-ga-j g pančo 'Pancho's calf' (P-SS-D-126) that calf-POSSD-his ART PN
- (CR) (43) inana-ra i pari 'the boy's mother' (CR-P-G-22)
  ART mother-his ART boy
- (HU) (44) (eeki) a-tumiini 'your money' (HU-G-S-30)
  you your-money
- (A) (45) in ii-pepeč in tla-'toaa-ni 'the ruler's bed' (A-DA-FC10-173)
  ART his-bed ART UNSFEC-say-AG
  OBJ
  ruler

A second type of construction is for the possessor and possessed nominals to be juxtaposed without any pronoun copy. In several variant forms, this construction is widespread enough that it could well have been in the proto language. The possessor nominal may be marked genitive or accusative in languages with such inflection, though several examples below involve nominative forms. In Papago, the 3P SG possessor — is used when the possessor noun follows the possessed noun but drops when it precedes. It is interesting that the 3P SG —ya in Huichol also drops when the possessor is a noun rather than a pronoun.

- (SH) (46) ku"cun-a-" kahni 'the cow's house' (SH-D-PMS-103)
- (SP) (47) paa-ya-ana kani(=ana) 'his aunt's house' (SP-8-G-189) aunt-ACC=his house=her
- (CA) (48) wikikma-l' weevu'-ki 'bird's egg' (CA-B-IN) bird-ABS egg-POSSD
- (P) (49) wisilo mo'o 'the calf's head' (P-L-FN) calf head
- (TA) (50) nihe ono-ra 'my father' (TA-H-TE-x)
  I father-POSSD
- (Y) (51) nim abači(-ta) kari 'my brother's house' (Y-L-TG-179) my brother-ACC house

(HU) (52) war.i iwaa-maa-ma 'John's siblings' (HU-G-S-40) PN sibling-RDP-PL

With either or both of these constructions, together with the basic marking for proxominal possessors, complex nominals can be built up in which a possessor is possessed by a possessor, which is in turn possessed, etc.

- (M) (53) poi"poi-na a-"pu"ku-na a-"qwaci 'Poipoi's dog's tail' PN-#CC his-dog-ACC its-tail (M-L-G-332)
- (L) (54) ya'a'š po-kaytu-m pom-huu 'the man's enemies' arrows' man his-enemy-PL their-arrow (L-H-I-51)
- (P) (55) high wisilo-ga-j g pance asli-ga 'that calf of Panche's that calf-POSSD-his ART PN child-POSSD child' (P-SS-D-127)

An important feature of some UA languages is a 'classifier' construction, in which the possessive relation is stated between the possessor and a noun with at least minimal classifying function, to which the possessed noun is in simple apposition. This construction can definitely be reconstructed for P-UA, as can the inanimate classifier noun \*ni-wa 'possession' on the basis of Serrano -nu (Kitanemuk -niw), Papago ini-ga, and Tarahumara niwa-ra.\* The most common distinction is between animate and inanimate possessions, and this is a likely candidate for reconstruction. Cahuilla has apparently innovated a series of more specialized classifier nouns.

- (SR) (56) ča-Mu-i niçqa-t-i 'our beads ACC' (SR-H-G-141)
  ou:-possession-ACC bead-ABS-ACC
- (CA) (57) ne-wes-'a nave-t 'my cactus' (CA-B-IN)
  my-sow-NR cactus-ABS
- (CA) (58) ns-sex-'a tal'ki'-im 'my cooked potatoes' (CA-B-IN)
  my-cook-NR potato-PL
- (CU) (59) kiima-l pe-'aš awa-l 'the boy's dog' (CU-HN-M-125) boy-ABS his-pet dog-ABS
- (L) (60) po-'aač-i awaal-i 'his dog ACC' (L-H-I-78) his-pet-ACC dog-ACC
- (L) (61) poraavle no-miix 'my leaf' (L-L-FN) leaf my-possession
- (P) (62) huan gogs şoi-ga 'John's dog' (P-S-IN)
  PN dog pet-POSSD

<sup>\*</sup>Conceivably \*ri-wa in turn derives from \*ni 'be' plus the possessed suffix \*-wa; note that the Luiseno form -mix 'possession' is probably just miyx 'be' under nominalization. Cupan -'as 'pet' and Nahustl -askas 'possession' (cf. (75)) are also suggestive.

- (P) (63) huan uus ½ñi-ga 'John's tree' (P-S-IN)
  PN tree possession-POSSD
- (TA) (64) muhe niwa-ra řipura 'your axe' (TA-B-G-54) you possession-POSSD axe
- (TA) (65) eruka niwa-ra aka 'Whose sandal is this?' who possession-POSD sandal (TA-B-C-384)
- (TA) (66) eruka buku-ra k-ame mi gao 'Whose is this horse?'
  who pet-POSSD be-PRTC this horse (TA-B-G-55)

These classifier nouns, or other nouns with similar sense, can be used as possessive pronouns. In some languages special emphatic pronouns serve this function instead. For the most part information about possessive pronouns or their equivalent is quite scanty.

- (M) (67) ihi nika 'This is mine.' (M-L-FILL-5)
- (H) (68) nii-yi 'It's mine.' (H-W-L-20) I-ACC (?)
- (H) (69) i-himi 'mine' (H-VV-D-48) my-(some)thing
- (SR) (70) ivi' imi' mi-nu 'This is yours.' (SR-H-D) this you your-possession
- (L) (71) cam-miix-um=pum 'They are ours,' (L-KG-SG-100) our-possession-PL=they
- (P) (72) iida miisa o=q t-'iñi-ga 'This table is ours.'
  this table B=be our-possession-POSSD (P-L-FN)
- (TA) (73) taši niwa-ra u nee 'It's not mine.' (TA-B-G-383) NEG possession-POSSD be I
- (PO) (74) no-bek 'mine' (PO-B-DMP-35)
  my-possession
  (?)
- (A) (75) n-aaškaa 'mine' (A-A-I-154) my-possession

### POSTPOSITIONS

#### Forms

UA languages may have postpositions, prepositions, or both. Prepositions are always independent forms. Some postpositions are also free forms, but

most are bound to a noun or some type of pronominal element. Bound postpositions are the most basic of these possibilities, in terms of prevalence and history; free prepositions and postpositions arise in UA, at least originally, through reanalysis involving the pronoun copy construction, as sketched in (1).

For this reason the prepositions and free postpositions of a UA language commonly begin with a recurring syllable that can be traced etymologically to some type of pronominal element, such as the <u>be</u> which initiates most free postpositions in Yaqui, which derives from 3P SG \*pi-. (See UA-L-SP for extensive discussion.)

It is not slways a simple matter to list the prepositions and postpositions of a LA language. For one thing, they may divide into subclasses
with distinct properties. One such division pertains to whether the element
in question is free or bound. Bound postpositions may differ in what they
can be bound to; in Shoshoni, for instance, a special subclass of postpositions is restricted to demonstratives, while in Classical Nahuatl, postpositions
must be divided into those that occur only on nouns, those that occur only
on pronouns, these that occur on either, and those that occur on pronouns
or else on nouns with an intervening connective, as in (2).

(A) (2) čiim.l-ti-ka 'with a shield' (A-G-L-90) shield-CONN-with

Postpositions may differ in the effect they have on nominals to which they attach, as in Yaqui, where some postpositions tolerate or require an accusative suffix and others do not.

- (Y) (3) hoan-ta-mak ne sii-ka 'I went with John,' (Y-D-BT-5) PN-A: C-with I go-PERF
- (Y) (4) ta'a-t ne sukau-bae 'I want to warm myself in the sun.' sun-in I warm-want (Y-D-BT-5)

A second type of difficulty in listing the postpositions of a language is that they may vary in form depending on phonological, morphological, or syntactic factors. The Yaqui postposition -t 'in' also has the morphologically determined variants  $-\underline{ci}$  and  $-\underline{cci}$ . In passive sentences, the choice of  $-\underline{e}$  or  $-\underline{mea}$  to specify the agent depends on whether this is singular or plural.

- (Y) (5) hu maaso wepul o'oo-ta-e me'e-wa-k this deer one man-ACC-with kill-IMPRS-PERF 'The deer was killed by one man.' (Y-L-S-38)
- (Y) (6) hu kuču h<sup>w</sup>a'a-wa-k im usi-m-mea thi; fish eat-IMPRS-PERF my child-PL-with 'The fish was eaten by my children.' (Y-L-TG-147)

The Luiseno postposition -na 'in, on, at, by' has the suppletive variant -to when used with pronouns.

- (L) (7) too-qa 'on the rock' (L-H-I-89) rock-at
- (L) (8) čaamo-to 'by us' (L-H-I-94)

Papago forms are inflected for number, e.g. wačo 'under SG', wapčo 'under PL', and wa'awačo 'under DISTR'.

However, the most fundamental reason why it may be difficult to list the postpositions of a UA language is the continual formation and evolution of new postpositions through combinations of older ones or derivation from other grammatical classes, nouns in particular. Complex postpositions formed in these ways may constitute a large, even open-ended class of forms showing varying degrees of grammaticization, and their properties may differ depending on the nature of their source. In some cases the formation of complex postpositions may follow fairly regular patterns, as in Shoshoni, where -i 'toward', -ti 'from', -ti 'at', and -ku 'toward' attach to simple postpositions to form regular paradigms: -tu"ka 'under', -tu"ka-i 'toward under', -tu"ka-"ti 'from under', -tu"ka-nti '(at) under', -tu"ka-nku 'toward under' (SH-M-NN-22). Naturally things are in general considerably less regular. The most common nominal source for postpositions is of course possessed body parts, and the elements derived from them may betray their origin through special morphosyntactic properties; compare the following pairs of examples from Tubatulabal and Huichol (see UA-L-SP for analysis of the latter).

- (TU) (9) akaziip oxolaa-1-a 'across the canyon' (TU-V-G-150) across canyon-ABS-ACC
- (TU) (10) puma-pa=n paa-l-in 'on the edge of the water' edge-on=its water-ABS-GEN (TU-V-G-176)
- (HU) (11) hee-pa-na 'toward him' (HU-G-S-43)
- (HU) (12) warie-na 'behind him' (HU-G-S-43) behind-him (back)

Serious reconstruction of individual postpositions for P-UA must await careful investigation. A number of preliminary reconstructions have however been made or can be suggested very tentatively. \*-mi (with lenition of m to w) is a fairly clear reconstruction (UA-L-SP, UA-L-NG) in the general semantic range of 'to' or 'with', as is \*-ma 'on' (UA-L-NCG), which is probably to be distinguished from \*-man 'with'. \*-"k"a can be reconstructed with a semantic value approximating 'to', 'at', or 'against', and it entered into such combinations as \*-pa-"k"a 'toward, direction' and \*-tu-"k"a 'under, belov' (UA-L-NA-95). Beyond these, there is good evidence for \*-pa(-na) 'on'; \*-ta, \*-na, and \*-ka with uncertain meaning; and perhaps \*-ci (with lenition of c to y and possibly nasalization to n), which semantically appears to involve movement or instrumentality.

# Syntax

A number of basic syntactic constructions can be reconstructed for postpositions in P-UA and are attested in virtually all the daughter languages. The simplest of these is \*PRON-P, in which a postposition attaches to a pronominal base. A highly tentative reconstruction of the pronominal forms to which postpositions could attach is the following:

In addition the reciprocal prefix \*na- took postpositions.

- (NP) (13) na-ma 'together, with one another' (NP-N-HG-216)
  RCPR-with
- (M) (14) ni-paa 'by me' (M-L-G-212) m:-by
- (H) (16) i-mi 'to you' (H-W-L-18)
- (H) (17) itami-cave 'between us' (H-K-L-118)
  us-between
- (SR) (18) pi-mia' 'with her' (SR-H-G-54) her-with
- (L) (19) čaamo-nay 'from us' (L-H-I-94) vs-from
- (P) (20) im-dagio 'in your PL direction' (P-M-LPA-38)
  you-direction
  FL
- (Y) (2L) sme-u 'to them' (Y-L-P) them-to
- (Y) (22) &-mak 'with him' (Y-C-PAY-4) idm-with
- (HU) (23) wa-heima 'above them' (HU-G-S-78)

Things are much more complicated with non-pronominal objects. It is easy to reconstruct for F-UA the pattern \*N-P, in which a postposition attaches directly to a noun, usually inanimate, causing the absolutive to drop. The postposition probably followed the 3P SG possessor suffix when

this was present.

- (H) (24) kii-ve 'at the house' (H-W-L-24) house-at
- (P) (25) kii-d-'id 'in his house' (P-S-PP-32) house-his-in
- (TA) (26) gari-či 'in the house' (TA-B-G-19)

Also reconstructable is the pronoun copy construction \*N-ABS-ACC PRON-P, with the possibility of inversion and probably also the possibility of discontinuity (see UA-L-SP for detailed justification).

- (M) (27) nopi-"na a-ho"ma-"wee 'in the space above the house' house-ACC it-above-in (M-L-G-224)
- (SR) (28) ni-şumani-t\* ni' pu-nə' mii 'I walk away from my bow.'
  my-bow-CONST I it-from go (SR-C-PC)
- (CR) (29) wa-hap<sup>M</sup>a u-huuci-m<sup>M</sup>a 'on their younger brothers' them-on their-younger-PL (CR-P-G-26) brother
- (PO) (30) i-tok a-t 'in the water' (PO-B-DMP-33) it-in water-ABS

Due to various diachronic developments, however, the situation in the daughter languages shows a great deal of diversity. For one thing, changes previously discussed affecting the absolutive and accusative suffixes have left few if any cases where the full \*N-ABS-ACC PRON-P construction is preserved intact with all the morpheme divisions synchronically defensible. Instead the noun is likely to be marked by what is synchronically an accusative suffix only or an absolutive suffix only; cf. (1), (27), (30), (31).

(CU) (31) supul-i nət-i pə-yik 'to the other chief' (CU-HN-M-135) other-ACC chief-ACC him-to

The innovation of possessor clitics and of new absolutive suffixes has given rise to cases where possessor elements follow postpositions and cases where absolutive endings do not drop.

- (SP) (32) kani-paa=ni 'at my house' (SP-S-G-230) house-at=my
- (SH) (33) huu-"pi-"ma 'with the stick' (SH-D-PMS-96) stick-ABS-with

<sup>&</sup>quot;This 'constituency' suffix indicates that the noun is coreferential to a pronominal element elsewhere in the sentence, in this case <u>pu</u>-. Cf. UA-L-SP and SR-C-AMM.

Beyond these, three other major types of changes affecting postpositions have occurred in various languages. First, the sequence "PRON-P has not infrequently been reanalyzed as P, giving rise to free postpositions or (with inversion) prepositions from the pronoun copy construction. This was illustrated above in (1), and (9) is an example showing inversion (a is from 3P NO NH \*a\_). Second, the two words of the uninverted pronoun copy construction have sometimes fused together into a single word, creating new types of complexities. In Cahuilla and Cupeno, for example, this has led to cases where a postposition does not cause an absolutive to drop; this is explained through the historical development sketched in (34).

A similar development in Papago caused the absolutive, otherwise completely lost, to be retained in remnant form as a connective before certain post-positions.

Similarly, the absolutive plus the 3P SG pronoun i- fused to make the connective -ti- of Classical Nahuatl, illustrated in (2). Third, the derivation of new postpositions from nouns has resulted in new types of postpositional constructions and even in new pronominal objects, as illustrated above in (9)-(12) (Huichol -na 'him' was originally a postposition and became a pronoun through reanalysis; see UA-L-SP).

Through these and other changes, the UA languages have come to show a great deal of diversity in their basic postpositional constructions. No language retains the P-UA system intact, and no two languages agree in all details. Apart from differences in the inventory of postpositional forms, languages differ in regard to whether they have postpositions or prepositions; whether they have free or tound postpositions; what pronominal elements they attach to; whether postpositions can attach directly to nouns; how they interact with absolutive, accusative, possessor, genitive, and connective elements; whether they show inversion and discontinuity; and so on.

Thus far we have considered only cases where postpositions co-occur with nouns or definite pronouns functioning as their objects in simple sentences with overt predicates, such as (28). Postpositions and postpositional expressions have a variety of other syntactic uses, however. Most of these will be dealt with in other appropriate sections; here we simply review some of these uses quite briefly.

First, postpositions can appear overtly as predicates in some languages and should perhaps be analyzed as underlying predicates in such cases; for examples, see VERB MORPHOLOGY, Other. Besides nouns and pronouns, they can also attach to other nominal elements such as question words and demonstratives.

- (SH) (37) kahni-a-n ma-hoi 'around the house' (SH-M-IN) house-ACC-GEN DEM-around
- (SP) (38) i<sup>n</sup>pi-ma=' tika"ni-paa"nia 'What will you butcher with?' what-with=you butcher=FUT (SP-S-G-209)
- (Y) (39) aapo habe-ta-sa-u nooka-k 'Who did she speak to?' (Y-L-TG-140) she who-ACC-Q-to speak-PERF

Postpositions meaning 'with' can function as conjunctions, especially to conjoin nominals. In some Numic languages, it is even possible for the conjunction to be marked accusative when the nominals so conjoined are objects.

(SP) (40) a"ci="ma-"ku='"kwa=pi '(while holding) it, together with his bow-with-ACC=it=REFL own bow' (SP-S-G-222)

Postpositions can be copied onto noun modifiers as a kind of agreement phenomenon.

- (SH) (41) ma-ma<sup>n</sup>tu toya-ma<sup>n</sup>tu 'on that mountain' (NUM-M-PC)

  DEM-on mountain-on
- (L) (42) po-ki-na yawaywi-na 'in his beautiful house' (L-H-I-150) his-house-in beautiful-in

Finally, postpositions or postpositional expressions figure in the composition of various other syntactic constructions or grammatical elements. They are often central elements in adverbial demonstratives, as in (36); a postposition may be the operative element in a comparative construction (see COMPARATIVES); postpositional expressions may be adopted as subordinators of various kinds; and so on.

#### DEMONSTRATIVES

#### Forms

The demonstrative systems of the UA languages range from the relatively simple to the quite complex. All of them are centered on a proximal/distal contrast, which is manifested by a minimum of two contrasting forms and a maximum of four. \*i can certainly be reconstructed as a proximal demonstrative element in P-UA, and it contrasted with a distal demonstrative whose most likely reconstruction is \*u (\*\* is also possible).

- (M) (l) i-hi\* 'this one' (M-L-G-189) u-hu 'that one' (M-L-G-190)
- (CA) (2) i' puk'u 'this root' et kiyaat 'that child' (CA-B-IN)

<sup>\*-</sup>hV is a demonstrative base (B). Harmonization determines the quality of the vowel.

(Y) (3) i-ke'e hamut-ta hu-ke'e ču'u-te\* (SON-K-V-340)
this-ACC woman-ACC that-ACC dog-ACC that dog ACC'

(A) (4) in-iin tla-'tosa-ni in-oon kal-li F-PROX UNSPEC-say-AG B-DIST house-ABS (AFT) OBJ 'this ruler' (A-A-I-273) 'that house' (A-R-AM-19)

In addition to these contrasting proximal and distal elements, P-UA had the two forms \*pi-ma and \*a-ma, which in origin at least meant 'that one' (\*ma 'one'), perhaps with an animate/inanimate distinction between them. These were reanalyzed as single-morpheme demonstratives and have been incorporated into the proximal/distal system of various daughters, elaborating it to include a greater number of contrasts or displacing original exponents of the simple contrast. Some of the forms with this origin are Muric ma (found in all the Numic languages), TU wa', H pam (plural pima), SR ama', L wunsal (\*wansal), P higai (\*p > h is not regular, but \*w (lented from \*m) > g is), Y wa, Mayo ama, FO ma. (Cf. UA-L-NCG.)

Categories other than proximal/distal are not widespread in UA and are probably secondary. The visible/invisible (i.e. in sight/out of sight) distinction found in some languages (e.g. Southern Paiute and Cora) can be regarded as simply one division in the (elaborated) proximal/distal scale. Shoshoni has sV forms, indicating 'definiteness' or previous mention, contrasting with 'V forms which lack this implication; there may be a similar contrast in Cupeno (ax "es" that' versus espete 'the former' (CU-HN-M-127)). Hopi has an emphatic demonstrative mi' used, for example, in pointing semething out.

(H) (5) mi taaqa 'that man there (the one I'm pointing to)'

Southern Numi: makes an animate/inanimate distinction through different endings attached to the demonstrative base,  $-\underline{na}$  AN versus  $-\underline{t-\underline{t}}/-\underline{t}\underline{ka}$  INAN; selected form: from the elaborate Southern Paiute paradigm are given in (6).

(SP) (6) i-na a-ti ma-ti u-"ka (SP-S-G-177)
t-is=AN that-INAN that-INAN that-INAN
(near) (far) INVIS

UA demonstratives can virtually always be inflected for number and for accusative case in languages which retain it. Details vary considerably in the daughters, but  $*-\underline{mi}$  PL and  $*-\underline{kV}$  ACC are fairly clear reconstructions. Various inflections are illustrated in the examples below.

(SH) (7) Eu-"ka ku"cun-a 'that cow ACC' (SH-D-PMS-80) that-ACC cow-ACC

<sup>&</sup>quot;Yaqui hu is distal relative to  $\underline{i}$ , but less distal than wa, hence it is generally glossed 'this' in our examples. (See also the footnote to example (34).)

- (SP) (8) a-"mi-tuk"a 'to them/those AN' (SP-S-G-180) that-PL-to (AN)
- (TU) (9) wongo=n wa'adin kooim-in 'that woman's shoes' (TU-V-G-184) shoe=her that woman-GEN
- (H) (10) i-mi-y koo-kon-ti-y 'these squirrels ACC' this-PL-ACC RDP-squirrel-PL-ACC (H-K-I-63)
- (L) (11) oonum-um-i yum'pi-š-m-i 'those hats ACC' (L-D-PG-224) that-PL-ACC hat-ABS-PL-ACC
- (P) (12) higa-m ka-kawyu 'those horses' (P-H-TWO-7) that-PL RDP-horse
- (Y) (13) gWa-ka kari-ta 'that house ACC' (Y-L-TG-182) that-ACC house-ACC
- (HU) (14) mii-ki\* tewi 'that person' (HU-G-S-36) that-SG person
- (A) (15) ini'-ke' iin otomi-' 'these Otomi' (A-A-I-273)

A number of UA languages have developed 'articles' of some kind. In most cases these can easily be related to demonstratives and can be regarded as demonstrative elements bleached of much of their semantic content and adapted for various grammatical uses. There may be a variety of articles, as in Southern Paiute, reflecting the multiplicity of the demonstratives from which they derive, or there may be a single article with no category distinctions (e.g. Nahuatl in). 'The' is often the most convenient gloss for them, but this may be misleading, as whatever semantic content they may have is often so limited that they can occur even with indefinites. While they tend to directly precede the noun, their syntactic properties vary; Papago g, for instance, only precedes the noun and is mutually exclusive with higai 'that', to which it is related, while in Southern Paiute articles can co-occur with demonstratives and show considerable freedom of position. Detailed information is often lacking.

- (NP) (16) su gapa paba-'yu 'This bed is big.' (NP-AA-AS-2)
  NOM bed big-VR
- (M) (17) a"na qa"ti="nuhu 'the/a chair' (M-L-G-331)
  ART sit-INSTR

<sup>\*-</sup>ki SG contrasts with \*-me PL on demonstratives in Huichol; it no doubt derives from \*-kV ACC, as accusative inflection was lost in that language. The -ke' of the Nahuatl form also derives from \*-kV ACC through a different reanalysis.

- (SP) (18) a-ti="su kun a-ti 'that fire' (SP-S-G-180)

  that-INAN\*just fire that-INAN

  THE TRUE TRUE THAT THAT
- (CU) (19) e. pe' pulini=" 'that child' (CU-HN-M-127)
  DEM ART child-ABS
- (CU) (20) p.\* pa-1 'water' (CU-H-G-152)
  ART water-ABS
- (P) (21) ȱ-xa-j o g aupa 'The cottonwood is tall.' (P-L-FN) tall-be B ART cottonwood
- (TO) (22) ga t-cog 'our father' (TO-M-PL-368)
  ART our-father
- (CR) (23) i ta-yau 'our father' (CR-F-NE-1)
  ART our-father
- (PO) (24) ra to-t 'the rock' (PO-B-DMP-31)
  ART rock-ABS
- (A) (25) av a'moo on-nees-ti-katka in see tlaaka-tl ard NEG away-appear-CONN-was ART one man-ABS 'And not a single man came forth.' (A-G-L-131)

# Syntax

Demonstratives normally precede the noun they modify. If they co-occur with other modifiers, the demonstrative tends to be first.

- (M) (26) maku nopi 'that house' (M-L-G-336) that house
- (H) (27) ina lööyöm sikisve-vit 'these two cars' (H-K-L-53) these two car-DL
- (SR) (28) wam hwwm-i taaqta-m-i 'the other people ACC' those other-ACC person-PL-ACC (SR-H-G-133)
- (TO) (29) miga tido' tivwag 'the blue heaven' (TO-M-PL-379) that blue heaven
- (TA) (30) mi ripura 'that axe' (TA-B-G-32) that axe
- (Y) (31) hu-me naiki peo-ta kaba'i-m 'these four horses of Peter's' this-PL four PN-ACC horse-PL (Y-L-S-66)
- (PO) (32) ina neke-t 'this meat' (PO-B-DMP-26)
  this meat-ABS

They can of (ourse follow a quantifier when this functions as head in what might be termed a 'partitive' construction:

- (TU) (33) pinni'i-k wal a-'aazovaa-l-a 'all (of) those doctors ACC' all-ACC that RDF-doctor-ABS-ACC (TU-V-G-186)

  ACC
- (Y) (34) si'ime hunu-me naiki sakoba'i-m 'all (of) those\* four waterall this-PL four watermelon-PL melons' (Y-L-S-28)

It is rare for demonstratives to follow their head, but this is attested in a few languages.

- (SP) (35) tinpi-ci i-"ka 'this rock' (SP-S-G-180) rock-ABS this-INAN
- (HU) (36) waruucie-ya mii-ki 'that mother of his' (HU-G-HTI-227) mother-his that-SG
- (A) (37) in pa'-tli iin 'this medicine' (A-G-L-142)
  ART medicine-ABS PROX

Discontinuity is considerably more common (cf. BASIC SENTENCE STRUCTURE, Presumptive and Resumptive Pronoun Constructions) and might possibly be reconstructed for P-DA.

- (SP) (38) ma-ti-"su piyai-"pikai kwa"si=an a-ti-that-INAN=just remain-REM tail=his that-INAN
  VIS PAST
  That tail of his was left.' (SP-S-G-180)
- (SR) (39) kwin ama' nim yiivuka' čičin-t 'The boy walked outside, it is QUOT that walk outside boy-ABS said.' (SR-H-C-28)
- (CU) (40) mukut əxwəč-i pəm-nənmin kəwisi-č-i and that-ACC they-chase fox-ABS-ACC QUOT 'And they chased that fox, it is said.' (CU-H-G-157)
- (TA) (41) eči=ca mu yenako nawa 'Did you arrive at those hours?' that=Q you hour arrive (TA-B-G-243)

Demonstratives usually serve in UA as third person pronouns. It therefore goes without saying that they can typically occur without head nouns (or viewed differently, as head nouns). In this role they can be inflected for case and number and can sometimes occur with postpositions and other modifiers.

(M) (42) u-wee-"huhu 'in that one' (M-L-G-191) that-in-B

<sup>\*</sup>Proximal/distal distinctions are not always rigidly maintained and will not always line up with the ones made in English, needless to say. Neutralization of such distinctions is carried farthest in the articles, as noted above.

- (SH) (43) i-tihi the two of them ACC' (SH-M-IN)
- (SP) (44) ma-wukWa 'to it' (SP-S-G-204) thaw-to VIS
- (H) (45) ni' pi-t tiwa 'I found it.'
  I that-ACC find
- (L) (46) conc-nay 'from that' (L-KG-SG-102) that-from
- (L) (47) wunaal yuvataat 'that black one' (L-L-FN) that black
- (TA) (48) eči ok<sup>w</sup>a 'those two' (TA-B-G-150) that two
- (HU) (49) mii-ki 'that one/he' (HU-G-S-36) that-SG

A number of previous examples indicate that demonstratives typically agree in number and case with the noun they modify. Enough daughters also show postpositional agreement that this, as well as agreement in case and number, might be reconstructed for P-UA. In some cases a postposition can be omitted from the noun if it occurs on the demonstrative; in Papago this constitutes a special construction for emphasis of the demonstrative.

- (M) (50) ma-ree-"huhu nopi-"wee 'in that house' (M-I-G-346) that-in-B house-in
- (CU) (51) ex'a-na kelawe-t 'on the stick' (CU-H-G-216) thut-on stick-ABS
- (L) (52) conn-pi-tal too-tal 'with that rock' (L-D-PG-137) than-(?)-with rock-with
- (P) (53) hig-daam do'ag 'on that mountain' (P-M-LPA-36) tha:-on mountain

#### ADVERBIAL DEMONSTRATIVES

Adverbial immonstratives are not themselves noun modifiers. They are discussed here because of their intimate association with regular demonstratives, which have just been treated. We will understand the term 'adverbial demonstratives' to refer to deictic elements pertaining to location, time, manner, and possibly other semantic domains represented by adverbial expressions. They will therefore include such terms as 'here', 'there', 'now', 'then', and 'thus'.

Systematic information about adverbial demonstratives in UA is frequently lacking, and what information there is is often scattered about and awaits careful study, including the internal reconstruction the data sometimes cries out for and which would seem to be a prerequisite for solid reconstruction. On semantic grounds, one could expect adverbial demonstratives to consist of three components: a deictic component (e.g. proximal/distal); some nominal or verbal pro form to indicate the domain (location/time/manner); and a postpositional element (at/from/to/etc.) to mark orientation with respect to the location indicated by the other two components. Thus 'now' can be analyzed roughly as 'at this time', and 'there' as 'at that place'. While the synchronic picture is often quite irregular and the diachronic picture remains cloudy, it is nevertheless readily apparent that these components are in fact basic to the UA adverbial demonstratives, though one or another is more often than not implicit and the synchronic identity of components is sometimes in doubt.

# Location

Some of the southern languages (e.g. Papago, Tarahumara, Cora) have developed elaborate locative demonstrative systems marking, besides proximal/distal, such categories as position with respect to a slope, position with respect to a river (upriver/downriver), and orientation (facing observer/facing away/facing sideways). How well such systems compare across the family, and how much can be reconstructed, is not immediately apparent.

The basic contrast in the locative domain is of course 'here' versus 'there', possibly with intermediate positions. The system may be quite regular, as in Shoshoni, where the postposition -"kV (the vowel is harmonic) can attach to any of the demonstrative bases with the expected meaning; or it may be considerably less regular.

- (SH) (1) i-"ki 'here' u-"ku 'there' (SH-M-NN-21) this-LOC that-LOC
- (L) (2) iip 'here' wuna 'there'

While there is considerable variety in and across the daughters, there is a fairly clear tendency for 'here' to involve the demonstrative base i- and for 'there' to involve a- or ma- (including lenited wa-). For 'here', likely P-UA reconstructions (with the second member a postposition or possibly a pro form) include \*i-k'a (cf. UA-I-NCG, UA-L-NA-98) and \*i-na (e.g. M inaha, P iina, TO iina, TA ena, Y inim, HU ena); other possibilities are more speculative. 'There' forms relatable to \*a- might include SP apaa, SR aap, P am, TO amu, TA ami, Y ama, and others; those which may indicate \*ma- include M maa\*noho, TU wah, L wuna, P gam, Y wam, HU mana/wana, PO ma, and others.

Besides 'here', 'there', and intermediate points, UA locative adverbials commonly cover more dynamic notions such as 'to here', 'from there', etc. The forms have varying degrees of morphological transparency. In Luiseno, for example, we find iva 'here', ivik 'to here', and ivay 'from here' paralleled by wuna 'there', wunik 'to there', and wunay 'from there'. While this seems quite regular, the postpositions -yk 'to' and -nay 'from' form somewhat irregular combinations with the bases, and there are also synchronically unanalyzable forms such as čeyk '(to) here' (< \*ča 'us' + -yk 'to'?).

Locative adverbial demonstratives may of course themselves specify location. In a dition they often duplicate in pronominal form the information specified in other locative expressions in the sentence (cf. BASIC SENTENCE STRUCTURE, Presumptive and Resumptive Pronoun Constructions),

- (SR) (3) ankta' ni' mih moom-t pu-no' 'I went away from the owl.' I go owl-ABS it-from (SR-C-IN) to there
- (PO) (4) ma teke-t ma pen loma 'that man there on the hill' tha man-ABS there on hill (PO-B-DMP-30)

At least on the basis of current information readily available. adverbial demonstratives pertaining to time are typically much less elaborated in UA than those pertaining to place. A form for 'now' is almost always attested, but there may be overlap with terms for 'already'. 'today', etc. A special, purely deictic form for 'then' is not always cited; it may be hard to distinguish such forms from 'and then' etc. For 'now', a sequence similar to aya is common at least in the northern languages (NP yr, SP ai, TU yah, CA petay, CU aya), but such forms are also attested meaning 'then' and any reconstruction would at present be tricky. Shoshoni forms temporal demonstratives by attaching the postposition -pe to demonstrative bases, e.g. si-pe 'now', while Tarahumara uses yenako 'hour', e.g. eči yenako (that hour) 'then' (cf. Y huna(c) 'then' and PO nako 'now/today').

# Manner

Little information is available concerning possible semantic differentiation of the basic 'thus' meaning, but a distinction between 'in this manner' and 'in that manner' can apparently be made in some languages, e.g. Huichel ipai 'in this way' versus mipai 'in that way'. Shoshoni and Southern Paiute form manner demonstratives by attaching -"ni to a demonstrative base.

(SH) (5) si-"ni 'in this manner/thus' (SH-M-NN-22) this-MAN

Yaqui huni 'thus' suggests that this may have comparative significance. The -"ni may be related to 'be' or 'do' forms (cf. BE/HAVE/DO), and examples like (6) suggest the relevance of the 'like' domain.

(SH) (6) satii-ni na-puni 'It looks like a dog.' (SH-M-IN) dos-like REFL-see

Tarahumara use: -rega 'manner' with demonstratives, e.g. eci-rega 'in that manner'.

'Thus' forms are not uncommonly found in a presumptive pronoun construction with complements of verbs of saying.

(Y) (7) im maala ne-u hunen hia [ka=ne sua-k] my nother me-to thus say NEG=I be-PERF

'My mother tells me I'm not smart.' (Y-L-TG-24)

## QUANTIFIERS

Quantifiers are a diverse lot, and we will focus our attention on such basic meanings as 'all', 'much', 'many', and 'some', which predominate in UA. Numerals are properly regarded as quantifiers, but they often have special properties and will be considered in a separate section.

## Forms

Even the basic quantifiers vary greatly in form in the daughter languages. and reconstructions must be very tentative. The basic reconstruction for 'all' appears to be "naco or "nayo (recall the c/y/n alternation): NP noo-(< "noyo < "nayo), TU pini- (ni < "nay?), CR naimi, HU nai, PO noco. "pisi is reconstructable for P-SUA: P wii, NT viiši, TO viiš, (?) Y si'ime, A iškič. The relation between these and other forms requires further study. 'Much' and 'many' are normally expressed by the same or closely related forms. Miller (UA-M-CS-46, set 276) reconstructs \*mu(')i on the basis of southern languages, but there is also northern attestation for such a form or for "mi(')i (considerable fluctuation is found in UA between "u and "i, particularly adjacent to labials), and many more forms can be included when consonant gradation relating m and w is taken into account. The k of certain forms may be a reanalyzed accusative suffix: H wasyak, SR wasr(a), CA meten, CU mat'is, L muyuk, P mu'i, NT muid'u, TO mui', TA ve, CR mu'i, HU maire, PO mick 'enough', A miyak. There is an evident relation to UA forms for 'big'. For 'some/few/a little' a likely proto form is \*pahi: TU paa'im, H pah, P ha'i, \* TO hai', \* CR ha'ih, HU hiipa (hii < \*hai?), A ači 'a little bit.

Whatever the precise reconstructions may be, the basic quantifiers often have plural and/or accusative forms and agree with the nouns they modify.

- (SK) (1) usi niwi oyo-ku-si niwi- tipia-i pui-"ka<sup>T</sup>ti that Indian all-ACC-EMPH Indian-GEN land-ACC see-PRTC 'That Indian saw all the Indians' land.' (SH-B-EDG)
- (TU) (2) wal pinni'i-k aazowaa-l-a 'all those doctors ACC' that all-ACC doctor-ABS-ACC (TU-V-G-185)

  ACC
- (CA) (3) mete'č-em kooč-im 'lots of pigs' (CA-B-IN) many-PL pig-PL
- (L) (4) muyuk-m-i momkat-m-i awaal-m-i 'many large dogs ACC' many-PL-ACC large-PL-ACC dog-PL-ACC (L-L-FN)
  PL

<sup>\*</sup>P-UA \*p is expected to become Pimic w/v, but \*p > h (> 2) (as in Corachol and Aztecan) is an alternate lenition pattern that could well have affected certain Pimic forms. \*p > h also allows us to relate \*pima to the Pimic distal demonstratives (cf. DEMONSTRATIVES).

- (Y) (5) silme-ta baye-k 'has all the corn' (Y-L-TG-187)
- (A) (6) in močin-tin tee-teo-' 'all the gods' (A-G-L-132)
  ART all-PL RDP-god-PL

## **Syntax**

As previous examples indicate, quantifiers normally precede the noun they modify. The opposite order is not at all uncommon, however, nor is discontinuity (cf. BASIC SENTENCE STRUCTURE, Presumptive and Resumptive Pronoun Constructions).

- (NP) (7) sati'i paa hibi-u noo-ko 'The dog drank all the water.'
  dog water drink-PNCT all-ACC (NP-AF-N-334)
- (SH) (8) i"kihtu wihnu naw-i wasa-"kwa soo-"ti here then Indian-ACC kill-PNCT many-PRTC PL ACC 'Here (they) killed many Indians.' (SH-B-EDG)
- (TU) (9) tuha-t-a yoowi 'very many water snakes ACC' (TU-V-G-186) water-ABS-ACC many snake
- (SR) (10) puyu=m±=' iyii ačam ča-ňuu-i 'They stole all our all=they=PAST steal we our-possession-ACC things.' (SR-H-D)
- (CA) (11) kiki-t-am supul-em 'some young people' (CUP-J-SC-299)
  young-ABS-PL some-PL
  person
- (L) (12) paa-1 muyuk-i 'a lot of water ACC' (L-L-FN)
  water-ABS much-ACC
- (TA) (13) weka Yo-ame guši 'Many stakes are lacking.' (TA-B-G-306) many lack-PRTC stake
- (A) (14) iškič naamoyo-lo-k in toonakayoo-tl all take-IMPRS-PAST ART sustenance-ABS away 'All the sustenance was taken away.' (A-G-L-139)

Quantifier: may themselves function as heads.

- (L) (15) muyuk-i ayali-q 'knows a lot' (L-H-I-39) much-ACC know-TNS
- (PO) (16) e-mok noco 'They all died.' (PO-B-DMP-35)
  PERF-die all

They can also function overtly as predicates.

- (L) (17) po-yu muyuk 'He has lots of hair.' (L-L-FN) his-hair much
- (NT) (18) ali muid v gir-ta-taišoli 'We have very many pigs.'
  very many our-RDP-pig (NT-MNRS-LM-191)
- (Y) (19) bempo hwebena 'They are many.' (Y-L-TG-171) they much
- (A) (20) wel miek in mawistik ki-čiiw-ke' kal-li very many ART marvelous it-made-PL house-ABS 'Very many were the marvelous houses they built.' (A-DA-FC10-167)

A distinction can be made between a simple quantifier construction in which QNT modifies N, as in many men, all snakes, etc., and a more complex construction in which the quantifier modifies an implicit head (or is itself the head) in a 'partitive' construction, as in many of the men, all (of) the snakes, etc. While little is known of the details of such constructions in UA, it is apparent that the partitive construction often has special properties. A demonstrative, for instance, may follow a quantifier in the partitive construction even though it is normally first in a series of modifiers (cf. DEMONSTRATIVES, especially examples (33)-(34)). A special partitive suffix is found in Papago.

(P) (21) ha'i-j o iida-m kii-ki s-to-tha 'Some of these houses some-PRTV B this-PL RDP-house POS-RDP-white are white.' (I-I-FN)

Special constructions with 'all' exist in Huichol, with reflexive possessor prefixes, and in Nahuatl, with subject prefixes.

- (HU) (22) yuu-nai-me 'all of them ACC' (HU-G-S-80)
  REFL-all-ACC
- (A) (23) ti-močin-tin 'all of us' (A-G-L-135) we-all-PL

The following Cora construction is also worthy of note.

(CR) (24) nain-kime ru-niunka 'with all his words' (CR-P-NE-3) all-with his-word

#### NUMERALS

Basic Forms

Luiseno, with numerals only through 'five', falls at one extreme in regard to the formation of numerals in UA. Some languages, such as Nahuatl, have principles of numeral composition that allow one to count at great length if not indefinitely. These principles are outside the domain of this survey.

Reconstructions have previously been offered for numerals from 'one' through 'five'. Voegelin, Voegelin, and Hale suggest \*si-, \*wo-, and

"pahi for the first three numerals (UA-VVH-TCG-137f., sets (65), (103), and (1) respectively). Miller (UA-M-CS-68-69) gives "se(me) for 'one'; "wo "woka/"woy/"wa for 'two'; "pahi for 'three'; and "wa/"mako for 'four'. He notes that forms for 'five' are based on "ma/"mo 'hand', and that the reciprocal prefix "na- is often used in the formation of numerals such as 'four', 'six', and 'eight'.

While these reconstructions are good as first approximations, there is room for refinement. For instance, taking consonant gradation into account allows Miller's two forms for 'four' to be related to each other and to 'five'/'hand', but a clearer P-UA reconstruction for 'four' (were there two competing forms?) is the reciprocal formation based on 'two'. Final y(V) or k(V) found on many forms were probably reanalyzed at some stage from suffixes, possibly 'be' and ACC respectively. While detailed discussion is not possible here, I believe a case can be made for the following reconstructions for 'cne' through 'four': "simayV 'one' (NP simi, SH si'má, SP suu, H sik'a, P hima, TO himad, Y senu, Opata sei, CR sai, HU se(Wi), PO se, A see/sen); "woha (NUA)/"woka (SUA) 'two' (NP waha, SH waha, SP waa, TU woo, H lööyöm, SF wih, CA wih, L weh, P gook, NT gooka, TO gook, TA ok'a, Y woi, HU hauta, PC omem, A come); "pahay(V) 'three' (NP pahi, SH pahi, SP pai, TU paa(h)i, H paayom, SR psahi', CA pah, L paahay, P waik, NT yaika, TA bekia, Y bahi, HU haika, PO eyom, A eeyi); "na-wo (RCPR-two) 'four' (TU naanaa'u(?), H naalōyōm, TA nawo, HU nauka, PO nsyom, A naawi).

There are traces of plural inflection on numerals, but in general there are no special plural forms. Accusative inflection is found in some of the northern larguages; in the south it would be expected only in Yaqui, and there it is found only when a numeral is used as head. Forms with postpositions have been attested at least in Luiseno. At present only accusative inflection seems a plausible P-UA reconstruction.

- (M) (1) taha-"ku nopi-"na 'two houses ACC' (M-L-Q-338) two-ACC house-ACC
- (SP) (2) waa-"ku=ca=ni kapaa-kai 'I received two horses.' (SP-S-G-264) two-ACC=PAST=I horse-have
- (H) (3) pama-y löqma-y maana-vita-y 'those two girls ACC' (H-K-L-62) those-ACC two-ACC girl-DL-ACC
- (L) (4) veh-č-um-i ya'ayč-um-i 'two men ACC' 1wo-ABS-PL-ACC man-PL-ACC (?)
- (L) (5) vex-tal no-čaayla-tal 'with my two sieves' (L-KG-SG-95) .wo-with my-sieve-with
- (Y) (6) menu-k-u noka-'e 'Speak to one.' (Y-L-TG-186) one-ACC-to speak-IMP

Other endings may be found on basic numerals. For example, in Northern Paiute the verbalizing suffix -\frac{1}{yu} is employed for numerals used as predicates (cf. (45)) or for emphatic nominative forms. -\frac{tu}{2}, no doubt derived from the active participle, is used with nominative forms in Mono.

(M) (7) waha-"tu nopi 'two houses' (M-L-G-337)
two-NOM house

The parallel form in Huichol has also in effect become a nominative marker on numerals, contrasting with accusative -me (which derives historically from the plural ending -- Huichol in general has no accusative marking).

- (HU) (8) sewi-ti-iraawe 'one wolf' (HU-G-S-50)
- (HU) (9) yu-haika-me 'they three ACC' (HU-G-S-33) REFL-three-ACC

## Derived Forms

Much more than the other quantifiers, numerals in UA often have special derived forms to express a variety of notions closely related to them semantically. One common pattern is the use of reduplication with a basically distributive sense, with such meanings as 'each', 'X by X', or 'X at a time': this clearly reconstructs.

- (M) (10) wa'-waha 'by twos, two by two' (M-L-G-285)
  RDF-two
- (SH) (11) si-si"mi 'one at a time, once in a while' (SH-D-PMS-24)
  RDP-one
- (TU) (12) čiičii-jičiič 'each one' (TU-V-G-179)
  RDP-one
- (L) (13) su-spul(-um) 'one each' (L-KG-SG-50)
  RDP-one-PL
- (P) (14) hi-hima-ko one by one (P-M-LPA-69)
  RDP-one-DISTR
- (A) (15) see-sen tlaaka-tl 'each man' (A-G-L-36) RDP-one man-ABS

A periphrastic means of expressing this type of notion has been reported for Tarahumara.

(TA) (16) okwa niraa 'two by two, two each' (TA-B-G-329) two DISTR

Quite often there are specific forms or general patterns for 'X times', 'X places', and ordinal numbers.  $\underline{sV/cV}$  recurs for 'X times', and other recurrent sequences such as  $\underline{na}$  and  $\underline{kV}$  can be noted, but specific reconstructions are not at present obvious.

(M) (17) waha-na"p4 'twice' (M-L-G-231) two-times

- (SP) (18) pasi-"ca 'three times' (SP-S-G-175) three-times
- (TU) (19) čii j-ami 'once' (TU-V-G-178)
- (H) (20) see-s 'once' nanal-sikiv paq"t 'eighty' one-times (H-K-L-203) eight-fold ten (H-K-L-173)
- (SR) (21) mshaç-ia 'five times' (SR-H-D)
- (CA) (22) wih-ga'an 'in two places' (CA-H-B8K-58) two-places
- (CU) (23) wi-š 'twice' (CU-HN-M-140)
- (L) (24) patay-kun 'three times' po-paahay-lo no-kaamay 'my third son' three-times (L-L-FN) its-three-ORD my-son (L-L-FN)
- (P) (25) gol-ko 'twice' waik-pa 'three places' tw-times (P-S-IN) three-places (P-L-FN)
- (TA) (26) bire-ana 'in one place' o-sa 'twice' ore-places (TA-H-TE-xvi) two-times (TA-B-G-326)
- (Y) (27) au-woi taewai-ka 'the second day' mamni-sia 'five times' ORI-two day-ORD (Y-J-I-31) five-times (Y-J-I-274)
- (CR) (28) aněávi-kah-rece 'five times' (CR-C-LDD-12)
- (HU) (29) haika-kaa 'three times' (HU-G-S-21)
- (A) (30) se-ppa 'once' c-k-kaan 'two places' ons-times (A-A-I-30) two-(?)-places (A-A-I-306)

Occasionally some of these endings can also be used with other quantifiers, e.g. L muyu-kun 'a long time', A miek-pa 'many times'. Forms are often irregular, and in particular there may be a special form for 'first', e.g. L anaeyi (cf. supul 'one' and (24)). Related forms and special constructions, especially with 'one' and 'two', are not uncommon, but largely beyond the scope of this outline. Semantic values include 'alone', 'only', 'both', etc. I give only a 'ew examples.

- (TU) (31) wooyo 'both' (TU-V-WD-228)
- (CA) (32) wih-qwa ne-naq'a 'both my ears' (CA-B-IN) two-(?) my-ear

- (L) (33) supul qaxaal po-ha\* 'only one quail' (L-KG-SG-101) one quail its-only
- (A) (34) to-seel-tin 'we alone' iin-newaan\*\* 'both of them' our-alone-PL (A-G-L-36) their-both (A-R-AM-18)

## Syntax

Numerals in UA usually precede the noun they modify and sometimes agree with it, as discussed above. While numerals following the head and discontinuity have both been attested, these phenomena appear to be quite uncommon.

- (SP) (35) ka"ni=ni ma"niki-yu="nia 'my five houses' (SP-S-G-175) house=my five-NCM=like
- (TU) (36) naawidam woo hanii-l-a 'between two houses' (TU-V-G-176) between two house-ABS-ACC
- (CU) (37) kəlawə-t ku'ut wih 'two sticks, it is said' (CU-H-G-156) stick-ABS QUOT two
- (L) (38) no-maa paahay 'my three fingers' (L-L-FN) my-finger three
- (L) (39) wunal-um weh atax-um 'those two people' (L-M-SA2-208) that-PL two person-PL
- (P) (40) iida-m waik s-to-tha kii-ki 'these three white houses' this-PL three POS-RDP-white RDP-house (P-I-FN)
- (P) (41) gook a=fi taču g o'chon 'I need two books.' (P-L-FN) two B=I need ART book
- (PO) (42) se kwe-t 'a snake' (PO-B-DMP-26) one snake-ABS
- (A) (43) nasvi meec-tli 'four months' (A-S-DLN-272) four month-ABS

They may of course be used without a head, in effect becoming head nouns themselves, as in (6) and (44).

(K) (44) waha-ko ni'i paka-kadi 'I killed two.' (K-M-SPO-5) two-ACC I kill-PAST

They sometimes appear as overt predicates.

<sup>\*-</sup>ha is probably the same element found in the Luiseno emphatic reflexive pronoun (UA-L-NA).

<sup>\*\*</sup>geel derives from see 'one', and newsam decomposes into ne- UNSPEC RCPR and wash 'with'.

- (NP) (45) waha-'yu-na nami 'There were two of us.' (NP-N-HG-245)
  .wo-VR-PROG we
  (?)
- (SR) (46) hwini-mi=' qac wohw 'They were two.' (SR-H-G-34)

While numerals, like other quantifiers, normally follow demonstratives (as previous examples show), they precede in 'partitive' constructions.

(8H) (47) ::4"mi su-ti wa'i-"pi 'one of the women' (SH-M-IN)

Special partirive suffixes are found in Papago and Northern Tepehuan. These may have something to do with a 'specifier' (SPEC) ending in Huichol and something apparently similar in Tarahumara; not much is known about these.

- (P) (48) witha-y o iida-m kii-ki s-to-tha 'Three of these houses three-PRTV B this-PL RDP-house POS-RDP-white are white.' (P-L-FN)
- (NT) (49) wii gi-vaika-tai 'all three of yours' (NT-MNRS-IM-191) all your-three-PRTV
- (TA) (50) Nuhe=ca niwa-ra okwa-nika 'Are the two yours?'
  | 'ou=Q possession=POSSD two=SPEC (TA-B-G-383)
  | (?)
- (HU) (51) maika kii-yari 'three houses' (HU-G-S-40)

## ADJECTIVES

## Morphology

Various aspects of the morphology of adjectives were treated earlier under ADJECTI/E MORPHOLOGY. Here we focus on those aspects that pertain most directly to the grammatical properties of adjectives used attributively as nominal adjuncts.

An adjective modifying a noun may enter into an ADJ+N compound with that noun (see examples (1)-(4) under COMPOUNDS). It is to be expected that for the most part such combinations will tend to be fixed lexical units, and the pattern of secondary importance, but at least in Hopi the pattern is productive and is the primary means of expressing adjectivally-qualified nouns.

(H) (1) wipa-taqa 'tall man' (H-K-L-122) tall-man

An attributive adjective which does not enter into a compound with the head noun may show other special morphological properties. In Tubatulabal

and Northern Tepehuan, adjectives sometimes take an ending which, at least in the former case, can be equated historically with the pro form 'one'.\*

- (TU) (2) tabu'upil-wa-yi-n támi'a-t-a 'short rope ACC' short-one-ACC-(?) rope-ABS-ACC (TU-V-G-175)
- (NT) (3) go-taišoli tuku-kėdė 'the black pig' (NT-MNRS-LM-190) the-pig black-one (?)

It was noted under adjective morphology that adjectives may be derived by means of active or perfective participles. Beyond that, however, are cases where active participles occur on attributive adjectives, not in a derivational function, but rather to mark their attributive status; contrast (4) and (5).

- (SH) (4) pia-<sup>n</sup>ti pu<sup>n</sup>ku ha"pi 'The big horse is lying down.' big-PRTC horse lie (SH-M-SG-74)
- (SH) (5) pu<sup>n</sup>ku pia-yu 'The horse is big.' horse big-VR (SH-M-SG-75)

Subject prefixes normally appearing on verbs have been attested on attributive adjectives under special circumstances in Cahuilla and Classical Nahuatl. The status of the Cahuilla example is not clear; in Nahuatl, subject markers regularly appear on predicate nominals (and predicate adjectives), and by virtue of agreement they also go on attributive adjectives modifying predicate nominals.

- (CA) (6) čemem heš-'a'amiv-am heš-taxliswe-t-em 'we old Indians' we we-old-PL we-Indian-ABS-PL (CUP-J-SC-298)
- (A) (7) ti-kWal-tin ti-mo-knii-waan 'We are your good friends.' we-good-PL we-your-friend-POSSD (A-A-I-267)
  PL

Apart from these special cases, attributive adjectives in UA usually require no morphological elements other than those involved in their derivation (e.g. absolutive or participial suffixes) or in agreement with the head noun. Of the latter, reduplication for (distributive?) plural is most widespread. The \*-mi plural is found throughout Takic, and accusative inflection shows up in one form or another in most of NUA.

(M) (8) cawu-"ku nopi-"na 'good house ACC' (M-L-G-337) good-ACC house-ACC

<sup>&</sup>quot;These attributive adjectives thus might have been appositive nouns in origin; a similar analysis can be suggested for the demonstratives "pi-ma and "a-ma, which also incorporate an element reconstructable as 'one'.

- (SH) (9) pis-Tti pu<sup>D</sup>ku-i 'big horse ACC' (SH-M-SG-74) big-PRTC horse-ACC ACC
- (TU) (10) pili tohii-l-a 'heavy deer ACC' (TU-V-G-175) heavy deer-ABS-ACC
- (SR) (11) atiija-c hwukah-t 'a big deer' (SR-H-G-138) big-ABS deer-ABS
- (L) (12) av'aant-um ki-ča-m 'red houses' (L-H-I-149) red-PL house-ABS-PL
- (L) (13) yot-i yuvataant-i munwut-i 'big black bear ACC' (L-H-I-133) big-ACC black-ACC bear-ACC
- (P) (14) ga'i-giq ho-hodai 'large stones DISTR' (P-M-LPA-61)
  REP-big RDP-stone

# Syntax

Adjectives most commonly occur directly before the head noun, as seen above, but the opposite order is also frequently encountered, and both possibilities can safely be attributed to the proto language. Discontinuity is also sometimes found.

- (SR) (15) miaa-c-i ni hihi sirii'nka'-ti 'I saw a red moon.'
  moon-ABS-ACC I see red-ACC (SR-H-G-9)
- (CU) (16) čiyma-1 ayxa-t 'old basket' (CU-HN-M-127) bisket-ABS old-ABS
- (L) (17) naučaxani-š muyuk-i eŋ-mawi-č-i 'a lot of salty food food-ABS much-ACC salt-having-ABS-ACC ACC' (L-L-FN)
- (L) (18) navitmal po-yk yawaywi-š 'to the pretty girl' (L-L-FN) girl her-to pretty-ABS
- (P) (19) gi'i wuq u'uhig 'They are big birds.' (P-CH-SR-182) bi; be bird
- (HU) (20) u ikaa méheek<sup>u</sup>a 'young woman' (HU-G-S-56) woman young

Adjectives can also appear without head nouns.

- (NP) (21) pa-paba-u si'ma ni koi 'I only kill the big ones.'
  R NP-big-ACC only I kill (NP-AF-N-335)
- (L) (22) no =n ma'ma-q yot-i 'I want a big one,' (L-KG-SG-117)
  I=I want-TNS big-ACC

In Yaqui adjectives take accusative inflection only if the head is omitted:

- (Y) (23) bwe'u-k 'a big one ACC' (Y-L-TG-188) big-ACC
- (Y) (24) hu-e tu'i usi-ta-u 'to this good child' (Y-L-TG-188) this-ACC good child-ACC-to

In some languages adjectives can take postpositions to agree with their head noun. The postposition may fail to appear on the noun if it occurs on the adjective.

- (M) (25) papa-"tu-wee nopi-"wee 'in the big house' (M-L-G-346) big-PRTC-in house-in
- (SR) (26) kii-č atiita-v 'in the big house' (SR-H-G-99) house-ABS big-in
- (CU) (27) savat-'aw xwavixwavi'-'aw 'on the green grass' (CU-H-G-84) grass-on green-on
- (HU) (28) eecipeme-cie=niu kararaa-cie 'in a little gourd bowl' little-in=QUOT gourd-in (HU-G-8-42) bowl
- (HU) (29) aki amspa-cie 'in the big canyon' (NT-MNRS-IM-238) canyon big-in

#### COMPARATIVES

Comparative constructions are discussed at this point because they most often pertain to noun modifiers, adjectives in particular.

# Comparisons of Inequality

Not nearly so much is known about UA comparatives as one would like, but it nevertheless seems apparent that 'more...than' comparatives are the most common type, being attested for every language where there is information. 'Less...than' comparatives, if they occur at all, are negated versions of the 'as...as' construction.

Comparatives pertain to relative degree along some dimension, which most typically is specified by an adjective. Adverbs and quantifiers can also be compared, as can other parts of speech such as verbs when semantically appropriate. The full range of possibilities for UA is not known; most examples involve adjectives, but comparatives formed on the other classes mentioned are also attested in one language or another.

(8P) (1) ni-kaapa-"t'i-m pa'a-yi-aqa 'He is taller than I.'
me-more-PRTC-PL be-PRES=he (SP-S-G-220)
(P) tall

- (TU) (2) you'd taatwa-l coyanas kooim-i There are more men than women.' many man-ABS more woman-ACC (TU-V-G-176)
- (TU) (3) moplement-tkič opbowi-kan opysnaš sazowas-l-a jinsonweed-ABS=QUOT power-have more doctor-ABS-ACC 'Jimsonweed, it is said, has more power than the doctors,' (TU-V-G-187)
- (H) (4) mon'i ini-peninay wiipa 'The chief is taller than I.' chief me-more tall (H-W-L-25)
- (H) (5) maana siwa-y e-vniqay a'ne-wari 'The girl ran faster than her girl younger-ACC her-more INTNS-run younger sister.' (H-W-L-25) sister
- (SR) (6) nii'=n ama-č pih-pa' mitaa'i 'I'm taller than he.'
  I≃I he-CONST him-on tall (SR-H-G-28)
- (SR) (7) pi-nuk kişaa'it iču'kin nii' nih-pa' 'He does it worse than him-REFL badly do I me-on I do.' (SR-H-D)
- (L) (8) wunsal=up noo-to weh-kun awolvo 'He is twice as old as me.'
  he=ne me=on two-times old (L-L-FN)
- (P) (9) huan o ba'ik'i čiwa-] [m=o hi higai o'dham]

  PN B beyond long-be SUBR=B PNCT that man
  'Jonn is taller than that man.' (P-H-TTE-190)
- (TA) (10) wabe pace fina-tiri uku noca ke fee-gia uga very difficult through-like be work NEG play-INF with 'It is more difficult to work than to play.' (TA-B-G-578)
- (TA) (11) magel we gara hu hulic tasi 'Maguel is better than Julio.'
  FN very good be FN NEG (TA-T-TED-43)
- (Y) (12) pen-ta kaari če'a hose-ta kaari beppa bwe'u PN-ACC house more PN-ACC house over big 'Peter's house is bigger than Joe's house.' (Y-J-I-51)
- (A) (13) in petolo' kwal-li san ok senka' kwal-li ye'waatl ART PN good-ABS just yet very good-ABS he 'He is better than Peter.' (A-A-I-350)
- (A) (14) ne'waatl ok ači ni-tla-mati-ni [in a'moo yu'ki te'waatl]

  I yet a I-UNSPEC-know-AG SUBR NEG thus you
  little OBJ
  'I am a bit more learned than you.' (A-A-I-351)

As these examples show, the UA languages witness a considerable variety of comparative markings and constructions. In the mejority of cases the element, or one of the elements, expressing the 'more' notion is a postposition of some kind, normally attached to the noun or pronoun designating the standard of comparison. Something relatable to "-pa 'on' predominates

in this role and is the most likely P-UA comparative marker (NP -pag. SP-kaapa, H -peniqay/-vniqay, SR -pa', Y beppa (from "PRON-P by reanalysis)). Some languages however use other postpositions with such glosses as 'on'. 'beyond', or 'through'. A variety of non-postpositional markings are also found. Negation, whose use is most transparent in locutions such as 'X is ADJ. Y not' (cf. (11)), may be used in Tarahumara and Nahuatl. The Nahuatl particle ok 'vet' is similar in semantic effect to a postposition like beyond'. Forms derived from verbs are also found; Nahuatl has comparative locutions based on tlapanawia 'excell/surpass something', and Voegelin suggests (TU-V-G-175) that Tubatulabal consants of the verb coya 'pass by'. the benefactive or applicative suffix -na. and the adverbial subordinator -s. Since the standard of comparison apparently derives in many cases from the object of a verb or postposition, one might expect it to appear in accusative case in those languages where such elements are so marked, and this is generally true, with accusative case marking in Tubatulabal, in Hopi, and optionally in Yaqui. In Papago and Nahuatl there is overt indication that the clause expressing the standard of comparison is subordinate. The participial ending in Southern Paiute, the -s of Tubatulabal coyanas, and the -qay of Hopi -penigay can also be identified with subordinators.

Comparisons of Equality

Less is known about comparisons of equality than those of inequality. As one might expect, these involve elements with such meanings as 'same', 'like', 'thus', and 'so', whether they are expressed by postpositions, clitics, predicates, or particles. Subordination with respect to the standard of comparison is found in some languages, and accusative case inflection at least in Yaqui. One recurring feature, at least in the southern languages, is the use of 'correlative' structures somewhat analogous to English as...as, with the same or similar marking occurring twice.

- (SP) (15) toko-"ni-pai-"ti-m pa'a-yi="nia=ana 'He is as tall as I mm.'
  just-me-equally-PRTC-PL be-PRES=like=he (SP-S-G-231)
  to tall
- (L) (16) no-kaamay-um po-plov-um pay'wič-um o-kaamay-um ankič-um my-son-PL RDP-good-PL same-PL your-son-PL like-PL 'My sons are as good as your sons.' (L-L-FN)
- (P) (17) husi c ha'as s-wagima [m=o g huan (ha'as s-wagima)]
  PN B so POS-industrious SUBR=B ART PN so POS-industrious
  much
  "Joe is as industrious as John (is)," (P-L-FN)
- (TA) (18) čigo yena řina-tu řee-gia [ma=pu=yena noca-ria]
  also much through-(?) play-INF SUBR=it=much work-INF
  hard
  'It is as hard to play as to work.' (TA-B-G-578)
- (Y) (19) in usi hamut in kuna(-ta) benasi si hi-hiibwa
  my child woman my husband-ACC like much RDP-eat
  daughter
  'My daughter eats as much as my husband.' (Y-L-S-53)

- (A) (20) in iin-čiči-waan tomaawak-e' yu'kin t-ička-waan ART their-dog-POSSD fat-PL thus our-sheep-POSSD PL PL 'Their dogs are as fat as our sheep.' (A-A-I-349)
- (A) (21) in keeski-pa kwiik-o-aano-loo-ya noo iski-pa mik-oa-ya
  ART how-times sing-IMPRS-take-IMPRS-PAST also so-times die-IMPRS-PAST
  many be song and dance DUR many DUR
  'As many times as there was song and dance, so many times was there dying.' (A-A-I-350)

As noted previously, 'less...than' comparatives, to the extent that they are found in UA, consist of negations of 'as...as' constructions.

- (L) (22) no-swaamay qay c-swaamay aa-q po-yoot-u my-daughter NEG your-daughter be-TNS its-big-NR like size
  'My daughter is not as big as yours.' (L-L-FN)
- (TA) (23) waši wiči-ra ko ke' me lasani [ma=pu=yena čo'mari cow skin-POSSD IRR NEG so smooth SUBR=it=much deer much
  'A cow's skin isn't as smooth as a deer's.' (TA-B-G-396)

## Superlatives.

Even less is known about superlatives than about comparisons of equality, and I can do little more than list a few examples that have come to light. If there is any tendency observable, it is that of the 'more... than' marking being used with an indefinite such as 'all', 'some', 'people', etc. for the standard of comparison. As the Nahuatl example shows, a degree expression ('very') that is comparative only implicitly may be the functional equivalent of a superlative.

- (SP) (24) nin'i-kaapa-"t'i-"mi ana 'the greatest person' (SP-S-G-220) person-more-PRTC-PL ART
- (TU) (25) pilit tohil-1 tambil coyanas paa'im 'The deer is heaviest of heavy deer-ABS (?) more some all.' (TU-V-G-176)
- (L) (26) no-swaamay maas yot čaamo-to 'My daughter is the biggest of us.'
  my-daughter more big us-on (L-L-FN)
- (P) (27) whis ha-ba'iči s-toni 'It is the hottest.' (P-M-LPA-63) all them-beyond POS-hot
- (NT) (28; gi-mara višia tividi-kidi 'your tallest son' (NT-MNRS-LM-192)
  vour-son all tall-one
- (TA) (29) raso-ame ba'wi rina ga'ra uku 'Sunned water is the best.' sun-PRTC water through good be (TA-B-G-323)
- (Y) (30) če'a bye'u kaari 'the biggest house' (Y-J-I-51) more big house

(A) (31) in ičpooč-tli ka senka' wel kwalneski
ART maiden-ABS indeed very well beautiful
'The maiden is most beautiful.' (A-A-I-353)

#### INDEFINITE PRONOUNS

#### Positive

Accessible data on indefinite pronouns in UA is so fragmentary that very often not even a reasonably full list of basic forms is available, let alone detailed knowledge of their properties. Among the positive indefinite pronouns, we may distinguish between forms like English one, which function as nouns (but not necessarily complete nominals), as in the red one, this one, etc., and forms like someone, somewhere, etc., which typically constitute full nominals or adverbial constituents.

There is a decent amount of evidence for reconstructing the simple pro form "wa 'one' for P-UA. It is preserved most clearly in Hopi, where it is used with some productivity in precisely the reconstructed role, e.g. i'-wa 'this one', mi'-wa 'that one'. Another fairly obvious reflex is found in the long forms of the Nahuatl independent pronouns: ne'-waa-tl 'I', te'-waa-tl 'you', etc. "wa also survives as an ending on certain adjectives in Tubatulabal (see example (2) under ADJECTIVES). More speculatively, wesi appears in negative indefinite pronouns in Tarahumara and can be glossed 'someone', while waate 'others' in Yaqui (Y-D-V) could easily be derived from 'one' by means of a plural or other suffix. It will be recalled that "simayV was reconstructed as the numeral 'one', and "pi-ma and "a-ma as demonstratives which in origin meant 'that one'. The "ma in these forms can be related to "wa 'one' through consonant gradation, probably at some stage of pre-P-UA. A number of other elements can also be traced to "ma/"wa 'one'. I believe, but less obviously so.

It was noted under QUESTIONS that WH question words in UA are closely related to the corresponding indefinite pronouns, the relationship ranging from full identity to readily perceivable morphological similarity in at least certain forms. It should come as no surprise, then, that \*haka 'who' and \*hita 'what' are also straightforward reconstructions for 'someone' and 'something' respectively (selected reflexes of \*haka 'someone' include SH ha'ka, H hak, L hax, A aka'; selected reflexes of \*hita 'something' include H hita ACC, L hita, Y hita, A itla'). As with question words, specific reconstructions for other forms are problematic at best. Accusative inflection with these forms is widespread in the northern languages. Plural inflection is not widespread compared to other nominals, which is what one might expect with indefinites. Quantifiers may sometimes serve as indefinites, in particular the numeral 'one'.

- (M) (1) haqehe ki"ma="ti 'Someone is coming,' (M-L-G-376) someone come-TNS
- (SH) (2) ni kia ha"ka-i pui-"ka 'I saw someone.' (SH-M-SG-34) I DUB someone-ACC see-RSLTV
- (SH) (3) ni hi<sup>n</sup>pai u pui-nu 'I saw him sometime.' (SH-MB-LC-15,10) I sometime him see-COMPL

- (H) (4) pan hiita navota 'He heard something.' (H-K-L-110) he something hear
- (H) (5) hasi-m sonohi-t tiki-ya 'Some people cut the reed.' soneone-PL reed-ACC cut-PL (H-K-L-110)
- (L) (6) mixina=mo heela-an 'They will sing sometime.' (CUP-J-SC-103) sometime=they sing-FUT
- (L) (7) non-n axi-m-i toow-q 'I see some people.'

  I=I someone-PL-ACC see-TNS
- (P) (8) hima o ki m-'a'aga 'Someone is beckoning to you.' (P-H-G-63)
  one B EV you-beckon
- (TA) (9) bire namuti či a-ma re 'You will give me something.' ole thing me give-FUT be (TA-B-G-449)
- (Y) (10) si'ime hita ho'o-ne 'Everyone does something.'
  all something do-FUT (Y-F-YP-10)
- (A) (11) t-aka'-me' 'We are some people.' (A-A-I-175)
  websomeone-PL

# Negative

For the most part the UA languages do not have special negative indefinite prinouns. Rather, negative indefinite notions are simply expressed through positive indefinite pronouns used in sentences marked negative by the usual marker for sentential negation. There are however languages, such as Nahuatl, where negative elements have fused with positive indefinite pronouns to form special negative indefinite pronouns. If there is some freedom of position, as in Hopi, the marker of negation may be attracted to the indefinite it negates even if the two are not so tightly bound as to constitute a single word.

- (M) (12) qutu'u=po'o haqehe a-su"tapihai-"ti 'But nobody understands it.'

  NAG=but someone it-understand-TNS (M-L-G-232)
- (K) (13) y-waat hana kahni-paana 'There isn't anybody in the house.'
  N'G someone house-in (K-M-SP0-14)
- (H) (14) q: hak warik-iwta 'Nobody is running.' (H-K-L-110)
  NEC someone run-DUR
- (SR) (15) qai=k<sup>w</sup>in hamin qii 'He didn't say anything.' (SR-H-G-22) .MEG=QUOT somehow say (?)
- (CA) (16) Den kil hiče-y piš pe-tew 'But he knows nothing about and NEG something-ACC about it-see it.' (CA-H-BSK-49)

- (L) (17) noo qay mikina paala-na a-'aw 'I never lived in Pala.'
  I NEG sometime PN-in RDP-live (L-L-FN)
  PAST
- (P) (18) pi a=ñ has ñ-Juñ-him 'I wasn't doing anything.' NEG B=1 something REFL-do-DUR (P-L-FN)
- (TA) (19) kaca ne ka gase eyen-e pa 'I wasn't going anywhere.'
  NEG I NEG somewhere go-PAST EMPH (TA-B-G-223)
  NIR
- (Y) (20) kg-ita beete-k 'Nothing burned.' (Y-L-TG-134)
  NEG-something burn-PERF
- (Y) (21) bempo ka-akun saha-k 'They went nowhere.' (Y-L-TG-134) they NEG-somewhere go-PERF PI.
- (PO) (22) nintega as n-ko-nki 'I want nothing.' (PO-B-DMP-34) nothing NEG I-it-want
- (A) (23) ayaak mo-tlapaloa-ya 'Nobody was daring.' (A-G-L-131) nobody REFL-dare-PAST
  DUR

At least one case has come to light in which the negative element is sublexical.

(L) (24) yaawa-qa=p hiiča 'There is nothing.' (L-KG-SG-106) lack-TNS-it something

Multiple indefinites in a negative sentence are attested, but it is not known how common they are.

(SR) (25) qai=kwin ham-i hiit-i maqai 'She didn't give anybody
NEG=QUOT someone-ACC something-ACC give anything.' (SR-H-G-38)

## ANY

Quite a number of UA languages have particles or affixes that convert indefinite pronouns to 'any' or 'ever' forms ('anyone', 'wherever', etc.). While something approximating tu is a recurring shape, there is little that can currently be said about their synchronic properties or historical evolution.

- (M) (26) tu'i-haqehe 'anyone' (M-L-G-192) any-someone
- (CA) (27) tu miva' 'wherever' (CA-H-B8K-66) any somewhere
- (L) (28) hax menčapan po-ma'ma-qala 'whoever wants it' (L-L-FN) someone even his-want-DUR

- (P) (29) ku=t wabs čum has wo juu g pančo and\*PERF just IMPOT something FUT do ART PN anything PERF 'And Pancho will do anything.' (P-SS-D-135)
- (Y) (30) aapc kaa habe-ta-mak huni sii-ka she NEG someons-ACC-with any go-PERF 'She didn't go with anybody.' (Y-L-TG-135)
- (Y) (31) habe-ta kaba'i huni 'anybody's horse' (Y-L-TG-186)
- (A) (32) saa:o kana'-pa 'from anywhere' (A-A-I-488)
  no somewhere-from
  matter

# Special Constructions

Cases of indefinite pronouns taking modifiers of various kinds are attested, but 1:ttle is known about the limits and possibilities of this.

(L) (33) muyuk-i hiš 'many things ACC' (L-L-FN)
many-ACC something
ACC

Indefinite pronouns are themselves sometimes observed functioning as noun modifiers, perhaps to be viewed as quantifiers in a partitive-type construction, though this interpretation does not always seem plausible.

- (SR) (34) qa...\*k\*ini=mi=' haiim iip qaç tasqtam NEM=QUOT=they=PAST someone here live people 'No people lived here.' (SR-H-G-23)
- (SR) (35) amm.'=k"in qai hiit-i hihiy hukah-t-i he-QUOT NEG something-ACC see deer-ABS-ACC 'Ho didn't see any deer.' (SR-H-D)
- (CU) (36) me-qwe-as qay his mi-čakwin-we and-POT-we NEG something them-catch-DUR
  PL
  'And we cannot catch any of them.' (CU-HN-M-122)
- (L) (37) hax\*p=il supul om-taxa-w lovi'-ax
  som\*one=he=PAST one your-self-POSSD do-PAST
  PL
  'On: of you did it.' (L-KG-SC-105)
- (Y) (38) hit: čuu-ta (huni) nee maka 'Give me some (any) dog.'

  Bomsthing dog-ACC any me give (Y-L-TG-43)
- (Y) (39) habe o'co-ta-mak 'with any man' (Y-L-TG-185) someone man-ACC-with

There are also a number of languages where the form for 'something' can be added to negative sentences. Probably this should be regarded as a strengthening of the negation by expanding 'not' to 'nothing/not at all'.

- (CU) (40) qay hiš ne-memyu-lu-qal 'I didn't speak English.'

  NEG something I-white-be -PAST (CU-HN-M-128)

  man like DUR
  speak English
- (CU) (41) qay pe-miyax-wen hiš [kwel-pe-yax-pi]

  NEG it-be-PAST something get-he-STAT-UNR

  DUR

  'He couldn't get up.' (CU-HN-M-137)
- (TA) (42) namuti buš-e-ame u 'It doesn't have eyes.' (TA-B-G-203) nothing eye-have-PRTC be
- (Y) (43) hiba ka-ita tomi 'There is never any money.' always NEG-something money (Y-I-TG-50)

#### DEFINITE PRONOUNS

Independent

Naturally every UA language has a series of independent pronouns that can function as subjects. The primary distinctions are between first and second person and between singular and plural. For the most part the third person is represented by demonstratives or elements derived therefrom. A dual category has been innovated in Numic and Tubatulabal (in Hopi it has not affected the pronouns), and these same languages have developed an inclusive/exclusive contrast in the non-singular first-person forms, though the details vary. The occurrence of subject pronouns is often optional, provided person and number distinctions are adequately marked without them, and under these conditions their presence may signal emphasis. Some of the independent pronouns show clitic tendencies, as noted earlier. The pronoun systems of the daughter languages have undergone extensive modification, so that definitive reconstruction will have to await extensive research. The following is but a first guess at what the P-UA system may have been like (cf. UA-R-CMR).

Languages that retain accusative inflection have special independent object pronouns (in Tarahumara this is the last vestige of accusative marking). Other languages use the same pronouns for both subjects and objects. The nature of the case marking varies considerably, and I can only observe in passing that Tarahumara neči 'me' and Yaqui enči 'you ACC' suggest the

possibility that the P-UA object pronouns were formed by adding the archaic accusative suffix \*-ci to the subject pronouns.

- (M) (1) poi"rpi-na=taa"k"aha a-"nopi-"wee 'We are in Poipoi's house.'
  PN-ACC=we his-house-in (M-L-G-383)
  INCL
- (SH) (2) sa-ti nia pui-"ka 'He sees me.' (SH-M-IN)
  DFM-NOM me see-RSLTV
- (SP) (3) ni' pa"ka-nu=nu"mi mi"mi-a 'I kill you PL.' (SP-S-G-182)
  I kill-PNCT=you you-ACC
  PL PL
- (H) (4) itam pimiy pa'aqwa-ya 'We helped them.' we them help-PL
- (SR) (5) ama-i ≨mi' qai=m' k™a'i 'You didn't eat it.' (SR-H-G-179) it-ACC you NEG=you eat
- (CA) (6) ika-t piš yal pe-tu-qale pe¹
  net-ABS with QUOT it-carry-PAST she
  it on DUR
  back
  - 'In a net she carried it on her back.' (CA-S-T-11)
- (CU) (7) muluk=nə i-qə-qəl ə'ə-y 'First I was biting you.'
  first=I you-bite-PAST you-ACC (CUP-J-SC-69)

  DUR
- (L) (8) noo=r omoom-i toow-q 'I see you PL.'
  I=I you-ACC see-TNS
  PL
- (P) (9) aani a=n=t wo im-gatwi aapim 'I will shoot you PL.'

  I B=I=PERF FUT you-shoot you (P-L-FN)

  PL PERF PL
- (TA) (10) alve yami ne'či 'She looks for me.' (TA-L-EN)
  DER look me
- (Y) (11) inepo enči aa'a bep-'ii'a 'I want you to hit it.'

  I you it hit-SBJNCT (SON-K-V-343)

  ACC
- (HU) (12) tare mara'aaka-te we-ta-te-ni-hawee-ni
  we chanter-PL they-us-DISTR-NARR-tell-NARR
  (ur) PL
  'The chanters tell us.' (HU-G-S-39)
- (PO) (13) ner. n-ko-te-s no-mil 'I'm going to see my field.'

  I I-it-see-FUT my-field (PO-B-DMP-26)

(A) (14) ye'waatl k-on-nooc-ke' in tee-teo-' 'The gods called him.' he him-away-call-PL ART RDP-god-PL (A-G-L-131) (him)

Many UA languages have special independent reflexive pronouns of various kinds. See UA-L-NA for details.

## Dependent

Four basic kinds of dependent pronouns can be distinguished. Possessor pronouns (not always affixal) and postpositional object pronouns were treated under POSSESSIVES and POSTPOSITIONS respectively. The other two types are those that agree with subjects and those that agree with direct objects (the subject or object with which they agree may of course be only implicit). These may be either clitics or verb prefixes. (For reflexive prefixes, see NON-DISTINCT ARGUMENT PHENOMENA, Reflexive.)

Most UA languages have either subject clitics or subject markers on the verb, but for the most part a language will have only one and not both. The subject prefixes are found in fewer languages; moreover, there is good reason to believe that in Cahuilla-Cupeno they are recent extensions of possessor prefixes used originally only in subordinate clauses (CUP-J-SC, CUP-J-SCC) and that in Corachol and Astecan they result from the reanalysis of clitic pronouns (cf. UA-G-PSP). Thus it seems fairly clear that subject clitics, but not subject verb prefixes, can be reconstructed for P-UA. At present any reconstruction of their form must be rather speculative; the following is offered mainly as a basis for research and discussion (for examples, see PARTICLES AND CLITICS, <u>Pronominal</u>; SYNTACTIC MARKING; and passim).

	SG	$_{ m PL}$
1P	#=n±	#=ta
2P	#= ' <u>÷</u>	#= 1 ± -m ±
3P	*(=p≟)	*=(p≟=)m≟

The same rough complementary distribution is found between languages with object clitics and those with object markers on the verb, but the details are different and in this case the object dependent pronoun is more commonly a verbal element of some kind, either proclitic or prefixal. It would not be unreasonable to reconstruct for P-UA (or P-SUA?) a series of object clitics that (in contrast to the second-position subject enclitics) tended to be proclitic to the verb, but at present this is only a conjecture. The forms are uncertain, but Huichol and Aztecan show verb prefixes with the archaic accusative \*-ci (cf. also TAK-L-RPE for a trace in Takic), suggesting that at least some of the object forms consisted of the subject clitic plus \*-ci. (See SYNTACTIC MARKING.)

#### STEMS

UA verbs and verb constructions can be highly complex and pose many problems of description and analysis. There are many possible ways to organize the discussion of UA verbs, and the scheme adopted here is not necessarily any better than various others one might propose. An attempt is made to factor out different facets of verb structure and to treat each in a separate section, though it must be realized that the division is arbitrary to a certain degree. This first section deals with stem phenomena other than those involving affixation.

## Suppletion

In most every UA language there are a few verbs which are suppletive for number. Suppletion is consistently with respect to the number of the subject with intransitive verbs and the number of the object with transitive verbs. These traits can definitely be reconstructed for P-UA. This number suppletion is largely confined to verbs with basic meanings including 'go'. 'sit', 'run', 'kill', 'put', etc., though the precise membership varies greatly from language to language. Suppletion is typically full but may be partial. It may, as with some verbs in Tarahumara, involve only such variation as a voiced versus a voiceless consonant, or the presence versus the absence of a syllable. In Shoshoni the contrast has been elaborated into a three-way one including the dual, but one seldom finds full three-way suppletion; rather, two of the three members for a given verb may fail to contrast, or they may differ only through reduplication or what can be recognized historically as affixation. Suppletion is occasionally found for categories other than number. The most obvious example is in Classical Nahuatl, where ka' 'be' is used in 'realized' forms and ye in 'unrealized' forms such as future, conditional, and subjunctive.

- (M) (1) niw: SG moo PL 'walk, go, wander'
- (SH) (2) wir i SG taca"kihka DL topoihka FL 'lie'
- (SH) (3) kata SG yakwi DL yakwi"ka PL 'sit'
- (SP) (4) yat. SG yu'a PL 'carry'
- (H) (5) qats SG yeese PL 'sit'
- (H) (6) war: SG yiiti PL 'run'
- (SR) (7) mijana SG qööna PL 'kill'
- (L) (8) pok a SG goors PL 'run'
- (L) (9) čaqvi SG yawa'na PL 'catch'
- (P) (10) was SG sulig PL 'put down'
- (TO) (11) mik SG ko' PL 'die'
- (TA) (12) čipere SG čubere PL 'be sharp'
- (TA) (13) mi'ri SG go'i PL 'kill'
- (Y) (14) sii SG saha PL 'go'

- (Y) (15) yepsa SG yaha PL 'arrive'
- (CR) (16) raa SG huu PL 'go'
- (HU) (17) mie SG kwii PL 'kill'
- (A) (18) yaw SG wi' PL 'go'

## Reduplication

Virtually every UA language displays verbal reduplication of some kind, and in some cases a variety of patterns. A full treatment is not possible here, and definitive reconstruction must await careful research (see UA-H-MP3 for some preliminary comments).

Most reduplication is stem-initial, but final reduplication associated with repetitive aspect or similar notions is found at least in Mono, Tubatulabal, and Hopi; lexicalized remnants are found in Southern Paiute (SF-8-G-262), and a final-vowel lengthening for habitual aspect in Papago is conceivably related.

- (M) (19) puti-ti-hi 'several come out in succession' (M-L-G-264) come-RDP-REPET out.
- (SP) (20) ta-yamunu- $^{n}$ ki 'have one's feet dangling' (SP-S-G-262) foot-dangle-REPET
- (TU) (21) anagaa-'a-t 'He is crying REPET,' (TU-V-G-109)
- (H) (22) <u>imi-mi-ta</u> 'It is thundering.' (H-W-PSA-130) thunder-RDP-DHR
- (P) (23) hi-hi'a-a 'urinate HAB' (P-H-PL-55)
  RDP-urinate-HAB

We find two basic types of initial reduplication in UA, simple CV-reduplication and a more elaborate type including CVCV- and types that can be viewed as reductions from this. One use of the simple CV-reduplication is in the formation of perfective stems; this use is considered below. Beyond that, we find it in a variety of roles generally involving some type of plurality.

- (M) (24) po-poyoha 'run PL/DISTR' (M-L-G-285)
  RDP-run
- (SH) (25) ki-ki"ma 'come DL' (SH-M-SG-59) RDP-come
- (SP) (26) pa-panwai 'yell several times' (SP-S-G-260)
- (H) (27) ti-twa 'find PL' (H-K-L-77)
  RDP-find

- (SR) (28) ya ya' 'He's running around.' (SR-H-G-105)
  RD?-run
- (P) (29) hi-xim 'move PL' (P-SS-D-118)
- (HU) (30) pi-suu-suure 'They are red.' (HU-G-S-95)
  AS SR-RDP-be
- (PO) (31) kc-koš-tuk 'is sleeping' (PO-B-DMP-23)
  RIP-sleep-PROG
- (A) (32) we-weeka 'laugh a lot' (A-A-I-119)
  RDF-laugh

CVCV- reduplication may very well, by reduction, be the source of such other patterns as CVC-, CV'-, and possibly even CV:- (on stems with underlying short vowels). Distributive value would not be implausible as a reconstruction for this type, especially if this is taken as including temporal distribution.

- (TU) (33) pišaa-bišaa'a-t 'He is going out repeatedly.'
  RIP-go-PRES (TU-V-G-108)
  out
- (SR) (34) p:h-pč \*be arriving\* (SR-H-G-106)
- (SR) (35) sum-i=č qaii-č-i hwač-hwač-q 'We climbed those hills.' that-ACC=we hill-ABS-ACC RDP-climb-PNCT (SR-H-G-43)
  DISTR
- (L) (36) pon-poni 'tie on in two places' (L-KG-SG-161) RDP-tie
- (P) (37) ha-la'a-la'asp 'trap them DISTR' (P-H-G-78) them-RDP-trap
- (Y) (38) čep-čepte 'jump several times' (Y-J-I-21)
  RDP-jump
- (A) (39) tes-tla-ma'-maka 'give something to each person'
  UNSPEC-UNSPEC-RDP-give (A-A-I-118)
  H OBJ
  OEJ
- (A) (40) tla-šee-šeloa 'divide something into many parts' (A-A-I-119)
  UNSPEC-RDP-divide

Phonological processes similar to reduplication may also be used in one language (r another to express semantic notions such as plurality,

aspect, intensity, etc. These processes include such things as consonant or vowel gemination, glottalization, and accent shift. To take just one example, consonant gemination (or non-lenition) with certain stems in Shoshoni conveys durative aspect.

(SH) (41) ni ka"ti 'I'm sitting.' (SH-M-NN-8)
I sit
DUR

## Perfective and Imperfective Stems

One can reconstruct with fair certainty for P-UA a contrast between 'perfective' and 'imperfective' verb stems. It may be difficult to determine the precise semantic nature of the contrast. Possibly the perfective forms viewed the action as a whole, as a unit including the endpoints of initiation and completion, while the imperfective forms viewed it as engoing activity in isolation from its endpoints; this is roughly the case in Hopi. Or the contrast may have been like that described for Tubatulabal by Voegelin (TU-V-G-94): 'The telic [perfective] is used for an action...performed or arrived at in an instant .... and for this reason the action ... is generally. though not necessarily, felt to be completed at the time of talking. The atelic [imperfective] is sometimes used when an action requires some duration for its performance..., but frequently the atelic is quite vague in respect to aspectual meaning. As Heath notes (UA-H-MP3-17), CVreduplication can be reconstructed as the marking for perfective stems. Also commonly associated with this contrast is the truncation of final syllables in perfective stems; we can speculate that reduplication affected placement of accent, which in turn facilitated truncation and other phonological changes in the unaccented portions of the stem. How much of this goes back to P-UA is an open question, but truncation is found in both Serrano and in Southern languages. It is likely that perfective reduplication precluded other tense/aspect marking.

The perfective/imperfective contrast, whatever its precise character, has met with varied fates in the daughter languages. In some cases it has shifted to indicating perfective aspect in the sense implying prior completion, the potential for which is suggested in Voegelin's characterization. From there it has sometimes shifted to marking simple past tense. In terms of form, reduplication or truncation may both be retained, as in Papago or Serrano; or one or the other may be lost, leading for instance to CV- reduplication in Luisenc and to final vowel truncation in Nahuatl, both for past tense. In Tubstulabal certain stems have reversed the pattern and use reduplication for the imperfective rather than the perfective, more in line with what one might expect given the general association between reduplicated forms and duration. Whether this has happened elsewhere is unclear, since reduplication from this source might not be distinguishable from other primitive CV- reduplication.

Southern Numic shows a possible trace of perfective reduplication in certain stems that reduplicate for punctual or inceptive aspect.

- (SP) (42) ka-"kati 'sit down' (SP-S-G-262)
  RDP-sit
- (K) (43) ka-ga'a 'begin to eat' (UA-XXX-WCL)
  RDP-cat

Tubatulabal, as noted, shows the split between verbs that reduplicate for the perfective and those that do so for the imperfective. Perfective forms are mutually exclusive with final position suffixes, while imperfective forms require them.

- (TU) (44) tima IMPRF an-dana PERF 'get down' (TU-V-G-95)
- (TU) (45) a-man IMPRF nan PERF 'cry' (TU-V-G-95)

Hopi makes a systematic contrast, and reduplication is one way of forming imperfective verbs from the simple or perfective stems; it is unclear whether this reduplication is secondary or whether Hopi has completed the shift of reduplication from perfective to imperfective that Tubatulabel has initiated.

(H) (46) pan ná-y pát ma-mqa. 'He is giving it to me.'
he I-ACC it RDP-give
ACC

Both reduplication and truncation may figure in the Serrano completive or perfective:

(SR) (47) kwuman 'sleep' kwu-kwuum 'gone to sleep' (SR-H-G-84)

Cupeno shows a remnant contrast marked by such devices as reduplication, stress shift, intrusive glottal stop, and the suffix -aane.

(CU) (48) salakwe 'give a scratch' salakwe 'be scratching' (CU-H-G-228)

A number of verbs in Luiseno use reduplication for past tense.

(L) (49) 1c-lo'xa 'cooked' (L-H-I-129) RNP-cook

In Papago, perfective forms are usually derived by dropping the final CV of the stem (viewed in terms of underlying representations).

- (P) (50) č.kpan o g pančo 'Pancho is working.' (P-SS-D-117)
  work B ART PN
- (P) (51) čikp a=t g pančo 'Pancho worked.' (P-SS-D-117)
  work B=PERF ART PN
  PERF

In addition, some verbs take final i, and others both reduplicate and truncate.

- (P) (52) is IMPRF ii PERF 'plant' (P-M-LPA-50)
- (P) (53) doom IMPRF doo-d PERF 'copulate' (P-M-LPA-51)

The other Piric languages have similar systems. Tarahumara may show a trace in the existence of a large number of final syllables that appear only in present active indicative verbs, dropping otherwise.

(TA) (54) řahini 'burns' řaha-re 'burned' (TA-B-G-137)
burn burn-PAST

The relation of the final vowel truncation for past tense in Nahuatl is uncertain, since truncation in other languages involves CV rather than just V.

(A) (55) miki 'die' oo-mik 'died' PERF-die

## Other Stem Phenomena

In dealing with other stem phenomena the borderline between affixation and non-affixal variation is not always very clear. One common UA distinction marked by elements of a non- or quasi-affixal character is that between active or transitive verbs on the one hand and on the other hand stative or intransitive verbs. In Nahuatl, for example, there are pairs of intransitive and transitive verbs that differ in that the former ends in i and the latter in a, e.g. teemi 'be/become full' versus teems 'fill'; related to this are intransitives ending in iwi or awi paired with transitives ending in o(w)a, e.g. pečawi 'become flat-surfaced' versus pecca 'give something a flat surface'. A similar distinction is found in Southern Paiute: paca"kwi 'be wet' versus paca"kwa 'get wet' (SP-S-G-238). While there are good grounds for positing a general UA i/a distinction along these lines at some level, it is anything but consistent even in those languages that retain fairly clear traces of it. The same distinction may of course be marked in other ways (cf. NON-SYNTACTIC AFFIXATION, Causative). In Cupeno, for instance, a system of stem alternants has evolved in which the stem increment (or 'thematic suffix') -in generally marks active or transitive verbs and -yax stative or intransitive verbs; some verbs have three variants -- with -in, with -yax, and with neither -- with the anticipated kinds of meanings, though the system is anything but regular (see CU-H-VN and CUP-J-SC for details).

The verb stems of a language may fall into major classes that differ in regard to how they interact with morphological or inflectional processes. An obvious example would be classes that differ as to how the perfective and imperfective forms are related (note previous Tubatulabal and Papago examples). Brambila (TA-B-G) divides Tarahumara verbs into a number of major inflectional classes: the stems in one class take the future suffix -ma and are divided into two subclasses on the basis of whether stress is fixed (bahí-re 'drank' versus bahí-ma 'will drink') or is shifted to the last stem vowel in unrealized forms (kašína-re 'broke' versus kašíná-ma 'will break'); those in a second class take the future -mea and undergo stem modification in unrealized forms (osá 'writes' versus oši-méa 'will write'); members of the third class take the future -ma together with the stem augment re in unrealized forms (ba'6' is pretty' versus ba'6-re-ma 'will be pretty'). Stem classification is of course a major subject that can only be mentioned here in passing.

The difference between realized and unrealized forms is an important one in UA, being manifested differently in different languages. Clitics and affixes often mark this distinction, as we have seen previously and will again. It can be relevant to verb stems in a number of ways. It was just noted that accent shift and stem modifications affect certain Tarahumara

stems in essentially those tenses and aspects that are semantically unrealized (including future, potential, conditional, and imperative, but excluding present, past, and past durative). It was also noted earlier that Nahuatl  $\underline{k}\underline{\epsilon}^{\bullet}$  'be' has the suppletive variant  $\underline{y}\underline{\epsilon}$  in unrealized forms. In Pochutla, there was apparently a vowel ablaut in unrealized forms, whereby a shifted to  $\underline{\epsilon}$  and i to  $\underline{\epsilon}$ ;

- (PO) (56) ita PRES ita IMP ita-a FUT 'see' (PO-B-DMP-21)
- (PO) (57) apeki PRES apeko IMP apeko-s FUT 'enter' (PO-B-DMP-22)

## INCORPORATION

An attemp: is made to distinguish two broad classes of verb affixes, those which are inherently verb-like or verbal and those which seem more noun-like in character. The verbal or verb-like affixes are so characterized because they often derive historically from verb roots, convey notions that are often expressed periphrastically by verbs, or are intrinsically tied to verbs by virtue of their semantic value (e.g. tense). In UA these are predominantly suffixal, and they will be dealt with under NON-SYNTACTIC AFFIXATION. In this section we are concerned with the more noun-like verb affixes, which lack the properties just listed (sometimes having clear nominal or adverbial sources) and are predominantly prefixal.

Incorporated (noun-like) elements form with verbs structures that are similar to (ncun-verb) compounds. We can reasonably speak of incorporation rather than compounding to the extent that the structure is grammaticized; indications of this may include the failure of the incorporated element to occur as an independent stem, full productivity (compounds may be restricted arbitrarily to certain combinations), phonological or grammatical behavior of the incorporated element as an affix rather than as one of two 'coordinate' stems, and so on. The distinction is naturally only one of degree. It, like the distinction between noun-like and verb-like affixes, is mainly for convenience of organization and exposition and should not be taken too seriously.

## Instrumental Prefixes

Despite heir limited distribution, instrumental prefixes are the best known of the Incorporated elements in UA and have received the most attention. They are found in all the Numic languages as well as some of the Pimic languages, but there are no clear indications of instrumental prefixation as an active morphological phenomenon elsewhere in the family. As Sherzer and Foley (UA-SF-IP) point out, though, evidence for instrumental prefixation in P-UA may be found by internal and comparative reconstruction involving verbs whose initial syllable can be identified as a reanalyzed instrumental prefix; careful work along these lines has not yet been carried out, however. While Kroeber and Grace are doubtful of the reconstructability of instrumental prefixation (L-KG-SG-243-246), Heath (UA-H-NCV-33-34) inclines to agree with Sherzer and Foley that it did occur in P-UA, and I think this is fairly definitely the correct position.

A language with instrumental prefixation may have an elaborate array of such prefixes; Nichols (NP-N-HG-161-182) reconstructs approximately a

score of instrumental prefixes for Proto Numic. Most of them can be recognized as derived from terms for body parts (which may be used in a much more general sense), but mixed in with these may be such elements as 'water', 'fire', 'speech', 'mental', and 'cold'. Semantically, the prefix may designate the instrument of the verbal activity, function as the object of this activity, or play some less clearly defined role. The verba taking instrumental prefixes may constitute a restricted class with semantic correlates, e.g. in Shoshoni they are verbs of hitting, breaking, cutting, and surface contact (SH-M-SG-48). Some of the prefixes may no longer occur as independent noun stems, and some of the verbs which take them may not occur without them.

Sherzer and Foley, relying only on Numic and their exceedingly preliminary search for lexicalized remnants, reconstruct for P-UA \*ke- 'teeth/
mouth', \*ca- 'hand', \*we- 'length of long object', \*ma- 'hand', \*ta- 'foot',
and \*ci- 'pointed object' (the vowel \*e should instead be \*i- - cf.

PHONOLOGY). While all of these may prove correct, the lexical evidence
adduced is hardly persuasive or definitive in itself. Direct comparison
of the more obviously archaic Papago instrumental prefixes with those reconstructable for P-NUM yields at least four likely P-UA forms, three of which
coincide with what Sherzer and Foley reconstruct: P-UA \*ki- 'teeth'

(P-NUM \*ki- 'edge/rim/teeth', P ki'i- 'teeth'); P-UA \*ca- 'hand' (P-NUM
\*ca- 'hand, forcefully', P softi- 'object in hand'); P-UA \*ma- 'hand' (P-NUM
\*ma- 'hand', P ma'i- 'object from hand'); P-UA \*pa- 'water' (P-NUM \*pa- 'water',
P wa- 'liquid').

- (NP) (1) ci-nnoho 'push with end of something' (NP-N-HG-163)
- (NP) (2) ma-noho 'push with hand' (NP-N-HG-167) hand-push
- (NP) (3) ta-noho 'push with foot' (NP-N-HG-170)
  foot-push
- (M) (4) pa-noo 'haul water' (M-L-G-298) water-carry
- (M) (5) ca-"n'oo 'haul/catch (fish)' (M-L-G-299) pulling-carry
- (M) (6) wi-"ci"toowina'i 'push with sidewise motion, crowd against' whipping-push (M-L-G-360)
- (SH) (7) ni u ta-"nua-hkwa 'I pushed it with my foot.'
  I it foot-push-PNCT (SH-M-SG-46)
- (SH) (8) ni ta-"mua-hk"a 'I pushed my foot.' (SH-M-SG-46)
  I foot-push-PNCT
- (SH) (9) ni tama-ma tu"ku-i ki-"ka'a-hk"a 'I bit off the meat with
  I teeth-with meat-ACC teeth-bite-PNCT my teeth.' (SH-M-IN)

- (SP) (10) mu-tona 'strike with one's nose' (SP-S-G-103)
- (SP) (11) wi-"pata-yi 'knocks down by slashing with stick'
  long -knock-PRES (SP-S-G-105)
  object down
  length
- (SP) (12) ca-"pa<sup>n</sup>tu-yi 'shakes with hand' (SP-S-G-107) hand-shake-PRES
- (P) (13) kii-ggan 'kick' (P-88-D-138)
  foot-pound
- (P) (14) ma'i-hin object-hit from hard
- (P) (15) sofi-hin 'hit with held object' (P-SS-D-138) object-hit in hard

## Other

Besides instrumental prefixes, a diverse array of noun-like or adverbial elements are found incorporated in verbs. Some languages have interrogative morphemes incorporated in certain basic verbs like 'be', 'do', or 'say'.

- (SP) (16) aka-"ni-"ka-ana 'What did he do?' (SP-S-G-210)
- (H) (17) am as hin-qaw-ni 'What were you going to say?' you IMPOT how-say-FUT (H-VV-H-197)

Demonstratives and adverbial demonstratives can also be incorporated.

- (SP) (18) un-utu's 'he is' (SP-S-G-249)

  EM-be
  1NVIS
- (H) (19) pen-qawi 'He says so.' (H-W-L-26)
- (CA) (20) ja-'ax-pe-'em-wawa-nem 'You PL will roast him there/in it.'
  there-FUT-him-you-roast-FUT (CA-F-MV-29)
  PL
- (CA) (21) pax-hem-hiči-wen 'They ride forth.' (CA-F-MV-27) : rom-they-go-DUR there PL

Locative adverbial demonstratives of course shade off into the broader domain of specifications of location and direction. Cora and Huichol in particular have innovated fairly elaborate prefixal systems in this domain; in Huichol, for instance, Grimes (HU-G-S) cites prefixes with such glosses as 'that side', 'cavity', 'down', 'circumscribed area', 'around/back and forth', 'toward/on surface of', etc. In Nahuatl, there are contrasting verb prefixes on- and waal-; the former derives from the distal demonstrative, the latter from the verb 'come'.

- (Y) (22) yeu-saha-k 'went PL outside' (Y-J-I-12) outside-go-PERF
  PL
- (HU) (23) te-n-i-wa-ti-haaniku-ni 'We'll pull him up out of the hole.'
  we-NARR-him-cavity-up-pull-FUT (HU-G-S-92)
- (HU) (24) p-a-nu-ka-tia 'He passed by going downwards.'

  ASSR-toward-that-down-go (HU-G-S-92)

  side
- (A) (25) n-on-tle'ko-s 'I will go up.' (A-H-F-100) I-away-ascend-FUT
- (A) (26) aw in oo-waal-kiis toonatiw 'And when the sun emerged....' and SUBR PERF-come-leave sun (A-DA-FC6-163)

  PAST

Other adverbial prefixes are less obviously nominal in character; some may even be verb-like in the sense described above, but it will be convenient to treat them here. Quite a variety of elements are found. A considerable number specify degree in some sense, e.g. augmentative, attenuative, 'almost', 'completely', 'thoroughly', etc. Others are aspectual, in a broad sense of that term, or specify manner. I can do nothing more here than cite a few examples.

- (M) (27) qaha-suwa"qa 'pant' (M-L-G-284) AUG-breathe
- (M) (28) na-"qoi 'injure' (M-L-G-291)
  almost-kill
  FI.
- (M) (29) su-"ki"ma-"ti 'came, unfortunately' (M-L-G-292) unfortunately-come-TNS
- (SP) (30) aa-ya'ai-yi 'gradually dies' (SP-S-G-99) gradually-die-PRES
- (SP) (31) na"mi-ipi-"mi-yi 'always drinks first' (SP-S-G-99) first-drink-HAB-PRES

- (SP) (32) sua-pa"ka-qu="ca=ni='i 'You nearly killed me.' nearly-kill-PNCT=PAST=me=you (SP-S-G-100)
- (SP) (33) i-"pini-"n'i-yi 'looks around in vain' (SP-8-G-99) ir-look-keep-PRES vain
- (HU) (34) aci-pi-ka-ti-meate 'He knows nothing.' (HU-G-S-88)
  alsent-ASSR-NEG-DISTR-know
- (HU) (35) e-pi-teewi 'It is long.' (HU-G-S-88)
  Alg-ASSR-be long
- (HU) (36) \*ci-pi-teewi 'It is short.' (HU-G-S-88)

  /TTEN-ASSR-be long

### SYNTACTIC MARKING

The UA verb is often the repository of numerous types of marking pertaining to symmetric relations. Most of these are discussed in other sections dealing with the appropriate syntactic phenomena. It is convenient to summarize them here as part of a general description of the interaction between verbs and syntactic processes.

## Pronominal

Quite a number of UA languages have pronominal elements on the verb agreeing with the subject, the object, or both. With the partial exception of Cupeno, these subject and object markers are prefixes. There is reason to believe that the subject markers are innovative (see DEFINITE PRONOUNS); in Cahuilla-Cupeno, they derive by generalization of possessor pronouns originally restricted to subordinate clauses, while in Corachol and Aztecan they apparently derive by attraction of subject clitics to the verb. Object prefixes are more widespreal, and it may be possible to reconstruct object proclitics to the verb for P-UA (or P-SUA). Subject markers precede object markers in Corachol and Aztecan, but in Cahuilla-Cupeno, where object markers are apparently recent innovations, the order is reversed.

Because of their different origins, subject and object markers in UA show considerable diversity in their properties. They differ, for instance, in how tightly they are bound to the verb. In Papago, the 3P PL ha- (also the non-IP reflexive \(\frac{1}{2}\)-) is less tightly bound to the verb than the other object markers, and can even occur discontinuously; moreover, if there are two objects, two object markers can occur on the verb provided the first one is ha-.\*

<sup>\*</sup>Possibly there properties indicate that ha- was a late addition to the object marker system. Its source could have been the indefinite base ha.

- (P) (1) gogs o ha-huhu'id haga-m 'The dog is chasing them.' (P-L-FN) dog B them-chase that-PL
- (P) (2) ha ast nii g pančo higa-m 'Pancho saw them.' them B=PERF see ART PN that-PL (P-SS-D-1.23)
- (P) (3) ha-mi-wapkon 'wash them for you' (P-H-G-76) them-you-wash
  PERF

Nahuatl also shows occasional unattached prefixal elements, particularly involving the imperative prefix <u>ši</u> (which functions in the subject marker slot); presumably these are remnants of the period when such elements were independent or only proclitic.

(A) (4) Si-kim-on ilwi 'Tell them.' (A-G-L-137)
IMP-them-away say

In Cora, the subject can apparently be either a verbal prefix or a clitic. It is not fully clear from existing descriptions just how closely the limited object markers in Western and Central Numic are bound to the verb, but the bond is evidently a loose one.

While systematic data is not available, UA languages show some tendency to avoid two object markers when two might be expected, though there are exceptions, as with Papago ha- in (3). Two object markers can be found together in Nahustl if one of them is reflexive or unspecified, but generally not when both are definite.

- (A) (5) ki-tla-mati-lia 'He knows something about him.' (A-B-NA) him-UNSPEC-know-APPLIC
  OBJ
- (A) (6) ki-čiiwi-lia 'He makes it for him.' (A-B-NA) him-make-APPLIC

When two pronominal prefixes can occur together, certain combinations of forms may merge into a sequence that is not fully regular morphologically, as in Pochutle and various modern Aztec languages. Note the variation in the 'me' form in these Pochutla examples:

- (PO) (7) nič-ota 'He sees me.' (PO-B-DMP-19)
  me-see
- (PO) (8) t-iš-če 'Wait for me.' (PO-B-DMP-19) you-me-wait

Similar variation can of course be found in other languages. Grimes (HU-G-S) reports the merger of a- 'toward' and i- 'him' to e- in Huichol; the latter also drops when the direct object it agrees with directly precedes the verb.

- (HU) (9) >-e-nu-'si-ni tumiini 'He will take the money.'

  SSR-toward-that-take-FUT money (HU-G~S-27)

  it side
- (HU) (10) ne-p-ii-seiya kii 'I see the house.' (HU-G-S-27)
  I-ASSR-it-see house
- (HU) (11) kii ne-p≟-seiya 'I see the house.' (HU-G-S-27)

Some of the least expected properties of subject and object markers are found in Cahuilla-Cupeno. In contrast to the usual subject-object order of pronomina. elements in UA (e.g. in (4), (8), and (10)), the object marker precedes the subject marker when both occur.

- (CA) (12) me-čem-kwa-wen 'We eat them.' (CA-S-G-1) them-we-eat-DUR
  PI.
- (CU) (13) mi-čem-tew 'We saw them.' (CUP-S-SR-144)
- (CU) (14) eva-1 nexani-č-i pi-pe-qe' 'The dog bit the man.' dog-ABS man-ABS-ACC him-it-bite (CU-H-VN-351)

While there are complications we will not bother with here, the Cupeno situation shows two further peculiarities. First, the subject marker only shows up in past forms. Second, the subject marker is not prefixal in all cases; when the active or stative thematic suffix (cf. STEMS, Other Stem Phenome is) is present, the subject marker occurs between it and the root.

- (CU) (15) ne'=ne=pe mi-tew 'I will see them.' (CUP-J-SC-142)
- (CU) (16) ne'=ep pi-čun-ne-n 'I kissed her.' (CUP-J-SC-188)
  I=R her-kiss-I-ACT

These special properties of the Cahuilla-Cupeno pronominal affixes result from the apparent late innovation of the object markers, the fact that the subject markers derive from possessor prefixes originally confined to subordinate clauses, the use of complex sentences with the higher predicate 'be' to indicate past tense at an earlier period, and the fact that the active and stative markers in Cupeno were probably originally separate (higher) predicates (cf. CUP-J-SC, CUP-J-SCC, UA-L-PR).

## Non-Distinct Argument Markers

For detailed discussion of this domain, which overlaps with both pronominal and sentence-type markings on the verb, see NON-DISTINCT ARGUMENT PHENOMENA and UA-L-NA.

Both reflexive and reciprocal prefixes and unspecified argument prefixes have been reconstructed for P-UA and are found in various UA

languages.\* In general it is to be expected that a reflexive or unspecified object marker will be mutually exclusive with other object markers, but since object markers may agree with both direct and indirect objects, this will not always be the case. In Nahuatl, for instance, a regular object marker can co-occur with either an unspecified object prefix (cf. (5)) or a reflexive prefix, and two unspecified object prefixes can co-occur.

- (A) (17) ki-mo-lwi-'-ke' 'they said to each other' (A-G-L-131) it-REFL-say-PAST-PL
- (A) (18) ni-tee-tla-kwepi-lia 'I restore something to someone.'
  I-UNSPEC-UNSPEC-return-AFPLIC (A-S-DLN-118)
  H OBJ
  OBJ

In both Corachol and Aztecan (the Pochutla data is lacking) the regular object markers are in a different position class from the non-distinct object markers, the latter being closer to the verb stem.

In regard to marking for sentence type, the P-UA passive/impersonal marker was a verb suffix. Passive and impersonal sentences continue to be marked by this or innovative verb suffixes in many UA languages. At the same time, reflexive and reciprocal prefixes have assumed passive function in some languages, with the result that both prefixes and suffixes are found as passive markers in UA.

# Sentence Type

Apart from the occasional incorporation of question words, UA verbs seldom if ever contain explicit interrogative morphemes. Mason (TO-M-PL) reports an interrogative prefix for Tepecano, but is highly likely that he did not properly separate prefixes from the clitic group.

(TO) (19) has-si-pu-m-kka' 'How are they eaten?' (TO-M-PI-379) how-Q-EMPH-REFI-eat

Special imperative markings, by contrast, are often found on UA verbs. Most commonly these are suffixal, but prefixes also play this role. See IMPERATIVES for details and examples.

Negative marking on the verb is infrequent in UA but attested. In Southern Paiute verbs take negative suffixes that co-occur with the primary marker of negation in the sentence (see PARTICLES AND CLITICS, Polarity); the same is true with negative imperatives in Northern Paiute.

(NP) (20) gai umi-noo mia-paana 'Don't go with them.' (NP-L-M)
NEG them-with go-NEG
TMP

<sup>\*</sup>Heath (UA-H-RL) notes that the reconstruction of reflexive prefixes is certain only for P-SUA and suggests that P-SUA may have innovated them to provide greater semantic differentiation in reflexive sentences. This strikes me as dubious in view of the fact that the whole trend in the evolution of the southern languages has been in precisely the opposite direction, toward neutralization in reflexive marking.

Negation is supposedly marked by a verb prefix in Tepecano, but again it is likely that a careful distinction between clitics and prefixes would change the analysis.

(TO) (21) an-iam-kooš-im 'I don't want to sleep.' (TO-M-PL-364)
I-NEG-sleep-DESID

Negation is lowever a verb prefix in Huichol.

(HU) (22) ne-p-ka-ti-'u-ni 'I will not shell corn.'
I-ASSR-NEG-DISTR-shell-FUT (HU-M-HP-35)
corn

### Number Agreement

UA verbs often agree with their subject or object in number. A considerable variety of devices for marking number on the verb are found. Subject or object markers will of course serve this function to the extent that they themselves are differentiated for number.

- (HU) (23) nee ne-pi-yia-ne 'I'm doing it.' (HU-G-S-24)
  I I-ASSR-do-go
- (HU) (24) taame te-pi-yia 'We are doing it.' (HU-G-S-25)
  we we-ASSR-do
- (P) (25) gogs o m-huhu'id aapi 'The dog is chasing you.' (P-L-FN) dog B you-chase you
- (P) (26) (logs o im-huhu'id aapi-m 'The dog is chasing you PL.' log B you-chase you-PL (P-L-FN)
  PI.

A second device is reduplication (or other phonological modification), and a third is suem suppletion, which marks agreement with the object of transitive verbs and the subject of intransitive verbs; see STEMS for discussion.

Many UA languages have one or more verb suffixes which, besides their basic function, are suppletive for number and therefore serve the cause of number agreement (with the subject). It is reasonable to suppose that most of these suffixes were originally independent suppletive verbs (cf. UA-C-ODA).

- (SP) (27) no<sup>n</sup>ci-kwa!ai-ya 'goes flying' (SP-S-G-139) fly-go-PRES
- (SP) (28) no<sup>n</sup>ci-"ka-"mia-kai 'as they flew along' (SP-S-G-277) fly-PL-go-while PI.
- (L) (29) (Waan tapi-lut expay 'John is going to finish tomorrow.'
  ?N finish-gonna tomorrow (L-H-I-42)

- (L) (30) čaam tapi-kutum exnay 'We are going to finish tomorrow.'
  we finish-gonna tomorrow (L-H-I-42)
  PI.
- (Y) (31) aman tekipanoa-se 'He goes there to work.' (Y-D-BT) there work-go
- (Y) (32) aman tekipanoa-bo 'They go there to work.' (Y-D-BT) there work-go

Finally, many languages have special suffixes to indicate the number of the subject, or less commonly, of the object. Note (17) and (28) above and the following.

- (M) (33) ma-"cu"pa-"ki-ta 'cause several things to sink with the hand' hand-sink-CAUS-PL (M-L-G-269)
- (M) (34) yaqa-"qoi 'several cry together' (M-L-G-274) cry-COLL PL
- (H) (35) pima pit tiki-ya 'They cut it.'
  they it cut-PL
  ACC
- (CR) (36) ma-ta-ki'i-me 'They (will) eat us.' (CR-P-G-60) they-us-eat-PL
- (PO) (37) e-k-mok-ti-kit 'They killed him.' (PO-B-DMP-15)

### Subordination

Markers of subordination will be dealt with extensively in later sections on complex sentences. Here I will limit myself to some general remarks.

Subordinating verbal affixes in UA are almost always suffixes rather than prefixes, but there are a few exceptions. The verb prefix pix-functions as a subordinator in Cabuilla.

(CA) (38) pi-čem-'ayaw-we [meten piš-pi-čem-či'-pi]
it-we-like-DUR lot SUBR-it-we-gather-UNR
'We would like to gather a lot.' (CUP-J-SC-297)

Huichol  $\underline{s*ka}$  'if' is sometimes prefixal, and the prefix  $\underline{m}$ - marks the verb in a number of subordinate clause types.

(HU) (39) [pe-sika-nua-ni] ne-pi-maci-seiya-ni you-if-come-FUT I-ASSR-you-see-FUT 'If you come I will see you.' (HU-G-S-66) (HU) (40) aii-ki [m-ii-ti-weewi] 'the thing he made' (HU-G-S-84) that-SG SUBR-it-up-make

Language: vary greatly in the number and inventory of their subordinating suffixes. As one might expect, they are generally in final position on the verb, the major exception being case and number agreement following subordinating suffixes serving a nominalizing function.

(SH) (41) nu"ku-i [pi"ni u" maka-ih-a] 'the meat ACC that he gave her' neat-ACC her his give-NR-ACC (SH-M-SG-98)

Naturally subordinating suffixes will usually attach to non-finite verb forms, forms that lack tense or other suffixes that might appear on a main-clause predicate. Subordinators do however show an affinity for aspectual suffixes, often incorporating them or co-occurring with them, and sometimes they follow tense markers; details are beyond the scope of this discussion.

- (M) (42) [a-pi"ti-"si] 'after he arrived' (M-L-G-230)
  'lim-arrive-having
- (M) (43) [n-"ti"ka-wai-"na] 'his future eating, what he will soon eat' nis-eat-FUT-NR (M-L-G-281)

This is a convenient place to observe that certain subordinators may have numerous functions, occurring in different types of subordinate clauses and possibly even having non-subordinating uses. The present organizational scheme whereby complex sentences are treated separately and different types of complex sentences examined individually, however useful it may be for purposes of exposition, has the drawback of entailing fragmented discussion of individual elements that happen to be very versatile. A case in point is the active participial -ame of Tarahumara (cf. the discussion of \*tá 'be' under BE/HAVE'DO, NOUN MORFHOLOGY, COMPOUNDS, and BASIC INFLECTIONAL ELEMENTS). It can occur as what is effectively a marker of neutral tense:

(TA) (44) sea mu ora-ame wipa 'Do you have tobacco?' (TA-B-G-2?7)

With a following auxiliary verb it takes part in a variety of constructions, including some with special modal value.

- (TA) (45) :nai muku-k-ame nii-re 'Here he died,' (TA-B-G-474)
- (TA) (46) mabire ree-gi-ame uku 'One doesn't have to play.'

  HEG play-IMPRS-PRTC be (TA-B-G-494)
- (TA) (47) he' co suwini-ame k-a 'It seems he isn't even finishing.'

  AEG either finish-PRTC be-GER (TA-B-C-495)

It occurs as subordinator in adverbial clauses:

(TA) (48) [gona mo'-e-ame] enaro 'He walks with his head down.' down head-have-PRTC go (TA-B-G-536)

It also occurs as subordinator in participial relative clauses, and by extension of this, as an agentive nominalizer.

- (TA) (49) wari≈ki [muni boči-ame] 'a basket full of beans' basket=EMPH bean full-PRTC (TA-B-G-386)
- (TA) (50) [tami gu'wiro-ame] 'one who helps me' (TA-B-G-385)
  me help-PRTC

Similar comments could be made for a number of other UA subordinators.

#### NON-SYNTACTIC AFFIXATION

### Causative

Under this general rubric we will consider markings with such values as 'benefactive', 'applicative', 'active', 'transitivizer', and 'causative' in the narrow sense. While these notions are related, grouping them under this label is done mainly for expository purposes, and neither this nor the following subsections can necessarily be taken as reflecting a natural division in UA grammar.

The active stative distinction is basically a semantic one, while the transitive/intransitive distinction is more grammatical, pertaining to whether or not a verb takes an object (note that these two distinctions are independent, so that any combination is possible, but in practice they correlate to a considerable degree). Distinctions between active and transitive verbs on the one hand and stative or intransitive verbs on the other were touched on very briefly in STEMS. Other Stem Phenomena. We will be concerned with them here mainly in that an affix with a basic causative or applicative function will often have a transitivizing or 'activizing' effect and may, as with Cupeno -in, evolve into a thematic suffix as its causative force weakens.

The basic UA categories in this domain are 'causative' and what is sometimes called 'applicative'. Like the causative, applicative suffixes have the effect of adding an argument to the verb (making an intransitive transitive or a transitive ditransitive), but they differ semantically in not implying causation. Perhaps the most common semantic value of applicatives is benefactive, and in some languages this rather than applicative may be the proper designation, but in many instances benefactive is too marrow a designation to cover the semantic effects of the applicative. It is to be expected that there is considerable synchronic and diachronic overlap among these various categories.

It may be possible to reconstruct a (possibly archaic) causative or applicative suffix of the shape \*-kV for P-UA; this is the basic Numic form and has possible cognates elsewhere:

(M) (1) pu"ni~"kihi 'show something to someone' (M-L-G-265) see-CAUS

- (SP) (2) sa'a-<sup>n</sup>ká=ni 'make mush for me' (SP-S-G-144)
  make-BEN=me
  mush
- (L) (3) česn-ki-la-š 'BcisBors' (L-KG-BG-143)
- (TA) (4) ti-ki-ma 'will bring (to me)' (TA-B-G-182) bring-APPLIC-FUT

A more defini: e reconstruction for the causative is \*-na, with the plural, repetitive, or distributive variant \*-ca,

- (SP) (5) ci"ka"pi-"n'a ci"kapi-"ca
  cut-DISTR

  "put something"

  TRNS

  "cut several objects" (SP-S-G-162)
- (H) (6) ri/ak-na 'cause to spin' (H-K-L-201)
- (SR) (7) timi-m-ina-i=n 'I keep shutting it.' (SR-H-G-40) s nut-REPET-CAUS-(?)=I
- (TA) (8) bi'ri-na bi'ri-ca tvist-CAUS twist-CAUS
  'wist something' PL
  'twist some things' (TA-B-G-407)
- (A) (9) thetlapaa-na thathathapa-ca
  UNSPEC-break-CAUS UNSPEC-RDP-break-FREQ
  OBJ OBJ CAUS
  'break something' 'shatter something' (A-A-I-120)

Yet another causative form is \*-tu-(y)a. The first syllable of this is probably related to a verbalizing suffix that can possibly be reconstructed with the meaning 'be' or 'become'. The second syllable, taking the c/n/y alternation into account, probably relates at some remote stage to the \*-na/\*-ca causative, and possibly also to the active a (cf. STEMS, Other Stem Phenomena).

- (SP) (10) kaa-"t'ui=ni 'make me sing' (SP-S-G-145) sing-CAUS=me
- (H) (11) n.' po'kaya-t naa-tiki-toyna 'I made Po'kaya cut himself.'
  I PN-ACC REFL-cut-CAUS (H-J-NC-7)
- (SR) (12) miiš-k-in-ičuna 'cause to get wet for someone' (SR-H-D)

  "tet-PNCT-CAUS-BEN

  zet
- (P) (13) fi-mil-cud 'cause me to run' (P-H-G-103)

- (Y) (14) nok-tua 'make talk' (Y-J-I-47)
- (HU) (15) kwei-tia 'give, cause to carry' (HU-G-S-96) carry-CAUS
- (A) (16) tee-čook-tia 'cause someone to cry' (A-A-I-91)
  UNSPEC-cry-CAUS
  H
  OBJ

Turning to applicatives, there is some evidence for an (archaic?) applicative suffix \*-wi(-ya).

- (M) (17) puhaa-wi 'doctor someone' (M-L-G-265)
  bewitch-BEN
- (P) (18) Jiin-gid 'cause to smoke, lecture, hold council' smoke-CAUS (P-S-IN)
- (A) (19) tee-tla-šel-wia "divide something with someone"
  UNSPEC-UNSPEC-divide-APPLIC (A-A-I-105)
  H OBJ
  OBJ

More obviously, though, \*-li-ya is reconstructable as an applicative for P-SUA; the first part of this may be cognate (through regular correspondence) to P-MUA \*-ni CAUS.

- (SP) (20) na-ŋwa'ka'mi-ni-"pakai 'covered oneself' (SP-S-G-146)
  REFL-cover-CAUS-REM
  PAST
- (CA) (21) pe-n-yuki-ni-'i 'I scared it.' (CUP-J-SC-60) it-I-fear-CAUS-PAST
- (P) (22) manc-culid 'cause to know' (P-S-IN) know-CAUS
- (TO) (23) ami-tu-n-sag-id 'They are speaking to me,' they-UNSPEC-me-say-APPLIC (TO-M-PL-365)
  ORI
- (Y) (24) bwik-ria-k 'sang for him' (Y-J-I-18) sing-BEN-PERF
- (HU) (25) haanii-ri 'bring something for someone' (HU-G-S-96) bring-BEN
- (A) (26) ki-čiiwi-lia 'He makes it for him.' (A-B-NA)

The fore; oing remarks give the briefest possible coverage of an extremely complex area. Other possible cognates could be cited for various sets, and the synchronic morphological picture is often quite complicated. See UA-H-MP2 for some comments on reconstructions basically compatible with those given above.

## Adverbial

This subsection deals primarily with verb suffixes indicating motion, direction, and posture. Certain other adverbial affixes were treated briefly under INCORPORATION, Other.

Adverbial suffixes, particularly those pertaining to motion, are highly prevalent in UA, and some languages are well stocked with them. Many are transparently related to independent verbs or can be seen to bear such a relation diachronically (cf. UA-C-ODA). Among the more obvious reconstructions are \*-ki 'come', \*-miya 'go', and \*-nimi 'go around' (related to the P-UA verbs \*kima 'come', \*miya 'go', and \*nimi 'go around, live' -- cf. UA-M-CS and UA-VVH-TCG). These and other adverbial suffixes are illustrated in the examples that follow.

- (M) (27) a-pu"ni-ki-"ti 'came to see it' (M-L-G-109)
- (M) (28) miya-poto 'go back and forth' (M-L-G-273)
  go-back
  and
  forth
- (SH) (29) ni ti"ka-hkati 'I sit and eat.' (SH-C-LV-32)
  I eat-sit
- (SH) (30) ti"ka-kba 'Go and eat.' (SH-M-IN) eat-away
- (SP) (31) kati-"m'ia-yi 'keeps on riding' (SP-S-G-141)
  sit-CONT-PRES
  MOT
- (SP) (32) noo-ki=ana 'come to carry him' (SP-S-G-142)
- (TU) (33) ymo'o-la-t 'He is going along limping.' (TU-V-G-177) limp-go-PRES
- (TU) (34) un-'ušaz'a-gim 'He came to dry it.' (TU-V-G-120)
  R:P-dry-come
  PERF
- (H) (35) wany-nam-to 'go for a walk' (H-W-L-39)
  wank-go-go
  around
- (CA) (36) p:-n-wiway-kaw-qa 'I hang it in different places.'
  i:-I-hang-around-DUR (CA-F-MV-61)

- (CU) (37) tawa-lu 'go and see' (CU-HN-M-133)
- (L) (38) ag-ni 'go bathe' (L-M-SA2-201) bathe-go
- (P) (39) nida-mid 'go to see' (P-SS-D-137)
- (TO) (40) m-iš-up-niok-im 'They also go speaking.' (TO-M-PL-368) they-POS-also-speak-go
- (TA) (41) ne neko-ši-nare 'I want to go fight.' (TA-B-G-174)
  I fight-go-DESID
- (Y) (42) ya'a-saka 'continue making PL' (SON-K-V-336)
  make-continue
  PI.
- (HU) (43) ne-p-e-u-haarii-mie 'I'm going off to get a drink of I-ASSR-away-RESTR-drink-go water.' (HU-G-S-94) water
- (HU) (44) pi-ku-'ie-ne 'He's going around drinking liquor.'
  ASSR-around-drink -go (HU-G-S-94)
- (PO) (45) &-temu-ti 'Go look for him.' (PO-B-DMP-22)
  IMP-look-go
  for
- (PO) (46) š-ta-kwa-ki 'Come eat,' (PO-B-DMP-22)
  IMP-UNSPEC-eat-come
  ORI
- (A) (47) oo-ti-kwiika-to 'You went to sing.' (A-A-I-124)
  PERF-you-sing-went
- (A) (48) maa ši-k<sup>w</sup>iika-ki 'Come to sing.' (A-A-I-127) EXHRT IMP-sing-come

Observe that motion is occasionally doubly marked, by a periphrastic locution and by a suffix with comparable meaning:

(PO) (49) e-n-ola-k ti-8-takwe-tu 'I came for you to pay me.'
PERF-I-come-PAST you-me-pay-came (PO-B-DMP-22)

#### Volitional

The principal category included in this subsection is the desiderative, which is widespread as a verb suffix in UA. Heath (UA-H-MP2-15) correctly reconstructs \*-pa on the basis of Tubatulabal -iba's and Yaqui -bae.

including in the set the Serrano future -iv and the Hopi inceptive -va. Cupan -vicu may also belong in the set, as well as the Southern Numic future -paa. Various southern languages show never formations based on the verbs 'die' (cf. COMPOUNDS) and 'want', the latter reconstructable as "maki for P-UL.

- (M) (50) hpjyatu-"naa"ma 'want to sing' (M-L-G-271) s.ng-DESID
- (TU) (51) an-dan-iiba'-iwa-t 'He wants to be kicked.'
  RDP-kick-DESID-IMPRS-PRES (TU-V-G-117)
  IMPRF
- (CU) (52) ne'e=n pi-čak-ne-n-viču-qal 'I wanted to catch it.'
  [=I it-catch-I-ACT-want-PAST (CU-HN-M-134)
  DUR
- (TA) (53) ga'ra nire-nare 'I want to become good.' (TA-B-G-167) good become-DESID
- (Y) (54) tohi-bae 'want to carry' (Y-J-I-17)
- (HU) (55) we-p-e-u-haarii-ku 'They want to drink water.'
  they-ASSR-away-RESTR-drink-DESID (HU-G-S-94)
  water PL
- (A) (57) nl-k-čiiwa-s-neki 'I want to do it.' (A-S-ALM-28) I-it-do-FUT-want

A variety of other categories are grouped here mainly for convenience. They include such notions as 'try', 'pretend', 'able', 'learn', and 'order'. These are all represented by verb suffixes in one or more UA languages, but at present there is little one can say about them in comparative terms.

- (M) (58) hipiyatu-"mana"qa 'try to sing' (M-L-G-271) sing-try
- (TU) (59) i-t-ik-iloog-isa 'He will pretend to eat.' (TU-V-G-112)

  RDP-eat-pretend-FUT

  PERF
- (L) (60) čaam=up čam-ŋoorax-vota-q 'We can run.' (L-L-FN)
  we=it our-run-able-TNS
  PL (SG)
- (P) (61) mil-idtahim 'learn to run' (P-SS-D-139)

- (P) (62) s-mil-dag 'be able to run' (P-SS-D-139)
  POS-run-able
- (TA) (63) kuši mi'či-nura-riru 'I was ordered to fashion poles.'
  pole fashion-order-PAST (TA-B-G-175)
  IMPRS
- (Y) (64) baa'a-m nu'u-sae 'He told him to bring water.'
  water-PL bring-order (Y-J-1-46)
- (HU) (65) p-uu-yei-we 'He can walk,' (HU-G-S-93)
  ASSR-RESTR-walk-able

Note the special construction in Luiseno, which seems undecided whether such sentences are main or subordinate clauses; the verb ending is finite, but its singular number, the singular clitic, and the possessor prefix would all normally indicate a subordinate clause subject.

#### Modal

Verbal affixes of modality show great diversity of form and semantic value in UA. Imperative suffixes were treated earlier (IMPERATIVES); here I simply give some illustrative forms (see also PARTICLES AND CLITICS, Modal).

- (M) (66) ti="ka-tuwa-"pi 'could/would eat' (M-L-G-281) eat-could/would-PERF
- (SP) (67) yayaka-"kai-ku '(1) would have cried.' (SP-S-G-168) cry-PERF-IRR
- (SP) (68) pa"ka-gu-<sup>n</sup>paa-<sup>n</sup>pi=aga 'Maybe (he) will kill him.' kill-PNCT-FUT-DUB=him (SP-S-G-169)
- (TU) (69) wiši-puwa-t 'It seems to be ripening.' (TU-V-G-118) ripen-seem-PRES
- (TU) (70) wěřáž-hai'iwát 'It should have ripened.' (TU-V-G-115) ripen-IRR
- (CA) (71) sewe'-t-i ne-mekan-max-alu 'He might kill a snake for me.'
  snake-ABS-ACC me-kill-BEN-POT (CUP-S-SR-142)
- (NT) (72) isa-na 'that he might plant' (NT-B-T-81) plant-SBJNCT
- (TA) (73) ši-me-re areko [mači-saa] 'He would have gone, having known.'
  go-COND-PAST DUB know-PAST (TA-B-G-303)
  GER
- (Y) (74) hi'ibwa-'ii'a-wa 'It is desired that (people come) eat.'
  eat-SBJNCT-IMPRS (Y-D-IN)

- (HU) (75) spai pi-'aanee-ni-kee 'It would be thus.' (HU-G-8-57) thus ASSR-be-FUT-IRR
- (HU) (76) pi-ka-yuu-seiya-nia 'He doesn't let himself be seen.'
  ASSR-NEG-REFL-see-let (HU-G-S-94)
- (PO) (77) a-ya-n 'Let me go.' (PO-B-DMP-23)
  I-go-SBJNCT
- (A) (78) ye'waatl toonatiw ye-skiya 'He would have been the sun.'
  he sun be-COND (A-G-L-73)

### Aspectual

A distinction is normally made between 'tense', which refers to the time of an event, and 'aspect', which refers to the configuration of an event through time. The conceptual value of this distinction is clear, but in practice it is often difficult to maintain, in UA or elsewhere. One problem is that putative tense elements, when closely examined, often turn out to be basically aspectual in character, with their tense value a secondary or specialized development. A second problem is the existence of mixed categories such as 'present perfect', 'past durative', and so on. Aspectual elements, moreover, display a wide diversity of semantic values, some (e.g. 'unrealized') rather closely allied to tense notions and others (e.g. 'continuative') less so and more verb-like.

The organization to be followed here is adopted for convenience of presentation and does not necessarily reflect any natural division in UA verb structure. In this subsection we concentrate on aspectual elements that are not closely associated with tense—like notions; those which are are treated together with tense in the following subsection. Certain reconstructions are fairly clear for the UA tense/aspect system, and many suggestive comparisons can be made, but for the most part at present remarks on comparison and reconstruction are highly tentative pending necessary detailed investigation.

Affixes considered in this subsection do not lend themselves to ready reconstruction. Some, however, are obviously related to independent verbs. It is perhaps easiest to group them for discussion in general semantic domains, though these may overlap with one another and with areas treated elsewhere.

The domain of 'repetitive', 'distributive', 'habitual', etc. is often marked in UA by reduplication (see STEMS, Reduplication), but verbal affixes commonly serve such functions as well.

- (M) (79) pi"ti-hu-ya'wi-"ti 'Several just arrived from separate direcscrive-PNCT-DISTR-TNS tions.' (M-L-G-274)
- (SP) (80) ai-"mia 'always says' (8P-8-G-156) say-HAB
- (TU) (81) tik-iniinimu-t 'It is grazing.' (TU-V-G-63)

  eat-DISTR-PRES

- (H) (82) tiki-0"i 'always cuts' (H-W-L-42)
- (SR) (83) nirir-ava-i=vi=' 'He kept moving it.' (SR-H-G-103)
  move-REPET-(?)=he=PAST
- (L) (84) qewi-ma 'always shouts' (L-D-PG-11) shout-HAB
- (HU) (85) we-p-e-u-taa-yei-sia 'They went off (each in his they-ASSR-away-RESTR-through-go-DISTR own direction).' (HU-G-S-97)

Closely allied to the above, and also to certain concepts marked by motion suffixes, are affixes with such values as 'keep', 'continue', and general 'durative'; these contrast with 'punctual', a category reported for various UA languages (cf. STEMS, Perfective and Imperfective Stems).

- (NP) (86) u-buni-pinni 'He is looking at him.' (NP-L-M)
- (M) (87) time-"mai 'be in process of eating' (M-L-G-271) eat-in process
- (M) (88) qwa"ca-'i 'fall a short distance' (M-L-G-263)
- (SH) (89) kati-'i-yu 'He kept on sitting.' (SH-M-SG-43) sit-keep-PROG
- (SP) (90) ipi-nu=nca=ana 'He (just) finished drinking.' drink-PNCT=PAST=he (SP-S-G-153)
- (SP) (91) pini-"n'i-"pikai 'kept on looking' (SP-S-G-158) look-keep-REM PAST
- (H) (92) pima warik-iwta 'They DL are running.'
  they run-DUR
  SG
- (NT) (93) 4ăi-mi 'He is planting it.' (NT-B-T-79) plant-PROG
- (HU) (94) p-ee-taa-'aasi-rime 'He is (just) arriving.'
  ASSR-away-through-arrive-DUR (HU-G-S-93)

Inceptive affixes are not uncommon in UA. Slightly less common is their opposite, affixes with the gloss 'stop' or 'finish' (but of the perfect forms considered in the next subsection).

- (NP) (96) yoJonoona hikwa-piti-'yakwi 'It begins to blow every evening.'
- (M) (97) phti-"naa 'start to grow' (M-L-G-292)
  INCEPT-grow
- (M) (98) ti"ka-"mati"ka 'finish eating' (M-L-G-271) e.t.-finish
- (SP) (99) timka-"mii-yi=ana 'He is eating already.' (SP-S-G-159)
  wat-already-PRES=he
- (SP) (100) noo-"ku-"pikai='"kwa 'started to carry them' (SP-S-G-154) carry-INCEPT-REM=them PAST
- (H) (101) piw-va 'go to sleep' (H-W-L-37)
- (P) (102) uk-ito 'finish raining' (P-SS-D-137)
- (Y) (103) ;uk-taiti-ne 'It will start raining.' (Y-L-TG-27)
- (Y) (104) hinu-su-k 'finished buying' (Y-J-I-39)

## Tense/Aspect

The most widespread tense/aspect marker in UA is probably zero, which normally has present and often past value, i.e. it covers the 'realized' domain. This can be reconstructed for P-UA.

- (NP) (105) ni puku punni 'I see the horse.' (NP-AA-AS-2)

  T horse see
- (SH) (106) ni nu"ki 'I ran.' (SH-M-NN-9)
  I run
- (H) (107) mi' wari 'I ran.'
- (SR) (108) nii'=n hi ama-i 'I saw him.' (SR-H-G-157)
  I=I see that-ACC
- (P) (109) man o čikpan 'John is/was working.' (P-H-P-210)
  N B work

- (TA) (110) bahi '(I) drink/drank.' (TA-B-G-73)
- (HU) (111) p-ii-ta-kwai 'He ate it up completely.' (HU-G-S-90)
  ASSR-it-through-eat
- (PO) (112) ti-nuca 'You call.' (PO-B-DMP-18)
- (A) (113) ni-k-neki 'I want it.'
  I-it-want

The future in UA is not always clearly distinguishable from such notions as 'potential' and 'unrealized'. Besides a simple future, a language may have a future durative form, a distinction between near and remote future, a distinction between 'definite' and 'indefinite' (i.e. more contingent) future, or a future analogous to English 'gonna'. Though forms vary, certain tendencies can be noted. Keath (UA-H-MPZ-19) reconstructs \*-ni, but while this is quite possible, Yaqui -ne, Mayo -nake, and potential cognates with shifted senses suggest the conceivable alternative that some or all of the forms in question descend at some level from \*-naki 'want' (cf. Volitional above). Suffixes derivable from \*-ps may go back to another desiderative suffix (see Volitional). Forms derivable from \*-ss and \*-ms (with some fluctuation in the vowels) are also common exponents of future or other unrealized categories.

- (M) (114) a-kuu-"kHa-"ti 'will bury him' (M-L-G-42) him-bury-REM-TNS FUR
- (SH) (115) ni in pui-nuhi 'I'll see you, maybe.' (SH-MB-LC-GN2.5)

  I you see-INDF

  ACC FUT
- (SP) (116) kaa-paa=ni 'I'll sing.' (SP-S-G-165) sing-FUT=I
- (TU) (117) i-tik-išam-iiu 'It will be eaten.' (TU-V-G-123)

  RDP-eat-FUT-IMPRS

  PERF
- (H) (118) pam in kiiki-ni 'It will bite you.'
  it you bite-FUT
  ACC
- (CA) (119) ax-pe-tew-nem 'He will find it.' (CA-H-BSK-52)
  FUT-it-see-FUT
- (L) (120) x aan=po nasčaxan-an 'John will eat.' (L-H-I-81)
  PN=FUT eat-FUT
- (L) (121) xwaan naacaxan-lut 'John is gonna eat.' (L-H-I-81)
  PN eat-gonna

- (P) (122) uw: a=t wo Mipkana-d 'The woman will be working.'
  woman B=PERF FUT work-FUT (P-L-FN)
  DUR
- (TA) (123) n.he ane-ma 'I will tell him.' (TA-H-TE-xii)
  I tell-FUT
- (Y) (124) as to bwit-bwik-pea-ne 'He will often feel like singing.'
  he RDP-sing-DESID-FUT (Y-L-TG-26)
- (Mayo) (125) hi'ibwa-nake 'will eat' (MA-CC-CM-209) eat-FUT
- (CR) (126) ta'a-ta-tuire'e-sin 'He will give it to us.' (CR-P-NE-2) (1)-us-give-FUT
- (HU) (127) ne-p-e-u-mie-ni 'I will go.' (HU-M-HP-34) I-ASSR-sway-RESTR-go-FUT
- (PO) (128) come-s 'will sew' (PO-B-DMP-21)
- (A) (129) ni-miki-s 'I will die.'

Present tense is not a primitive category in UA. While zero can be reconstructed with present value, as noted above, it was also probably used for past tense and is better regarded as indicating realization or as the unmarked form of the verb. Various northern languages have innovated tense suffixes that function as zero does or are more specifically for present tense. (All have a shape that can be related to one of the stems posited earlier for 'be'.)

- (M) (130) ti"ka-"ti 'is eating/ate' (M-I\_G-282) eat-TNS
- (SP) (131) kaa-yi 'sings' (SP-S-G-163) sing-PRES
- (TU) (132) tika-t 'He is eating.' (TU-V-G-121) eat-PRES

The greatest variety is found in UA tense/aspect markers pertaining to the past. Among the categories one finds are simple past, perfect, recent past, memote past, past durative, past habitual or usitative, and past perfect. Here too, many of the forms can be related to one of the P-UA stems for 'be'. For perfective aspect \*-pi is a clear P-NUA reconstruction (with a possible southern cognate in Opata -ve), and \*-su (or \*-sV) is almost as blear for P-SUA. Beyond this I will not suggest any specific reconstructions due to the great complexity of the material.

- (M) (134) qwa"si-"pi 'has become ripe' (M-L-G-282) get-PERF ripe
- (SH) (135) o"ca ti"pikia-"pi 'The jug had been full.' (SH-M-IN) jug full-PERF
- (SP) (136) a"pi-"kai=ana 'He has slept/been asleep.'
  sleep-PERF=he (SP-S-G-164)
- (TU) (137) ibii'-iukan 'It used to blossom.' (TU-V-G-107)
- (CA) (138) čem-hiči-'i 'We went.' (CA-F-MV-25) we-go-PAST
- (L) (139) noo yumayk oovi-quş 'I was giving long ago.' (L-L-FN)
  I long give-PAST
  ago DUR
- (L) (140) noo paa'i-k 'I used to drink.' (L-L-FN)
- (L) (141) yauy-muk-p=il 'It was snowing.' (L-L-FN) snow-REC=it=PAST
  PAST
- (L) (142) kar-(y)ax 'played' (L-H-I-125) play-PAST
- (NT) (143) vuapai-tyadai 'was bringing' (NT-B-T-81) bring-PAST DUR
- (TA) (144) eruka šina-re=ke 'Who shouted?' (TA-B-G-481) who shout-PAST=EMPH
- (TA) (145) ropiri baye-cane-ge 'Ropiri was calling you.' (TA-B-G-170)
  PN call-say-PAST
  DUR
- (Y) (146) aman si-ka 'He went there,' (Y-M-PS-205) there go-PERF
- (Y) (147) aapo bwik-bae-n 'He wanted to sing.' (Y-L-TG-28)
  he sing-DESID-PAST
  DUR

- (Y) (148) and tekipanca-su-k 'He finished working there,' there work-COMPL-PERF (Y-D-BT)
- (Opata) (149) ne hio-ve 'I have painted.' (UA-B-NR-703)
  I paint-PERF
- (CR) (150) u. nu-ha'u-me'e-ka'a 'I was going there.'
  there I-away-go-PAST (CR-MM-CE-xiv)
- (HU) (151) se-p-te-a-'iwa-si 'You PL won.' (HU-M-HP-34)
  yau-ASSR-DISTR-toward-win-PAST
  Pi PI
- (HU) (152) tewi wana p-uu-yeikaa-kai 'The man used to live there.'
  man there ASSR-RESTR-live-PAST (HU-G-8-63)
  DUR
- (PO) (153) mu-k 'took' (PO-B-DMP-20)
- (A) (154) oo-ti-k-poov-ka-' 'We had counted it.' (A-B-NA)
  PERF-we-it-count-PAST-PL
  PERF
- (A) (155) ni-nooca-lo-ya 'I was being called.' (A-G-L-45)
  I-vall-IMPRS-PAST
  DUR

### OVERALL VERB STRUCTURE

Previous sections have dealt with the diversity of verbal affixes found in UA languages, treating each affix or class of affixes in essential isolation from one another. To complete the description of the verbs of a language, it is necessary to specify how the various parts of the verb fit together. This includes such matters as saying which affixes can co-occur with one another, what order they appear in, which kinds of affixes go on the various classes or types of stems, etc. There is not a great deal one can presently say with assurance about this problem for UA as a whole or for the proto language. I will offer only a few general comments.

UA languages vary greatly in the complexity of verbs. Some languages, like Serrano, have relatively little productive verb morphology and comparatively few verbal affixes, and long strings of affixes are simply not found. At the other extreme are languages like Huichol, for which Grimes (HU-G-5-22-23) sets up fifteen prefix position classes and five suffix position classes in a morpheme-order chart; previous examples abundantly illustrate the morphemic complexity of individual verb words. As a group the UA languages tend to be more like Huichol than like Serrano in regard to verbal complexity. Huichol is however atypical in its abundance of prefixes; for the most part suffixation predominates over prefixation in UA.

The verb structure is largely agglutinative, with boundaries between affixes normally easy to discern, comparatively little fusion of adjacent affixes, and little in the way of portmanteau morphemes.

When strings of affixes (particularly suffixes) occur on a verb, there is a tendency for one farther from the stem to have greater semantic scope than one closer to the stem; a suffix will typically be subject to the semantic force of a following suffix rather than conversely. In at least some cases suffixes can occur in different orders reflecting different semantic scope. Consider (1) and (2), for instance.

- (L) (1) noo=n poy nee-ni-viču-q 'I want to make him leave.'
  I=I him leave-CAUS-DESID-TNS
- (L) (2) noo⇒n poy qee-viču-ni-q 'I make him want to leave.'
  I=I him leave-DESID-CAUS-TNS

In (1) the desiderative is external to the causative and has greater semantic scope, while in (2) both relations are reversed. The tense suffix is external to both in each sentence, which corresponds to the fact that the entire verbal activity is subject to its semantic force, in this case temporal. (See UA-L-PR for further discussion.)

It is not presently known how much flexibility there is in the ordering of affixes to convey contrasting scope relations. Certainly the overall UA tendency seems to be for affixes to be relatively fixed in order. While this is consistent with a general correlation between scope and position (e.g. tense suffixes are usually external to others and have others in their scope semantically), it gives rise in individual cases to 'scope inversion', where the fixed ordering of affixes prevails in the teeth of semantics and an internal affix has an external one in its scope:

- (SP) (3) maai-"t'ui-"ki-"ti-pa=aŋa=taŋwa catch-CAUS-APPLIC-PASS-FUT=he=us INCL 'He will cause us to be caught.' (SP-S-G-147)
- (TU) (4) a-naŋaa-l-iloog-iba'a-t
  RDP-cry-go-pretend-DESID-PRES
  IMPRF
  'He wants to go pretending to cry.' (TU-V-G-71)

The prevalence of scope inversion in UA is not known.

Some loose generalizations can be made about the ordering of different kinds of affixes. There is a tendency, noted earlier, for the more noun-like affixes (e.g. pronominal or instrumental prefixes) to precede the stem and for more verb-like affixes to follow the stem; this is not unrelated to the overall verb-final character of the family. Subordinators are usually final. In finite forms tense markers tend to be final, following various aspectual markers, with other suffixes closer to the stem. One general tendency observable with respect to these 'internal' suffixes is the order CAUS-APPLIC/BEN-PASS/IMPRS, as illustrated in (3) and (5).

(HU) (5) kWei-ti-ya-ri 'have something given one for someone' carry-CAUS-BEN-IMPRS (HU-G-S-97)

Particularly suggestive for purposes of comparison and reconstruction are cases where classes of suffixes form mutually exclusive sets that interact in particular ways with syntax or stem phenomena. The clearest case is in Tubatulabal, where Voegelin (TU-V-G) distinguishes between medial suffixes, which can co-occur and appear in a certain order, and final suffixes. These latter naturally follow the medial suffixes. Moreover, they are mutually exclusive with one another, and include subordinators, the present tense suffix, imperative suffixes, and other modal elements. These final suffixes occur only with imperfective stems (cf. (4)); another way of saying this is that perfective reduplication (or perfectivity of stems however marked) is a member of the class of mutually exclusive morphological processes that includes the basic tense and modal suffixes. Furthermore, the modal auxiliary construction in Tubatulabal requires that the stem be imperfective, and the final position suffixes are not permitted; hence the modal auxiliary construction is also a (syntactic) member of the set including perfectivity and final position suffixes.

(TU) (6) ana.=haa=giluuc haš kim 'May we come?' (TU-V-G-128)
Q=:ay=ve NEG come

The comparative interest of such restrictions becomes evident when we note the common use of bare stems for imperatives in UA, the use of the bare stem (without the regular present tense suffix) for present tense questions in Southern Palute, and similar phenomena.

#### COORDINATION

Coordination and subordination are not always easily distinguished, in UA or in languages generally. The relation between the two in UA can be quite intimate, as we will see. This section focuses on complex sentences for which the lesignation 'coordinate' seems fairly straightforward; following sections take up in turn the major types of subordination in UA. Not nearly so such is known about UA coordination as one would like, especially at the level of fine detail. While a few reconstructions and general tendencies are reasonably clear, much remains obscure.

## Conjunctions

For convenience we may consider conjunctions to span the three general semantic domains 'and', 'or', and 'but', though this categorization is somewhat artificial, at least for UA. Of the three domains, 'and' is the most significant; while every UA language has special conjunctions in this domain, many lack conjunctions for 'or' or 'but', use them only in restricted circumstances, or express these notions through elements with broader function that cannot be characterized as conjunctions in any narrow sense.

The 'and' forms are variagated. The clearest reconstruction is zero, i.e. many UA languages use simple juxtaposition for 'and' coordination:

- (SR) (1) ni-yi' ni-na' 'my mother and my father' (SR-H-G-128) my-mother my-father
- (HU) (2) i-ki uki iya uka me-pi-hani-tiwe this-SG man that woman they-ASSR-carry-go water around PL

'This man and that woman are carrying water.' (SON-K-V-285)

(A) (3) on-tee-ca'ci-lia on-tee-nooca-ya
away-UNSPEC-shout-APPLIC away-UNSPEC-call-PAST
H DUR
OBJ
'He proclaims, he calls out.' (A-G-I-145)

Another reconstruction is the postposition \*-man 'with' for conjoined nominals.

- (SH) (4) pi tai-mai ti"ka-yu 'My brother and I are eating.'
  I brother-with eat-PROG (SH-M-SG-103)
- (CA) (5) paapas-i pe-n-kwa-qal karne'-i pe-man 'I eat potatoes with/ potatoes-ACC it-I-eat-DUR meat-ACC it-with and meat.' (CA-H-BSK-46)
- (CR) (6) is santaru wa'a-hamwan is cike 'soldiers and dogs' (CR-F-G-80)

  ART soldier them-with ART dog
- (A) (7) in aatool-namaka-'-ke' ii-waan in kakawa-tla-keca-l-namaka-'-ke'
  ART atole-sell-AG-PL it-with ART chocolate-UNSPEC-stand-IMPRS-sell-AG-PL
  OBJ

ii-waan in tekiski-namaka-'-ke' it-with ART saltpeter-sell-AG-PL 'the atole-sellers, the sellers of prepared chocolate, and the sellers of saltpeter' (A-DA-FC10-93)

Other reconstructions in the 'and' domain are less obvious, though there are suggestive recurring shapes like ku and ya. As is already apparent in the case of \*-man 'with', 'and' conjunctions often have special shades of meaning; a pure 'and' sense may be more the exception than the rule. Semantic values in this general domain include 'and then', 'and so', 'also', 'again', 'too', 'both', etc. (for further examples, see PARTICLES AND CLITICS, Conjunctions and Adverbs.)

- (M) (8) qatu'u"tu=tiyaha=yai"si nii-"nawa"ku-"ci'i NEG=also=and our-money-DIM 'And also we have no money.' (M-L-G-385)
- (SH) (9) n4 t4e ka"t4 'I'm sitting again.' (SH-MB-LC-15.25)
  I again sit
  DUR

- (TU) (10) iš-, hali-t ku-dii tibaič 'Coyote is living, and also coyote-ABS live-PRES and-also wolf Wolf.' (TU-V-G-122)
- (SR) (11) a-ya' ami'a-na' 'his mother and his father' his-mother and his-father (SR-H-G-13)
- (SR) (12) ani:n čaacu' 'And then I sang.' (SR-H-C-29) and-I sing
- (CU) (13) mə qay haşi-čəm-yəx 'And we didn't go.' (CU-H-G-ll) and NEG go-we-STAT
- (L) (14) xwaan mariya weh pellax-kutum 'John and Mary are both going to
  PN PN both dance-gonna dance.' (L-H-I-44)
  (two) PL
- (P) (15) ku=n=t wo i gii aañi 'And I will fall.' (P-SS-D-121) and=I=PERF FUT PNCT fall I DS PERF
- (TA) (16) pegro antonio ši 'Peter and Antonio' (TA-B-G-268)
  PN PN also
- (TA) (17) owsame ne naki čo 'I also want medicine.' (TA-B-G-271) medicine I want also
- (TA) (18) ke ce mu iki-re ru 'Didn't you know it, then?'
  NEC then you know-PAST AFF (TA-B-G-350)
- (Y) (19) hunv aapo tuisi b"i-b"ika into ye-ye'e this always much RDP-sing and RDP-dance 'He always sings and dances a lot.' (Y-L-TG-50)
- (HU) (20) net=ta mpai ne-ti-ni-maari-waa-ni 'I too thus know of him.'
  I=tlso thus I-DISTR-NARR-know-HAB-NARR (HU-G-S-79)
- (A) (21) aw ii-waan ti-k-ilnaamiki-s 'And you will remember.' and it-with you-it-remember-FUT (A-G-L-142)

It was observed above that 'or' conjunctions in UA are highly limited. Languages may lack a special 'or' form, or such a form may be restricted to certain types of questions, as is apparently the case in Papago and Tarahumara. Many of the forms are related to modal elements, for instance the recurring sequence has should by now be familiar as a common component of interrogative, indefinite, and assorted modal expressions.

(SH) (22) ni wosa-i nuu<sup>n</sup>-tia o"ca-i suwai-"na I basket-ACC DUB-again jug-ACC want-PROG 'I want a basket or a jug.' (SH-M-SG-103)

- (H) (23) na' sen sowi-t sen taavo-t niina-ni
  I DUB jackrabbit-ACC DUB cottontail-ACC kill-FUT
  'I will kill the jackrabbit or the cottontail.' (H-K-L-139)
- (SR) (24) mia=t čičin-t ha naaš-t 'Maybe it's a boy or a girl.' may=DUB boy-ABS or girl-ABS (SR-H-G-13)
- (L) (25) mičat=pu xwaan man mariya qee-n 'Either John or Mary will which=FUT PN or PN leave-FUT leave.' (L-L-FN)
- (P) (26) n=a=p taču g on aha n=a=p g luusi Q=B=you want ART salt or Q=B=you ART candy 'Do you want salt or candy?' (P-L-FN)
- (TA) (27) keca ga'ra hu-we 'Or isn't it good?' (TA-B-G-364)
  NEG good be-or
- (HU) (28) me sika arikemika u-ti-nuiva=ri 'Or if she is born later....'
  or if later RESTR-up-be=EMPH (HU-C-6-71)
  else born
- (A) (29) teoo-kuitla-nakoč-tli a'nooso tepos-nakoč-tli

  god-excrement-ear-ABS or copper-ear-ABS
  gold plug plug
  'gold ear-plugs or copper ear-plugs' (A-DA-FC10-177)

Just as 'or' conjunctions are closely allied to dubitative and interrogative elements, so 'but' conjunctions are closely allied to affirmative and emphatic elements, in particular \*ta (see PARTICLES AND CLITICS, Polarity, especially examples (9)-(13)).

- (SH) (30) ni sokotihiya pe"ka-sua-"ti ka"mu-i taka pe"ka-nu
  I deer kill-DESID-PROG jackrabbit-ACC but kill-COMPL
  'I wanted to kill a deer, but instead I killed a jackrabbit.'
  (SH-M-SG-104)
- (SP) (31) uu=ca="sa"p'a=nwa 'But he broke wind.' (SP-8-G-95) break=PAST=but=he wind
- (SR) (32) wari' yanq qai=n hii 'But I didn't see him.' (SR-H-D)
  AFF but NEG=I see
- (CU) (33) qay='əp haw-pə-n men tan-pə-n 'He didn't sing, but he NEG=R sing-he-ACT but dance-he-ACT danced.' (CU-H-G-150)
- (P) (34) n=t wo čim fi-hii t aşba g čihil i-padč I=PERF FUT IMPOT REFL-shear PERF but ART scissors REFL-break PERF
  'I was going to cut my hair, but the scissors broke.' (P-H-P-205)

- (TA) (35) ke řari-nare-ame rina 'But (I) didn't want to buy.'
  NEC buy-DESID-PRTC through (TA-B-G-446)
  (TMPH)
- (Y) (36) antinyo kaa yepsa-k ta peo yepsa-k
  PN NEG arrive-PERF but PN arrive-PERF
  'Antonio has not arrived, but Peter has,' (Y-L-TG-51)

Syntax

The most besic syntactic property of a conjunction is its position with respect to its conjuncts. As previous examples show, UA conjunctions vary greatly in this regard. Conjunctions most commonly precede the second conjunct, i.e. they occur between the two conjuncts if both are explicit, but there are diviations from this pattern and special cases. Sentential conjunctions ar: typically introducer elements in the second clause, but in many instances they are second position particles or clitics and therefore occur inside the second conjunct. As introducer elements in particular they may serve as proofs for topicalization.

- (CU) (37) tu cumay me=m=pe suge-t-i pati 'And tomorrow he'll shoot tomorrow and=he=UNR deer-ABS-ACC shoot a deer.' (CU-H-G-13)
- (Y) (38) em ču'u tosali nim ču'u into čukuli 'Your dog is white, and my dog your dog white my dog and black is black.' (Y-L-TG-64)

Occasionally a conjunction will attach to the first conjunct.

(P) (39) n=t wo fi±'i-d≃č wo čipkana-d 'I'll sing and work.'
I=fERF FUT sing-FUT=and FUT work-FUT (P-L-FN)

DUR SS DUR

Sometimes conjunctions follow the second conjunct, as in certain Terahumara examples above, or occur before both conjuncts, as in (23). Postpositions serving as conjunctions will attach to the second conjunct or to a pronoun copy of one of the conjuncts, as in (4)-(7).

There are various cases in UA where conjunctions are specially marked to reflect certain syntactic relations. Accusative inflection is found in Numic and Hopi

- (SH) (40) n: satii-a kiti-ma'ai-hku pui-"ka 'I see a dog and a cat.'
  I dog-ACC cat-with-ACC see-RSLTV (SH-M-SG-103)
- (H) (H) pan taaqa noq pam waiti wani-wta 'The man and the woman are that man and that woman stand-DUR standing.' (E-K-L-137)
- (H) (42) na' pooko-t nit moosa-t tawa 'I found a dog and a cat.'

  I dog-ACC and cat-ACC find (H-K-L-138)

  ACC

Conjunctions may mark a difference between same subjects and different subjects. For instance, Papago ku (cf. (15)) is used when the subjects of the two conjuncts are different, while  $\check{c}$  (cf. (39)) or  $\underline{k}$  is used when they

are the same; although the facts appear to be more complex,  $\underline{\check{c}}$  and  $\underline{k}$  themselves supposedly contrast as durative and non-durative respectively. Cahuilla exhibits an unusual type of agreement between possessor prefixes and confunctions:

(CA) (43) ne-na nen ni-ye 'my father and my mother'
e-na en i-ye 'your father and your mother'
he-na pen hi-ye 'his father and his mother'
POSSR-father and POSSR-mother (CA-K-Z3)

The general form for 'and' is pen, but in this construction at least there is a person contrast. Another 'and' conjunction, man, is found throughout in the plural.

A variety of constituent types can be conjoined, including at least clauses, nominals, and predicates, and a given conjunction might be restricted to particular types. When corresponding elements of two conjuncts are repeated, reduction can take place in at least some cases (note (26)). There is little systematic information about either of these subjects in UA, and I cannot pursue them here. It is of course possible to have more than two conjuncts, as in (7).

Conjunctions show up in a variety of subordinate clause constructions in UA, as we will see later. Such examples, as well as those where a conjunction apparently itself functions as a subordinator, underscore the difficulty of distinguishing coordination from subordination in UA. Note (12) and the following:

- (SR) (44) iim ačam [ani=č kim] 'We were those who came.'
  these we and=we come (SR-H-D)
  then
- (SR) (45) qai=ç kwa' hwënëqaahçič ama [ani=m maqa-i]
  NEG=you eat filthy that and=she give-(?)
  stuff then
  'Don't eat that filthy stuff when she gives it to you.'
  (SR-H-G-135)

#### COMPLEMENT CLAUSES.

A 'complement clause' is a (non-relative) clause that functions as a subject or direct object, e.g. that he left in That he left is obvious or I regret that he left. It may be appropriate to consider certain types of adverbial clauses as complement clauses functioning as postpositional objects, but we will not consider such clauses in this section.

### Position

UA languages vary as to the positioning of complement clauses, and detailed information is seldom available. While these clauses may often appear in the same position as any other subject or object, the general tendency is for them to be postposed to the end of the main clause, either optionally or obligatorily. In (1) below, the object complement clause

occurs between the subject and verb, the normal position for objects in Hopi; in (2) the same object clause has been postposed to the end of the main clause and is therefore post-verbal (the subordinator in (2) is final, hence it occurs in its 'pausal' form).

- (H) (1) ni [in hiro-ro-ta-q] pas qa navota 'I certainly didn't hear
  I you snore-RDP-DUR-SUBR very NEG hear you snore.' (H-VV-IN)
  ACC DS
- (H) (2) pas ni qa navota [in hiro-ro-ta-q'ö] 'I certainly didn't hear very I NEG hear you snore-RDP-DUR-SUBR you snore.' (H-VV-IN)

Similar variation is observed in the following two examples of subject complement clauses in Tarahumara.

- (TA) (3) [ok'a čiwawa-ra ni-sa] ga'ra nii-ma 'It will be good that there two sack-ABS be-PAST good be-FUT are two sacks,' (TA-B-G-463)
- (TA) (4) aca ga'ra u [wa'ru ba'wi bahi-a] 'Is it good to drink a lot of Q good be much water drink-GER water?' (TA-B-G-462)

Both Luiseno and Tarahumara sometimes tolerate 'split' complement clauses, where part of the clause has been postposed to the verb and part left behind. The restrictions on this construction have not been explored, and it is not known whether it occurs in other UA languages.

- (L) (5) [noc=p no-qee-pi] miy-q [no-ki-yk] 'I have to go home.'
  I=it my-leave-UNR be-TNS my-house-to (L-L-FN)
- (L) (6) [no-ma'max=up=i1] miy-quş [xwaan-i] 'I liked John.' (L-H-I-189) my-like=it=PAST be-PAST PN-ACC
- (TA) (7) ne ko [we řa'i-g-o] mae-e=ke [kuči tosa-k-ame]

  I EMPH very tasty-PAST-SUBR think-PAST=EMPH piece white-STAT-PRTC

  DUR

  'I thought the little white pieces were very tasty.' (TA-B-G-213)

## Marking

Subordinate clauses vary along a continuum from the sentential, i.e. those sharing nost or all of the properties of main clauses or independent sentences, to the nominal, i.e. those lacking sentential properties and resembling nours. The object clause in <u>I know he is sad</u> lies toward the sentential end of the continuum, for instance, while that in <u>I dislike running</u> lies nearer the nominal end.

Complement clauses in UA differ in their location along this continuum, as do other types of subordinate clauses. In some cases there are two contrasting types of complement clauses which differ little if at all in overall semantic value but do differ considerably in marking in accordance with a sentential/nominal opposition. We will use the terms 'finite' and

'non-finite' to label this type of contrast and will illustrate it with examples from Iniseno. (8) and (9) involve subject complements, while (10) and (11) contain object complements; the complements in (8) and (10) are finite, while those in (9) and (11) are non-finite.

- (L) (8) loovi-q [wam' pitoo aamo-q] 'It is good he is hunting now.' good-TNS already now hunt-TNS (L-L-FN)
- (L) (9) loovi-q [xwaen po-'aamo] 'It is good John is hunting.'
  good-TMS PN his-hunt (L-L-FN)
- (L) (10) noo=n oho'van-q [xwasn=po samo-n] 'I believe John will hunt.'
  I=I believe-TNS PN=he hunt-FUT (L-L-FN)
- (L) (ll) noo=n ayali-q [o-hati'ax-vo-y] 'I know you went.'

  I=I know-TNS your-go-R-ACC (CUP-J-SC-290)

The two finite complement clauses in these examples could each stand alone as an independent sentence. The verb is in each case inflected for tense the same as any main clause verb, and second position clitics are possible as in main clauses. None of this is true for the two non-finite complement clauses, which show three further properties that distinguish them from the finite clauses and show their nominal character. First, a possessor prefix agreeing with the subject attaches to the subordinate verb. Second, special aspect markers, such as -vo R (which contrasts with -pi UNR), give the only tense/aspect specifications in the subordinate clause; these aspect markers do not appear in main clauses. Third, the subordinate clause verb takes accusative inflection when the clause functions as direct object. While the distinction between finite and non-finite (or sentential and nominal) clauses is not always this clear, bearing it in mind may help to clarify certain matters, such as why subordinate clause subjects sometimes assume possessor form.

As the examples above suggest, the means for marking complement clauses vary considerably, sometimes even within a single language. There may be no subordinator at all, notably in finite clauses.

- (TU) (12) pingi=gič taatwa-l [maygila-t=pi ye'wan]
  say=QUOT man-ABS run-PRES=you tomorrow
  'The man said you are going to run tomorrow,' (TU-B-IN)
- (SR) (13) na'=n anan [x'aan mariya-ti piiha'n] 'I know John likes Mary.'
  I=I know PN PN-ACC like (SR-C-IN)
- (TA) (14) [pe ne wekawa-re] mu ka mae ko 'You think I forgot!'
  ATTEN I forget-PAST you EMPH think then (TA-B-G-511)
- (Y) (15) tuisi tu'i [yepsa-k hu usi] 'It's very good that the child very good arrive-PERF this child arrived.' (Y-L-TG-127)
- (P) (16) as n-c-eti-k [as mo-namokti] 'Didn't I tell you not to NEG I-you-tell-PAST NEG REFL-marry marry?' (PO-B-DMP-26)

Another possibility for basically finite clauses is a subordinator consisting of an introducer particle. Such a particle may be optional, as with Nahuatl in (perhaps ultimately the same as the article in), and in some languages it attracts to it the clitic or auxiliary group.

- (P) (17) tačču a=n [m=a=n=t o n-hii] 'I want to cut my hair.'
  want B=I SUBR=B=I=PERF FUT REFL-shear (P-H-P-206)
  PERF
- (TA) (18) ma ga'ra nii-ma [ma=ta šima-bo ku]
  alleady good be-FUT SUBR=we go-FUT again
  'I'. will be good for us to go home.' (TA-B-G-459)
- (A) (19) peewa [in tla-čii-čiil-wi] 'It (sky) begins to get red.'
  beg n SUBR UNSPEC-RDP-chile-CAUS (A-G-L-97)
  OBJ

Most commonly, however, subordination is marked by a verbal affix. Usually it is a suffix, but subordinating prefixes are not unheard of in UA:

(CA) (20) ne' pe-n-'e'nan-qa [piš-'e-hiči-ve-y] 'I know you went.'
I it-I-know-DUR SUBR-your-go-R-ACC (CUP-J-SC-290)

In some cases the subordinating suffix can be identified with a participle or other type of nominal (izing) suffix.

- (SP) (21) [ma"noo-"ku=ya=a"ka pu"cucuk"a-t±] a-ya=ana hai-"ka all-ACC=QUOT=them know-PRTC ART-ACC=he say-PRES 'Ee says he knows all of them.' (SP-S-G-277)
- (8R) (22) ni'\*n inan [ama-y a-mi-ih va-ti] 'I know he's leaving.'

  I=I know that-ACC his-go-INSTR-ACC (SR-C-IN)
- (CU) (23) nf-hiwou [ne-memye-lu-'a-y] 'I learned to speak English.'

  I-know my-white-be-NR-ACC (CU-H-G-119)

  man like
  speak English

In other cases the subordinating suffix can be identified with one used in adverbial clauses.

- (SP) (24) nn' no"no"si-yà [kwiyacici"ka'nwi-"ci]

  I dream-PRES become-having
  bear SS .
  'I dream that I turned into a bear.' (SP-G-G-244)
- (TU) (25) maa'aga-t [alaa'awa-š] 'He knows how to talk.'
  know-PRES talk-when (TU-V-G-125)

- (L) (26) noo=n=il qay taap-yax [kWa'-nuk] 'I didn't finish eating.'
  I=I=PAST NEG finish-PAST eat-having\* (L-KG-SG-149)
  SS
- (Y) (27) tuisi tu'i [hu hamut bwika-kai] 'It is very good that the woman very good this woman sing-while sings,' (Y-L-S-101)

Sometimes a complement clause is marked by a modal affix or other modal entity that either co-occurs with another subordinator or occurs without one, in which case it itself can be construed as having subordinating function. The complement clause construction has the modal value one would expect with these markers.

- (TU) (28) aana=c pingi-t [imbi ayaana-h] 'Our father says for you to father=our say-PRES you sing-IMP sing.' (TU-B-IN)
- (P) (29) hig o taču [m=n=t s wo čipk] 'He wants me to work.'
  that B want SUBR≃B=I=PERF QUOT FUT work (P-L-FN)
  PERF
- (TA) (30) nehe naki [goči-mera ba] 'I want to sleep.' (TA-T-TED-37)
  I want sleep-FUT EMPH
- (Y) (31) aapo nee te-tehwa [kaa nee misi-ta hipu-'i'a] she me RDP-tell NEG I cat-ACC have-SBJNCT 'She always tells me not to have a cat.' (Y-L-TG-29)
- (A) (32) mo-čiko-mati [maa a'so ye'waantin oo-ki-kwi-k-e' in

  REFL-little-know MDL DUB they PERF-it-take-PAST-PL ART
  suspect
  ii-tlatki]
  his-possession
  'He suspects they took his possession.' (A-G-L-99)

Little has been done in UA to investigate possible correlations between the semantic properties of the main clause predicate and the type of subordinator it allows or requires. Certain tendencies can be noted, but in lieu of detailed work they should be taken more as indications of what directions one might search in than as rigorous descriptive statements. Finite clauses are most likely to occur governed by basic verbs of propositional attitude such as 'say', 'think', 'know', and 'believe', as in a number of previous examples. Modal markings, as expected, tend to go with verbs implying non-realization, such as 'want', 'order', 'tell', etc. There may be semantic correlations within particular languages. In Tarahumara, for instance, the subordinator -o (cf. (7)) evidently occurs mainly with a semantically coherent set of verbs meaning 'say', 'think', 'tell', etc. Verbs of practical knowledge, such as 'know how to', 'learn how to', etc. take zero, the gerund ending, or the infinitival ending, though these

<sup>\*</sup>Luiseno -nuk/-nik and Yaqui -kai have a variety of translations, none of which fits all uses perfectly.

inflections are not restricted to such verbs (or to complement clause constructions).

- (TA) (33) we mu lomi [řa'ica] 'You know how to talk well.'

  very you know talk (TA-B-G-521)

  well
- (TA) (34) a:a mu [Yoma-ga] bene 'Do you know how to play "15"?'
  Q you play-GER know (TA-B-0-520)
  "15"
- (TA) (35) ke ne mači [gari-ra-ria] 'I don't know how to build houses.'
  NEG I know house-make-INF (TA-B-G-520)

The extent and details of such correlations in other languages remain to be determined.

Besides elements that can be regarded as subordinators, complement clause markings include several things touched on earlier connected to the non-finite or nominalized status of the clause. The verb may take accusative inflection in object complements, as in (11), (20), (22), and (23). Nominalized clauses will most likely involve special aspectual suffixes rather than the tense/aspect markers of main and finite clauses, as in (5), (11), and (20), if there is any indication at all of tense/aspect beyond that conveyed by the subordinator itself. Some of the most interesting phenomena pertain to how the subject of the subordinate clause is marked. In a number of languages it occurs in its possessor or accusative form (recall that possessors are often marked accusative in UA); previous examples are (1), (2), (5), (6), (9), (11), (20), (22), and (23).

- (SH) (36) [ma ti"ka-toih-a] caa sua-"ki-"na him eat-FUT-ACC good want-CAUS-PROG 'I want him to eat.' (SH-M-SG-56)
- (TU) (37) sam'aga-t [noh-iš-ka-ci=n šuu'i-t-a]
  lnow-PRES roast-INSTR-STAT-ACC=your rabbit-ABS-ACC
  (?)
  'He knows you ought to roast the rabbit.' (TU-V-G-159)
- (Y) (38) aepo hunen hia [hu-ka hamut-ta tutu'uli-tia] he thus say this-ACC woman-ACC pretty-QUOT 'He says this woman is pretty.' (Y-L-S-106)

Cupeno permit: the subordinate clause subject to be doubly marked on the verb:

(CU) (39) he'=ne ayuw-qa [ne-čaq-ne-n-pi] 'I want to catch it.'

The possessor subject prefix parallels that in related languages; the internal subject marker is in the same position that such markers occupy in finite verbs in the past tense, but the past tense restriction is clearly not operative her.

There is a tendency in UA, across subordinate clause types, for clauses to show a greater degree of nominalization when the main and subordinate clause subjects are different. This greater nominalization in turn correlates with possessor or accusative marking of the lower subject, and while there are exceptions (like the Cupeno examples (23) and (39)), retention of the subject and marking it with these special inflections can have the effect of indicating non-coreference of main and subordinate clause subjects. UA languages may also mark this distinction by contrasting verb suffixes, both in complement clauses and in other subordinate clauses (cf. COORDINATION, Syntax). The Hopi subordinator -q, for instance, is a different-subject marker in a variety of complex sentence types; compare (1) and (2) with (40).

(40) ni'a-w pan-qawi [ni' pev-ni-qay] 'I told him I had been there,'
I him-to thus-eay I there-VR-SUBR (H-W-L-46)

A few other complement clause subordinators in the northern languages are only used with coreferential subjects, though this phenomenon is more prevalent with relative and adverbial clauses.

### Modification

The presence of a complement clause subject may be a clue that the main and subordinate clause subjects are different for the reason that the lower subject is often deleted or omitted when the two subjects happen to be coreferential, as in English or most any language. Omission of the lower subject does not preclude its leaving agreement markers behind, and with pronominal subjects a more general principle allowing their omission may entail that it is not necessary to speak of a special rule deleting them in complement clauses. Previous examples with coreferential main and subordinate clause subjects include (17), (21), (23)-(26), (30), (33)-(35), (39), and (40). They show differing degrees of reduction of the shared subject and should be sufficient to illustrate the phenomenon.

Another cross-linguistic phenomenon affecting complement clause subjects is subject raising, which extracts the lower subject and moves it up into the main clause, where it functions as derived subject or object depending on whether the complement clause it is extracted from was the subject or object. What appears to be subject raising in UA, due to a subordinate subject with accusative marking, may in some cases only reflect the general pattern discussed above of possessor/accusative inflection on non-coreferential complement clause subjects; raising into the main clause is not necessarily involved. (41) could be construed as having the clause boundary either before or after awaali, for instance.

(L) (41) noo naqma-q awaal-i [po-wa'i-y] 'I hear the dog barking,'
I hear-TNS dog-ACC its-bark-ACC (L-H-I-154)

There are however cases in UA where this interpretation is highly unlikely due to non-contiguity of the accusative-marked subject and the remainder of the subordinate clause. The prevalence of subject raising in UA remains very much an open question; here are some possible examples:

- (SR) (42) sam=mi=či' ačam-i wii'win [ča-riwit-q-çi]
  they=they=us we-ACC want our-disappear-PNCT-ACC
  'They want us to disappear.' (SR-H-D)
- (L) (43) felisita čaam-i ma'ma-q [poy čam-ma'max-i]
  PN we-ACC want-TNS her our-like-ACC
  'Felicita wants us to like her.' (L-L-FN)
- (P) (44) b a=n \*lid g toolo [m=a=tp hu i wua g huan] thus B=I think ART bull SUBR=B=likely throw ART PN 'I think the bull may have thrown John.' (P-KM-MRME-86)
- (Y) (45) inepo enči [aa'a bep-'ii'a] 'I want you to hit it.'
  I you it hit-SBJNCT (SON-K-V-343)
  ACC ACC

The left common rule of 'tough movement', which extracts the object from a subject complement clause and makes it into the main clause subject, is rare at test in UA. The following Luiseno sentences may illustrate such a rule but the phenomenon has not been investigated.

- (L) (46) hika ka-q [hunwut-i po-tiiwi-lo] 'It's hard to see the bear.' hard-TNS bear-ACC its-see-SUBR (L-L-FN)
- (L) (47) hunwut=up hika'kas [po-tiiwi-lo] 'The bear is hard to see.' bear=it hard its-see-SUBR (L-L-FN)

Luiseno also displays an unusual construction involving a few verbs such as 'like' and 'hate'. These can occur embedded to the verb 'be' (omissible in the unmarked tense) even when semantically they appear to be main clause predicates. Besides deletion of the higher 'be', this construction is noteworthy for its highly irregular case and number inflection; as the following examples show, the object may lack accusative marking, the subject clitic agrees with the object rather than the subject, and the verb may take a plural suffix agreeing with the object.

- (L) (48) [noo=m=il awaal-um-i no-ma'max-um] miy-quş 'I liked dogs.'

  I=they=PAST dog-PL-ACC my-like-PL be-PAST (L-H-I-189)

  DUR
- (L) (49) [noo=p no-ma'max x waan] 'I like John.' (CUP-J-8C-177)
  I=he my-like PN

An explanation for these peculiarities is not readily apparent.

According to one analysis, certain verbal affixes (e.g. causative, desiderative, tense, modal, aspectual) can be regarded as underlying semantic predicates which take complement clause subjects and objects. Should this analysis be adopted, a rule of 'predicate raising' (UA-L-PR) or some principle having comparable effect must be presumed to attach the underlying predicate to the lower clause verb as an affix, entailing loss of the higher clause as a surface entity. Beyond calling attention to this analysis, I will not pursue the matter here.

### EMBEDDED QUESTIONS

### General

'Embedded questions' are interrogative clauses that function as subjects or objects of other, main clauses rather than standing alone as independent questions. They can be regarded as complement clauses of a special sort. In some cases, e.g. <u>Tell me who bit you</u>, the overall sentence containing the embedded question constitutes a request for information, but this is by no means always the case, e.g. Whether or not he bit you is immaterial.

Relatively little is known about embedded questions in UA, though a fair amount of information is available for a few languages. Very few examples of embedded questions functioning as subjects have come to light, and those that have involve an adjectival main clause predicate or a passive verb in the main clause; in this latter case the interrogative clause is an underlying object despite appearing in surface subject position.

- (L) (1) [hax kulaawu-t po-pora-vo-ri] oolaat 'Who planted the trees is a who tree-ABS his-plant-R-(?) unknown mystery.' (L-C-PC)
- (HU) (2) [hakeewaa m-ee-kieka-me-ti-ka] takwee tisaiti where SUBR-away-citizen-PRTC-CONN-be INTNS NEG

aci-r-ee-ti-maati-wa absent-DISTR-away-up-know-IMPRS 'Where he was a citizen is not at all known,' (HU-G-S-63)

While interrogative clauses sometimes precede the main clause predicate, as in the previous two examples, they tend to follow it even more strongly than other complement clauses.

Much of the discussion in the preceding section on the form of complement clauses will carry over to embedded questions. For example, the same rough distinction between finite and non-finite clauses can be made, as illustrated in the Luiseno examples below. (3) and (4) are embedded yes/no questions, while (5) and (6) embed WH questions; (3) and (5) are finite, while (4) and (6) are non-finite.

- (L) (3) ataax-um onani-viču-wun [iitax-lut=su=kun]
  person-FL know-DESID-TNS be-gonna=Q=QUOT
  PL cold
  'People want to know if it will be cold.' (L-L-FN)
- (L) (4) no-kaamay ney tuvyuni-q [tee waxaam po-xili-vo-y] my-son me ask-TNS if yesterday its-rain-R-ACC 'My son asked me if it rained yesterday.' (L-C-PC)
- (L) (5) yax ne-yk [hax=gu ayali-q teela-t] 'Tell me who knows the say me-to who=Q know-TNS language-ABS language.' (L-L-FN)
- (L) (6) noo=n onani-viču-q [kristina poom-ik po-'oovi-vo-y hiš]

  I=I know-DESID-TNS PN them-to her-give-R-ACC what

  ACC
  'I want to know what Christina gave them.' (L-C-PC)

The finite clauses have verbs inflected as they would be in a main clause and take clitics, including the interrogative clitic. The non-finite clauses lack these features, and the verb shows the same nominal traits as in non-finite complement clauses, namely a possessor prefix agreeing with the subject, special aspect markers restricted to subordinate clauses, and accusative inflection in an object clause.

Remarks on subordinators of complement clauses largely carry over to embedded questions as well. Apart from the special modal elements discussed in the following subsection, there appear to be no special subordinators used just for embedded questions. A variety of subordinate clause markings used for nominalization, adverbial clauses, general subordination, and even conjunction are found. The contrast between same and different subjects does not appear to be as important for embedded questions as for other subordinate clause types; it is however marked by contrasting verb suffixes in Hopi.

- (SH) (7) i ha[i<sup>n</sup> tekwa-ih-a] su<sup>n</sup>paatu-hka 'Do you know what you you Q your say-NR-ACC know-RSLTV said?' (SH-M-IN)
- (SH) (8) ni pui-"ka [un pe"ka-"pih-a] 'I see what he killed,'
  I see-RSLTV his kill-PERF-ACC (SH-M-SG-99)
- (H) (9) ni' qa i'ni'ta [hiita tiwa-qa'e] 'I don't remember what I found.'

  I NEG remember what find-SUBR (H-K-L-170)

  ACC SS
- (H) (10) ni' navota [hak timala'ta-q'8] 'I found out who is working,'

  I find who work-SUBR (H-K-L-169)

  out DUR DS
- (SR) (11) qay=n inan [hiit-i ani wiravira'n-iva']
  NEG=I know what-ACC and talk-when
  then

'I don't know what he's saying.' (SR-C-PC)

- (P) (12) pi a=n maač [m=a=ni=s h±bai wo hii]
  NEG B=I know SUBR=B=I=DUB where FUT go
  PERF
  'I don't know where I'm going.' (P-SS-D-147)
- (A) (13) in kaampa cinti-'-ke'] a'moo wel mač-o SUBR where begin-PAST-PL NEG well know-IMPRS 'Where they began is not known.' (A-R-OP-58)

### Yes/No Questions

Embedded yes/no questions may be marked in the same way as independent yes/no questions; thus the subordinate clause in (3) could stand alone in Luiseno as an interrogative sentence. Non-finite clauses will of course differ from nain clauses. Moreover, with either finite or non-finite clauses there may be a special modal introducer, roughly equivalent to English whether, that marks the clause as an embedded yes/no interrogative

and which in some cases cannot be used in independent questions. The interrogative clause in (4) fails as an independent question on both counts.

- (NP) (14) mi yaisi supidak adu-k i [hau ni mi nimoaga-k i]
  you then know-POT whether I you lie-POT
  PL
  'You will know then whether or not I am lying to you.' (NP-AA-S)
- (H) (15) [sen ni' timala'ta-ni-qe] qa navoti'ta 'I don't know whether I'll

  DUB I work-FUT-SUBR NEG know be working.' (H-K-L-169)

  DUR SS
- (CA) (16) pe-n-'ayaw-qa pe-n-'e'nan-ka' [nema pe-qwa-qa wiwi-č-i] it-I-want-DUR it-I-know-gonna DUB it-eat-DUR acorn-ABS-ACC mush
  'I want to know whether he eats acorn mush.' (CUP-J-SC-31)
- (TA) (17) ya Yuye kiri [aca mu ikiro-ma ke ca-we]
  slready tell EXHRT Q you can-FUT NEG DUB-or
  (7)
  'Tell us quickly whether you will be able to or not.' (TA-B-G-515)

There are attestations of alternative questions being embedded, and question tags as in (17); how widespread such constructions are is unknown.

- (H) (18) ni' qa navoti'ta [pam sen timala'ta sen qa timala'ta]
  I NEG know he DUB work DUB NEG work
  DUR
  II don't know whether he's working or not working.' (H-K-L-169)
- (CU) (19) me=se=t=pe hame čem-puy-wen ham
  and=DUB=EMPH=UNR whether we-eat-PAST whether
  DUR
  'I really don't know whether we ate or not.' (CU-H-G-12)
- (L) (20) ataax-um onani-viču-wun [tee=pum no'oy noct-i
  person-PL know-DESID-TNS if=they chief-ACC
  PL
  se'i-ktum man tee gay | 'Feople want to know who

se'i-ktum man tee qay] 'People want to know whether they can choose-gonna or if NEG choose the chief or not,' (L-L-FN)

In the Cupeno example (19), no main clause predicate appears; the modal markings are evidently sufficient to convey the desired sense, and the main verb is left implicit. Similar phenomena have been observed in other languages.

(H) (21) sen pam timala'ta 'I wonder whether he's working.'

DUB he work (H-K-L-168)

DUR

(L) (22) Ree=nu=p=ku saamsa-n man tee qay 'I don't know whether I'll if=I=FUT=POT buy-FUT or if NEG buy it or not.' (L-D-PG-131)

#### WH Questions

For the most part embedded WH questions are quite similar to their main clause counterparts, apart from possible markings of subordination. The question words are the same as for main clauses (with possible marginal discrepancies), and they are preposed or not essentially as they are in main clauses, though there may be a greater tendency to prepose them in subordinate clauses. At least in Shoshoni, however, the semantic content of embedded TH questions is conveyed without question words. The construction used amounts to a headless relative clause structure, already illustrated in (7) and (1). For questions formed on oblique objects, the pronoun pi- is used as postpositional object, as illustrated in (23)-(24).

- (SH) (23) ni [pi-<sup>n</sup>ka su"ka<sup>n</sup> kati-"pi] su<sup>n</sup>paatu-hka-<sup>n</sup>ti I PRON-at his sit-PERF know-STAT-PRTC PRTC
  'I know where he has been sitting.' (SH-M-IN)
- (SH) (2h) ni [huu-"pi-"ta pi-"tu"ka un yai-hkwa-ih-a] sunpaatu-hka I log-ABS-ACC PRON-under his enter-PNCT-NR-ACC know-RSLTV 'I know which log he went under.' (SH-M-SG-100)
- (SR) (25) inaanai=n [ta=n hamin mii-v] 'I know what I'll do.'
  know=I DUB=I how do-FUT (SR-H-D)
- (CU) (26) qay ne-hiwcu-qa [hiš pi-yaw-mi'aw-pi] 'I don't know what she will NEG I-know-DUR what it-carry-come-UNR bring.' (CU-HN-M-128)
- (L) (27) onani-viču-q [mikiga tee po-yoo-yi maamayu-lut] ::now-DESID-TNS when if her-mother-ACC help-gonna :She wanted to know when he would help her mother. (L-L-FN)
- (TA) (28) kepi ne mači [piri u] 'I don't know what it is,' (TA-B-G-290)
  NEG I know what be
- (Y) (29) habe lutula hu'unea-k-tea [haisa tea-ka-'u]
  hobody exactly know-PERF=QUOT what be-PERF-SUBR
  named
  'Nobody knew exactly what his name was.' (Y-J-I-109)
- (PO) (30) mwen t-ite-s [ak ti-meka] 'You will see who you give it to.'
  you you-see-FUT who you-give (PO-B-DMP-30)
- (A) (31) :i-k-ilnaamiki-s [in kaampa ti-ya-s]
  | tou-it-remember-FUT SUBR where you-go-FUT
  | You must remember where you must go.' (A-G-L-142)

#### RELATIVE CLAUSES

General

A 'relative clause' is a subordinate clause that modifies a nominal constituent. More abstractly, it can be characterized in terms of the following syntactic configuration:



That is, a relative clause is a constituent of a nominal and must contain within it (at the semantic level) a nominal coreferential to the nominal to which it is embedded. This coreference requirement reflects the semantic function of relatives, namely to characterize or modify a nominal (hence it must refer in some way to that nominal), and it distinguishes relative clauses from complement clauses, which have no such coreference requirement. The upper N<sub>i</sub> in the diagram can be referred to as the 'head noun'; we will refer to the lower N<sub>i</sub>, i.e. the nominal in the relative clause which is coreferential to the head, as the 'relativized noun'.

There is no formally obvious distinction in UA between restrictive and non-restrictive relatives. Most relative clauses are restrictive, meaning that they play a significant role in identifying the entity to which the nominal refers. However a number of examples are available of cases where it is clear for one reason or another that the identification of the entity in question is established independently of the relative, which thereby plays a non-restrictive role and simply provides 'extra', non-essential information from the standpoint of identification. The non-restrictive semantic value of a relative clause may be apparent from context, or because the clause modifies a proper name, definite pronoun, or possessed noun (see A-L-RC for further Nahustl examples).

- (L) (1) xwaan [ivi toonav-i-s lovi'i-mokwis] poloov toonav-ka-t
  PN this make-NR-ABS make-PAST good make-AG-ABS
  basket basket
  'John, who made this basket, is a good basket-maker.' (L-L-FN)
- (A) (2) ne'waatl [in ni-nemi] 'I, who live' (A-S-AS-30)
  I SUBR I-live

Relative clauses in UA normally come directly after the head noun, as in (1)-(2), but at least three other possibilities must be mentioned, all of which are sufficiently widespread in the family that they can safely be reconstructed for P-UA. First, there may be no overt head at all; this possibility will be examined below under <u>Headless Relatives</u>. Second, the relative may be preposed and occur directly before the head; the Shoshoni example below is atypical of the normal UA pattern in that the preposed relative is separated from the head by an element of the main clause.

- (SH) (3) [u<sup>n</sup> pe"ka-"pih-a] ni si"pih-a pui-"ka his kill-PERF-ACC I sheep-ACC see-RSL/IV
  - 'I see the sheep that he killed.' (SH-M-SG-99)
- (H) (4) hoci-ci-ta-qa-t] pöhi-t a-nq 'on a road that winds' wind-RDP-DUR-REL-ACC road-ACC it-on (H-VV-Q-389)
- (L) (5) [puney Jan ne-yk pu-'oovi-vo] yum'pi-š 'the hat John gave me'
  REL PN me-to his-give-R hat-ABS (L-D-PG-232)
  INAN
- (P) (6) miga-m [m=o g husi ha-fisid] čičoj o ko-ks That-PL SUBR=B ART PN them-see men B RDP-sleep ¹The men that Joe sees are sleeping.¹ (P-L-FN)
- (TA) (7) ena a k-ame [ma=ta ora-e=ke] řipiga this AFF be-PRTC SUBR=we have-PAST=EMPH knife DUR 'This is the knife that we had.' (TA-B-G-58)
- (A) (8) in [ki-namaka] ička-t1 'the cotton which he sells'
  ART it-sell cotton-ABS (A-DA-FC10-75)

The third possibility is for the relative to be 'extraposed' from its head, usually to the end of the main clause. The postposing may be minimal, as in the Luiseno example (13), where we have extraposition only in the limited sense that a postposition intervenes between the head noun and the relative, or it may involve substantial discontinuity. The Shoshoni example (10) technically does not involve relative clause extraposition, since the entire nominal including the head as well as the relative is moved, but the function of this movement seems comparable to extraposition, as a 'heavy' constituent is removed from clause-internal position to final position; note the presumptive pronoun copy left behind.

- (SH) (9) ni si"pih-a pui-"ka [u" pe"ka-"pih-a]
  I sheep-ACC see-RSLTV his kill-PERF-ACC
  PRTC
  'I see the sheep that he killed.' (SH-M-SG-99)
- (SH) (10) ná u pui-"ka-ha-"tá tu"ku-i [u" tá"ka-"páh-a]

  I it see-RSLTV-REF-PRTC meat-ACC his eat-PERF-ACC
  PRTC

  'I see the meat which he ate.' (SH-M-6G-99)
- (H) (11) poki waha-ha-ta [im ni-y maka'a-qat] 'The dog you gave me is dog bark-RDP-DUR you I-ACC give-REL barking.' (H-M-PC)

  DS
- (CU) (12) naxani-&=pə haw-in [pə' mariya pə-mamayəw-qali-və tuku].

  man-ABS=UNR sing-ACT SUBR PN her-help-DUR-R yesterday.

  'The man will sing that Mary was helping yesterday.' (CUP-J-SC-266)

- (L) (13) wunaal čulupa-q pupuk-na [no-heōi'-na]
  he enter-TNS door-in my-open-in
  'He walked in the door I left open.' (L-L-FN)
- (P) (14) higai toonk o gi'i-ĭ [m=o g kii an daam kiik]
  that hill B big-be SUBR=B ART house there on stand
  'The hill on which the house is standing is big.' (P-L-FN)
- (TA) (15) učečo ne towi řewa-re [ma=ne řuw-e tu]
  again I boy see-PAST SUBR=I tell-PAST EMPH
  DUR
  'I saw the boy again that I was telling you about.'. (TA-B-G-327)
- (Y) (16) itepo ču'u-ta hipwe [kaa hi-hiibwa-m-ta] we dog-ACC have NEG RDP-eat-PRTC-ACC 'We have a dog that doesn't eat.' (Y-L-S-72)
- (A) (17) miek in tlaal-lan i'kak kal-li [in onkaan many ART land-in stand house-ABS SUBR there tla-tla-tla-tooka-tia-'-ke' in ye'waantin toolteeka-'] RDP-RDP-UNSPEC-bury-CAUS-PAST-PL ART they Toltec-PL OBJ

'Many houses stood in the earth where the Toltecs left many things puried.' (A-DA-FC10-167)

In some UA languages nouns modified by a relative clause have a tendency to be 'reinforced' by a demonstrative, which might not be required to occur with such frequency with nouns lacking relatives; note the Papago examples (6) and (14). In Cupan these added demonstratives have given rise to special relative subordinators (cf. (5) and (12)), which are now apparently inside the relative clause (while the reinforcing demonstratives are external to it); in Luiseno these subordinated demonstratives have been elaborated into a type of relative pronoun, which agrees with the head in number, case, and animacy. Sentences with extraposition, like (12) and (21), show that this demonstrative subordinator is in fact part of the relative clause. In Luiseno, however, there is considerable freedom of position with respect to the head, more than one demonstrative can appear, and agreement is sporpadic.

- (CA) (18) naxani-š [pe' ne-mamayaw-pi] 'the man that I will help' man-ABS REL my-help-UNR (CUP-J-SC-54)
- (CU) (19) awa-l [pe' pe-mamayew-qal-ve] 'the dog that he was helping' dog-ABS REL his-help-DUR-R (CUP-J-SC-286)
- (L) (20) ataax-i [ponee-yi ki-š wasqi-qat-i]
  person-ACC REL-ACC house-ABS sweep-PRES-ACC
  ACC
  'the person ACC who is sweeping the house' (L-H-I-178)

- (L) (21) wunaal şu'ič-i ma'ma-quş [po qwa'i-vo-l-i waxaam]
  he rabbit-ACC want-PAST REL eat-R-ABS-ACC yesterday
  'He wanted the rabbit that was eaten yesterday.' (CUP-J-SC-121)
- (L) (22) punee-yi ataax-i [punee-yi xwaan po-'oyooto-vo sinava-l po-nay]
  that-ACC person-ACC REL-ACC PN his-steal-R money-ABS him-from
  'the person ACC from whom John stole the money' (L-L-FN)

The definition offered above for relative clauses indicates that two nominals are involved, one typically manifested by a head noun and the other a nominal inside the relative clause that is coreferential to the head. Seldem if ever in UA are both coreferential nouns manifested overtly in unreduced form. As previous examples abundantly illustrate, the relativized noun, the one inside the relative clause, is virtually always deleted. This deletion does not preclude its leaving traces behind in the form of agreement markers, as in (2) and (6). On occasion the relativized nominal is rot deleted, but remains in pronominal form. It may remain to bear a postposition, as in (22), since postpositions normally cannot be 'stranded' in UA. On the other hand, at least in Hopi it can be retained even when not needed for any such obvious grammatical purposes.

(H) (23) ni' i-napna-y ahoy a-w tii'iha [ni' pit ciik'a-qa'e]
I my-shirt-ACC back it-to sew I it tear-SURR
ACC SS
'I sewed back up my shirt which I tore.' (H-VV-ISNI-27)

Hopi also features an 'internal head' construction, in which no head noun external to the relative clause appears, but the relativized noun inside the clause is unreduced.

(H) (24) [im kwasa-t yiki-qat] ni ciikya 'I tore the dress you made.'
you dress-ACC make-REL I tear (H-M-PC)

# Subject Relatives

'Subject relatives' are those in which the relativized noun functions as subject within the subordinate clause. Previous examples are (1), (2), (4), (16), and (20). Subject relatives, like other types, for the most part fall towards the nominal or non-finite end of the scale, though finite or sentential relatives are found in various southern languages. Nominalized relative clause predicates often show number and case agreement with the head noun.

Finite subject relatives are marked by introducer particles or, in the case of Hulchol, by a subordinating verb prefix. In each case the marker is the basic subordinator for the language and occurs in a variety of subordinate clause types. For P-SUA one can reconstruct initial \*ma-, which attracted the clitic group.

(P) (25) o'odham [m=o s-ap-'\ddays ] 'man who is righteous' man SUBR=B POS-good-be (P-SS-D-150)

- (TA) (26) anaka enaro řehoi [ma=pu řapako mi řarigia-re ata]
  here come man SUBR=he yesterday you sell-PAST bow
  'Here comes the man who sold you the bow yesterday.' (TA-B-G-58)
- (HU) (27) tewi [wana m-uu-yeika-kai] 'the person who used to live man there SUBR-RESTR-live-PAST there' (HU-G-S-63)
- (A) (28) in caan-e' [in oo-mo-kal-ti]

  ART house-POSSR SUBR PERF-REFL-house-CAUS

  PAST

  'the householder who built a house' (A-R-RC-246)

For non-finite subject relatives, the southern languages use the active participial ending  $-\underline{m(e)}$ , which can be reconstructed as  $-\underline{m\acute{e}}$  for P-SUA.

- (P) (29) [am oidag-č-'id g aali wiim čipkana-da-m] o'odham there field-CONN-in ART child with work-DUR-PRTC man 'a man who works in the field with a child' (P-L-FN)
- (Y) (30) čuu-ta [si hiib a-m-ta] 'a dog ACC that eats a lot' dog-ACC much eat-PRTC-ACC (Y-L-TG-102)

In the northern languages, subject relatives are generally nominalized clauses employing the active participle \*-ti or a suffix derived from it. This is often preceded by \*-ka, a pervasive UA verb suffix with generally stative or durative value related ultimately to \*ka 'be'. Limited tense/ aspect contrasts can be made; for instance, Shoshomi allows the perfective participle for past or perfective in lieu of the active participle, and Luiseno has evolved the three-way contrast -mok\*iš PAST, -qat PRES, and -lut FUT, all incorporating the absolutive or active participial ending as its last segment. Case and number agreement with the head often involves \*-mi for plural and \*-yi for accusative. Dialects of Hopi differ significantly in how they mark relative clauses, but the same versus different subject contrast is sometimes indicated.

- (SH) (31) te"na-"pi-a-" [ki"tu piti-"pi-hka-"tin-a-"]
  man-ABS-ACC-CEN yesterday arrive-PERF-STAT-PRTC-ACC-GEN
  satii ni ki"cia
  dog me bite
  "The man who came yesterday's dog bit me.' (SH-M-SG-93)
- (SH) (32) su-ti [nahna-"pi] tuna-"pi'i 'that grown boy' (SH-D-FMS-118)

  DEM-NOM grow-PERF boy-ABS

  PRTC
- (H) (33) ma-man-t [yiiti-qa-m] loo-lolma-ti 'The girls who ran are RDP-girl-PL run-REL-PL RDP-pretty-PL pretty.' (H-K-L-126) PL
- (H) (34) ni maana-t [wari-qat] coocona 'I kissed the girl that ran.'
  I girl-ACC run-REL kiss (H-K-L-128)

- (CA) (35. awa-l [pe' hunwe-t-i mamayaw-qale-t] 'the dog that is helping dog-ABS SUBR bear-ABS-ACC help-DUR-ABS the bear' (CUP-J-SC-285)
- (CU) (36 kiima-l-i [pe' pe tuku s-yka haş-ax-i-č-i]
  boy-ABS-ACC SUBR yesterday it-to go-STAT-NR-ABS-ACC
  'the boy ACC that went there yesterday! (CUP-J-SC-195)
- (L) (37) noo ayali-q ataax-um-i [ponee-m-i ki-š waaqi-qat-um-i]
  I know-TNS person-PL-ACC REL-PL-ACC house-ABS sweep-PRES-PL-ACC
  ACC
  'I know the people who are sweeping the house.' (L-H-I-180)
- (L) (38) čaam [pom-om teetila-qal-mokwič-um] 'we who were talking' we REL-PL talk-DUR-PAST-PL (L-L-FN)

### Object Relatives

'Object relatives' are those in which the relativized noun functions as direct object within the subordinate clause. Previous examples are (3), (5)-(13), (18), (19), (21), (23), and (24). As with subject relatives, object relatives in UA normally involve nominalized rather than sentential clauses. Those southern languages with finite subject relatives also have finite object relatives, however, marked in the same way; note (6)-(8) and the following.

- (HU) (39) tewi [kakaiyari m-e-i-ye-ni'a]
  man God SUBR-away-him-RESTR-send
  'a man that God sent' (UA-H-URC-230)
- (A) (40) in pa'-tli [in oo-ni-mic-waal-no-tki-li-li]

  ART medicine-ABB SUBR PERF-I-you-come-REFL-carry-CAUS-APPLIC

  PAST

  'the medicine that I have brought you HON' (A-G-L-142)

The general pattern for object relatives, reconstructable for P-UA, has a nominalized verb with the subject marked as possessor. The perfective participle \*-pi can be reconstructed for object relatives in P-NUA; the nominalizers \*-i and \*-a can also be reconstructed at some level, though more tentatively. Case and number agreement with the head both occur, the latter possibly being less common than with subject relatives. (24) illustrates different-subject marking and an internal head in Hopi.

Previous examples with \*- $p\underline{i}$  include (3), (5), (9), (10), (12), (19), and (21). In Cupan this ending has come to mark realized aspect and contrasts with the unrealized  $-p\underline{i}$ , as in (18). Note that an absolutive suffix shows up with these aspect markers when the subject is unspecified and therefore does not gererate a possessor prefix, as seen in (21) (cf. (44)). The examples that follow illustrate nominalizing suffixes other than \*- $p\underline{i}$ .

(M) (41) aa"pa'ni [nii-"copa-"na] 'apples which we have picked up' apple our-pick-NR (M-L-G-123)

- (SH) (42) sokotiniya [nia<sup>n</sup> pe"ka-i] 'the deer I killed' deer my kill-NR (SH-M-IN)
- (CA) (43) tavu-t [ne-sex-'a] 'the rabbit I roasted' (CUP-J-SC-145) rabbit-ABS my-roast-NR
- (L) (44) awaal-i [po' mamayuw-i-c-i] 'the dog ACC that was helped' dog-ACC REL help-NR-ABS-ACC (CUP-J-SC-178)
- (P) (45) higai siiki [f-mi'-a] o gi'i-j 'The deer I killed is big.' that deer my-kill-NR B big-be (P-H-PC)
- (Y) (46) gwa'a kari [aman itom biča-ka-'u] 'the house we saw there' that house there our see-PERF-SUBR (Y-L-TG-101)
- (Y) (47) bu'u kari-m [in ačai-ta attea-ka-'u-m]
  many house-PL my father-ACC own-PERF-SUBR-PL
  'many of the houses that my father owned' (Y-L-TG-104)

Oblique Relatives

'Oblique relatives' are those in which the relativized noun is a postpositional object. Basically these are marked the same as object relatives in UA. However, complexities are introduced by a conflict between two general principles of UA grammar: relativized nouns are normally deleted, and postpositions normally cannot stand alone with no explicit object. Several different strategies are conceivable for resolving this conflict, and the UA languages vary as to which one(s) they employ.

There is of course no problem when the postposition is free rather than bound, so one 'strategy' is simply the use of free forms:

(TA) (48) ke mu naki wa [ma=mu gite čimoriki muhubu-ma]

NEG you want arrow SUBR=you with flying hunt-FUT

squirrel

'Don't you want arrows with which to hunt flying squirrels?'

The Papago example (14) can also be interpreted in this way.

(TA-B-G-58)

The most common device used for oblique relatives in UA is retention of the relativized noun in pronominal form to bear the postposition. In Nahuatl the PRON-P sequence is preposed to initial position (after the introducing subordinator), but generally such preposing is not required. Retention of the pronoun, without preposing, can be reconstructed for P-UA. Sentence (14) could be construed as a case of pronoun retention, since the 3P SG postpositional object pronoun in Papago is zero. (17) shows a special case of the PRON-P construction in Aztec, with onkaan 'there', an adverbial demonstrative, being functionally equivalent to a PRON-P sequence. (22) is a more straightforward Luiseno example of the PRON-P construction; other examples follow.

(SH) (49) ns atamon-a [pi-<sup>n</sup>pa ns nu'ki-tuih-a] pits ka-\text{ka-\text{lka-lka}}
I car-ACC PRON-on I run-FUT-ACC fix-RSLIV
'I'm fixing the car with which I'm going to drive.' (SH-M-SG-101)

- (SP) (50] uti-a="su tipi-"pi-a [pi-'utai=tan"a uni-na]
  DEM-ACC=just land-ABS-ACC PRON-toward=our do-NR
  'those lands ACC to which we are going' (SP-S-G-277)
- (H) (51) pam maana [tiyo a-mim nima-ŋwi-ni-q] that girl boy her-with go-HAB-FUT-SUBR home (?) DS 'the girl the boy goes home with' (H-W-L-48)
- (CU) (52 kəlawə-t [pə-sii-y pə-či pə-'ičaay-win-pi]
  stick-ABS his-nest-ACC it-with his-make-DUR-UNR
  'sticks with which to build his nest' (CU-HN-M-137)
- (Y) (53) hu-me haamuč-im [in ame-t noka-ka-'u] this-PL woman-PL my them-on talk-PERF-SUBR 'the women that I talked about' (Y-L-S-72)
- (A) (54) mani in tencoč-tli [in ii-kpak mo-kec-t-i'kak in k\*aaw-tli]
  be ART nopal-ABS SUBR its-over REFL-stand-CONN-stand ART eagle-ABS
  'There was the nopal, on top of which stood the eagle.' (A-R-OP-55)

Several other strategies are used for oblique relatives in one language or another. Sometimes the postposition is simply omitted. This appears to be the cese in the Tarahumara example (15), and it is one frequent device in Liseno:

(L) (55) ivi po kulawu-t [xwaan po-woti-vo awaal-i] this DEM stick-ABS PN his-hit-R dog-ACC 'This is the stick with which John hit the dog.' (L-L-FN)

Luiseno examples with the postposition attached to the verb are also attested:

(L) (56) kii-š [pu-'aaw'-qal-vu-ŋa] 'the house ACC in which he was house-ABS his-live-DUR-R-in living' (L-D-PG-247)

ACC

Luiseno also allows omission of the instrumental postposition in favor of the instrumental suffix which otherwise derives instrumental nouns from verbs:

(L) (57) kulawu-t [po xwaan mariya weh awaal-i pom-woti-la] stick-ABS REL PN PN both dog-ACC their-hit-INSTR 'the stick with which John and Mary hit the dog' (L-L-FN)

#### Headless Relatives

'Headless relatives' are those which lack an overt head noun, either internal or external. Sometimes a demonstrative is present that could be considered the head. Often, though, not even a demonstrative is present, and the nominal is fully headless. With either sort, the marking is often precisely the same as it is in 'headful' relatives.

- (SH) (58) u-"ka [in ta'uta-"pi pesi] 'that ACC which you have found'
  DEM-ACC your find-PERF already (SH-M-IN)
- (H) (59) [yev tav-ilti-qa] 'that which was put here' (H-W-L-48) here put-PASS-REL
- (SR) (60) aam [kima-qa-m-i] 'the ones ACC who were coming' those come-REL-PL-ACC (SR-H-D)
- (L) (61) no=n=il [po čiwi-mokwiš] 'I was the one who won.'
  I=I=PAST REL win-PAST (I-T-LIL-36)
- (P) (62) higai [m=o ku'a g muuni] 'one who eats beans' that SUBR=B eat ART beans (P-L-FN)
- (TA) (63) [ma=pu mo'iba-re-ame] 'those who have gone (died)'
  SUBR=they go-PAST-PRTC (TA-B-G-246)
- (Y) (64) [in bwa'a-bae-'u] 'what I want to eat' (Y-J-I-43) my eat-DESID-SUER
- (HU) (65) [m-ti-'ie-ni] 'he who will drink' (HU-M-HP-34)
  SUBR-up-drink-FUT
- (A) (66) [toonatiw oo-mo-čiiw] 'he who had become the sun' sun PERF-REFL-made (A-G-L-134)

To the extent that nominalizing suffixes are used in relative clauses, headless relatives may be indistinguishable from nominalized verbs. The following examples, for instance, from Comanche (Central Numic) and Tubatulabal, could be interpreted either way:

- (Comanche) (67) [tena-nii-ma'ai-yu-tu'i-nii] 'the ones who will be with man-PL-with-VR-FUT-PRTC the men' (CM-OS-F-96)
- (TU) (68) [otolooh-ina-pii-l tahambiš-i] 'the one who causes the old man groan-CAUS-AG-ABS old-ACC to groan' (TU-V-G-160)

Headless relatives need not be marked in precisely the same way as other relatives. In particular, they sometimes employ question words, especially in cases where the meaning is analogous to 'whoever', 'whatever', etc. It is not always fully apparent whether these question words are internal to the relative or external to it, making them heads of a sort; the former is perhaps more probable for the most part (see A-L-RC for some discussion of this matter as it pertains to Classical Nahuatl). Other markings can also figure in 'ever' relatives (cf. INDEFINITE PRONOUNS, ANY), but in general very little is known about these constructions.

- (L) (69) h:iča [xwaan po-yax-pi] 'whatever John will say' (L-L-FN) what FN his-say-UNR
- (L) (70) miči-yk menčapan [o-ma'ma-qala] 'to wherever you want (to go)' where-to even your-want-DUR (L-L-FN)
- (P) (71) has a = t o i gai [hadai i mada-d=c] that B=PERF FUT PNCT fall who PNCT run-FUT and PERF DUR SS
  'Vhoever will be running will fall.' (P-SB-D-147)
- (P) (72) oidag a=m moihun [m=o hikid ju-jk] 'I plow the field whenever field B=I plow SUBR=B when RDP-rain it rains.' (P-L-FN)
- (P) (73) [n=a=t haseu g čioj o i gatwi] ku=t hig o muu £UBR=B=PERF what ART man FUT PNCT shoot and=PERF that FUT die PERF DS PERF 'Whatever the man shoots, that thing will die, ' (P-L-FN)
- (HU) (74) [tiita ne-m-aine ne] 'what I'm saying' (HU-G-S-64) what I-SUBR-say I
- (A) (75) [in aakin neec-nooca] 'the one who calls me' (A-8-DLN-169) SUBR who me-call
- (A) (76) [in tlein ki-neki-'] 'what they want' (A-R-RC-246)
  SUBR what it-want-PL

#### ADVERBIAL CLAUSES

### Adverbial Relative Clauses

Certain adverbial clauses, especially some pertaining to location, time, and manner, can be analyzed semantically as involving a relative clause construction. He works where I work is roughly equivalent to He works at the place at which I work; He works when I work to He works at the time at which I work; and He works like I work to He works in the manner in which I work. The head in these expressions is a pro form of time, place, or manner, and they are doubly oblique -- the relativized noun is a prepositional object within the subordinate clause, and the whole nominal is a prepositional object in the main clause. Relatively little information is available about these constructions or their equivalent in UA, virtually none systematic, and the data at hand presents a diverse and somewhat confusing picture. While we should not necessarily assume that a doubly oblique relative clause structure always underlies UA expressions of this kind, this conception of them provides a convenient framework for discussion and sometimes helps to explain their form. Explicit pro forms like time, place, and manner are not common in these UA adverbial relative clauses; to the extent that a relative analysis is appropriate, they are better viewed as (doubly oblique) headless relative clauses.

We begin with where-clauses. In the simplest case these will be equivalent to at (the place) at which or at (the place) where, with an unmarked postposition like at, but either the internal or external postposition may have less obvious semantic content, yielding clauses with values such as to where, at (the place) to which, etc. The more marked semantically the expressions, the more likely it is that postpositions contributing the special semantic value will surface. It may not always be obvious whether a given postposition represents the one that is semantically internal to the relative clause or the one external to it, but clear cases of both are attested.

The simplest type of marking in UA for where-clauses involves nothing more than a simple subordinator with no special locative value. This can be extended to Cupan examples where subordination is indicated by possessor prefixes and special aspectual suffixes.

- (CU) (1) (pal atinye ə-paw-vi pe-weni-və] 'where your water lies at PN your-water-(?) its-lie-R Hot Springs' (CU-HN-M-136)
- (L) (2) [aamo-vo-1] 'where hunting took place' (L-KG-SG-17) hunt-R-ABS
- (TA) (3) [ma=tumu beteba-re] 'where you PL spent the night'
  SUBR=you pass-PAST (TA-B-G-223)
  PL night
- (HU) (4) [haa m-waa-yeikaa-kai] 'where the water came up'
  water SUBH-cavity-be-PAST (HU-C-S-63)
  DUH

Locative adverbial demonstratives appear in where-clauses in a few languages.

- (L) (5) ivi=p [iva amay-um pom-wolli-pi]
  this=it here child-PL their-grou-UNR
  up
  'This is where the children will grow up.' (L-L-FN)
- (A) (6) [in compa on-tla-maaseew-ti-nen-ka]
  SUBR there away-UNSFEC-do-CONN-go -PAST
  OBJ penance around PERF
  'where they had been doing penance' (A-G-L-132)

Question words occur as well, just as they do in other headless relatives.

- (L) (7) [miča po-het-qala] 'wherever it is open' (CUP-J-SC-302) where its-open-DUR
- (Y) (8) [hakuni hi'i-boo-tua] 'where he made him drink and eat' where drink-eat-CAUS (UA-H-URC-235)

(A) (9) in compa tepee-ti-teč [in kaampa co-mo-štlaawa-'] ART there mountain-CONN-on SUBR where PERF-REFL-pay-PL 'there upon the mountain, where they (debts) were paid' (A-3-RC-246)

Most commonly, though, an overt postposition figures in UA whereclauses. As with other oblique relatives, the relativized noun is often retained in pronominal form to bear the postposition.

- (SH) (10) [pi-nkm ni hapi-tui] 'where I will sleep' (SH-M-NN-23)
  PRON-at I lie-FUT
- (SP) (11) [nini pi-paa kati-"na=ni] 'where I stay' (SF-S-G-211)
  ne PRON-at sit-NR=my
- (CU) (12) [a-na-y pa-t magni-va-1] 'where your father was killed' your-father-ACC it-on kill-R-ABS (CU-HN-M-137)
- (A) (13) [in ii-k katka te-pan] 'where he was on the rock' SUBR its-on was rock-on (A-G-L-149-150)

Another possibility, also as with other oblique relatives, is for the postposition to be attached to the verb.

- (CA) (14) [pa-hem-čenen-va'] 'where they danced' (CA-F-MV-37) there-their-dance-at
- (L) (15) [c-htii'a-qala-yk] 'where you are going' (L-KG-SG-35) your-go-DUR-to
- (TA) (16) [ba'wi noka-či] 'where the water moves' (TA-B-G-389) water move-at
- (Y) (17) anan a-toha [em=a'a nu'u-ka-wi] 'Leave it where you brought there it-leave your=it bring-PERF-to it.' (Y-L-TG-129)

The following examples show other varieties of where-clauses marked by postpositions. Previous examples all involve postpositions that are probably internal to the relative clause; some of the postpositions below can be seen to be external, either by virtue of the sense or because there are two postpositions in the expression, as in the Southern Paiute example.

- (SP) (18) [pi-pa wini-"kai-"paa-"tuk"a] 'to where he had stood' PRON-at stand-PERF-to (SP-S-G-213)
- (CA) (19) [pi-yk-ne-hiči-pi] 'to where I will go' (CUP-J-SC-55) it-to-my-go-UNR
- (CA) (20) [tamya-t naš-qali-vi-yka] 'to where the sun set' (CUP-J-SC-55)

- (CU) (21) mivi-'aw [pət-'aw=şə=pə manə-pə-yə-qal]
  where-at DEM-at=DUB=UNR roll-he-STAT-PAST
  DUR
  'at the place where he must have rolled' (CU-H-G-147)
- (L) (22) noo=n mona [gevee-la po-tu'-qal-vo-ŋay]
  I=I come sycamore-ABS its-grow-DUR-R-from
  'I come from where sycamores were growing.' (L-KG-SG-96)
- (L) (23) om wuna matii-q [čam'-qal-qa-vu-ŋa]
  you there lose-TNB our-be-DUR-R-at
  'You lost it over there where we were.' (CA-D-RF-512)

Very little is known about like- or how-clauses in UA. From the examples available, it appears that some of the same marking devices are used as for locative adverbial clauses, e.g. question words and postpositions.

- (CU) (24) nə'=qwə=n wiwi'iw [ixemuk nə-yə ni-'un-pə-n-və-ŋə]
  I=POT=I make doing my-mother me-show-she-ACT-R-at
  acorn thus
  mush
  COND
  - 'I can make acorn mush like my mother always showed me.' (CU-H-G-135)
- (TA) (25) [ma=mu=rega nura] 'as you command' (TA-B-G-256) SUBR=you=MAN command
- (HU) (26) [keepai m-ti-wa-'utia-nee-kai] 'how he was writing them how SUBR-DISTR-them-write-go-PAST down' (HU-G-S-83) down DUR
- (A) (27) [in yu' či'-čiiwa-lo in ilwika-k] 'as is done in heaven' SUBR thus RDF-do-IMPRS ART sky-in (UA-B-NR-735)

Temporal clauses of various kinds will be treated in a separate subsection. Here we merely note that some temporal clauses are analogous in form to the other adverbial relative clauses and can be so analyzed,

- (CU) (28) [aya čəx-pə-yax-va-qa] 'when it was dawn' (CUP-J-SC-93) now light-it-STAT-R-at
- (Y) (29) peo tekipanoa [hu-ka antoonyo-ta hiib a-po]
  PN work this-ACC PN-ACC eat-in
  'Peter is working while Antonio is eating,' (Y-L-TG-129)
- (HU) (30) [keepaik" a m-ti-nuiwa] 'when she is born' (HU-G-S-71)
  when SUBR-up-be
  born

#### Temporal Clauses

Among the temporal adverbial clauses in UA, a basic distinction can be made between those in which the action described is sequential with respect to the action of the main clause and those in which the action is, in one sense or another, simultaneous with that of the main clause.

For sequential temporal adverbial clauses, the normal situation is for the action of the subordinate clause to precede that of the main clause; a gloss with 'naving', 'after', or 'upon' is often appropriate. By a natural shift from the temporal to the causal dimension, these clauses are sometimes used for 'if' and related notions as well. Marking is usually by means of a verb suffix. A distinction between same and different subjects is made in most of the northern languages, with traces in the south as well, and in some cases the construction is possible only with same subjects. Fairly elaborate systems have developed in Tubatulabal and Huichol. In Tubatulabal, -xibiyu 'right after Ving' and -jya'awas 'having finished Ving' are both same subject forms; they contrast with each other and with the different subject form -iya'awa 'X having finished Ving', not to mention with the different endings marking simultaneous actions. Enichol has a paradigm of four distinct sequential endings, which mark the intersecting dimensions of same versus different subject and realized versus unrealized.

- (SH) (32) ni [pui-"kwa-"ci] mia-kwa 'First I looked, then I left.'

  I see-PNCT-having go-PNCT (SH-M-SG-94)

  SS
- (SP) (33) [ninia=nca=ana pa"ka-nu-npaa-"ci=ni] iya"ti ku"kwi
  ne=PAST=he kill-PNCT-FUT-having=me in shoot
  SS vain
  be about to

'He tried to kill me but he shot in vain.' (SP-S-G-244)

- (TU) (34) [tika-kibii'i=gi] in-gim-isa 'After eating, I'll come.'
  eat-after=I RDP-come-FUT (TU-V-G-124)
  SS PERF
- (TU) (35) taatwa-l kooim-i i-mi'ik [culuum-iya'awan]
  nan-ABS woman-ACC RDP-kill sleep-having
  perf finished

'The man killed the woman when she had finished sleeping.' (TU-V-G-127)

(H) (36) [ram warik-t] pi' co'omti 'After running, he jumped.'

te run-having and jump (H-K-I-149)

SS then

- (SR) (37) ni' ya'i [huuna-t-i hi-u-nk] 'I ran when I saw the bear.'

  I run bear-ABS-ACC see-(7)-having (SR-C-IN)

  SS
- (CA) (38) [pe-n-tehwa-nuk] pe-n-'enan-pulu' 'If I saw it, I might know what it-I-see-having it-I-know-POT it was.' (CA-F-MV-40)
- (CU) (39) ramona=p hiwen-pe-yax [haw-in-nuk] 'Ramona stopped singing.'
  PN=R stop-she-STAT sing-ACT-having (CUP-J-SC-93)
  SS
- (L) (40) [noo xwaan-i tiiwi-nik] poy pat-ax 'When I saw John, I shot
  I PN-ACC see-having him shoot-PAST him.' (CUP-J-SC-124)
  SS
- (P) (41) fid-ok 'having seen' (P-H-G-42) see-having
- (TA) (42) [ma≈pu=ari ne šuwa-re] a'ri ku norina-ma are SUBR=it=after I finish-PAST after again come-FUT DUB 'When I have finished them, I'll come again.' (TA-B-G-555)
- (HU) (43) [nua-ka] pi-neci-'u-sei 'After he arrived, he saw me.'
  arrive-having ASER-me-RESTR-see (HU-G-S-65)
  SS
  R
- (HU) (44) [nua-me] pi-neci-seiya-ni 'After he arrives, he will see arrive-having ASSR-me-see-FUT me.' (HU-G-S-65)

  SS
  UNR

Clauses of simultaneity are usually most conveniently glossed with 'when' or 'while', but this of course oversimplifies the situation in various ways. These clauses may overlap with the sequential clauses in their range of uses, and like sequential clauses they lend themselves to adaptation to the causal dimension, taking on such values as 'if' on occasion.

Moreover, they may involve a more specialized meaning. In Shoshoni, for instance, the different subject subordinator -ku indicates initiation of the subordinate clause action prior to the onset of the main clause action, while -ke is compatible with simultaneous onset of the two. A similar contrast is made in Tubatulabal, where special 'interruptive' subordinators, -ks for same subject and -ks for different subject, indicate that the main clause action interrupts the subordinate clause action.

(SH) (h5) [i"kihti u ya"pa hota-ku] u kupa here her carrot dig-while her grab DS

'While she was here digging carrots, he grabbed her.' (SH-M-SG-90)

- (SH) (46) sp-ti [nii wini-"ka] nii pui-nu 'He saw me when I stood DEM-NOM me stand-when me see-COMPL up.' (SH-MB-LC-15,13)
- (TU) (47) [cooim-i tika-kan] a-pa'agin taatwa-l soman-ACC eat-while RDP-hit man-ABS

  DS PERF

  'The man hit the woman while she was eating,' (TU-V-G-127)

The contrist between same and different subject is prevalent, as with sequential clauses, and a subordinate subject not coreferential to the main clause subject is often marked accusative. The subordinator is very often a verb suffix, particularly when categories such as the above are marked, but other possibilities are not uncommon, including a subordinating introducer particle, the different markings typical of adverbial relative clauses, and even zero. The subordinator may be a general one not restricted to this type of clause.

- (M) (48) [i-mu"sina"ti-na] i-ci-"pa"ti'i 'poke me in the eye with a pointed ne-go-NR me-point-poke object as I go along stooping and stooping in dodging eye
- (SP) (49) kaa-yi [ti"ka-kai] 'sings while eating' (SP-S-G-245) sing-PRES eat-while SS
- (SP) (50) [ya'ai-ku=ca=ana=ni] k<u>ima-nwi-"cukwa-</u>nu die-while=PAST=him=I other-to-PNCT DS 'While he died, I went away.' (SP-S-G-246)
- (TU) (51) [weleehan-i'ima] alaawina-t oowanii'i-l-a 'While fishing, he reads fish-while read-PRES book-ABS-ACC the book.' (TU-V-G-124)
- (H) (52) [nima-kyan] miina-t tiwa 'As he went home, he saw the river.'

  ;30 -while river-ACC see (H-W-VC-279)

  :tome SS
- (SR) (53) 'ᢦຽōŋ-o] qay yuy 'When it's raining, it's not snowing.'
  rain-when NEG snow (SR-C-IN)
- (SR) (54) a-yuy-iva] qay=kwi wöön 'When it's showing, it can't be its-show-SUBR NEG=POT rain raining,' (SR-C-IN)
- (CA) (55) [ne-hivin-qali-pa] 'while I was collecting them'
  my-collect-DUR-SUBR (CUP-J-SC-25)
  (at it)

- (L) (56) časm=čam=il jec-ji [pitowli teetila-win-t-um]

  we=we=PAST RDP-leave yet talk-DUR-ABS-PL

  PAST PL

  'We left, still talking,' (L-L-FN)
- (L) (57) non-n=il nee-ni [teetila-mok\*iš] 'I left talking.'

  I=I=PAST RDP-leave talk-PAST (L-L-FN)

  PAST (REL)
- (P) (58) fixed a=f [m=a=t am i ha=gul g u'us tako] see B=I SUBR=B=PERF there PNCT them-knock ART tree yesterday down press

'I saw him when he knocked the trees down yesterday.' (P-L-FN)

- (P) (59) [m=a=n=t am Jiwia] k ab si şofihi higai SUBR=B=I=PERF there arrive and thus INTNS hit him SS 'When I came, I hit him,' (P-L-FN)
- (TA) (60) a'ri ne mači-mea [wa'ru k-a] 'I'll know it later, when I'm after I know-FUT big be-GER big.' (TA-B-G-552)
- (Y) (61) peo tekipanoa [hu antonyo hiibwa-o] 'Peter is working while
  PN work this PN eat-when Antonio is eating.' (Y-L-TG-130)
- (Y) (62) [mu-ka o'co-ta yepsa-k] itepo saha-k
  this-ACC man-ACC arrive-PERF we go-PERF
  PL
  'When the man arrived we left,' (Y-L-S-81)
- (Y) (63) [aapo kookwe-kai] kaa tekipanoa 'Being sick, she doesn't work.' she sick-while NEG work (Y-L-TG-74)
- (HU) (64) [kuu-yeika-kaaku] pi-neci-'u-sei 'As he was walking along, she around-walk-while ASSR-me-RESTR-see saw me.' (HU-G-S-65)
  DS
- (A) (65) [in i'kwaak ti-waal-mo-kwepa-s] 'when you return'
  SUBR when you-come-REFL-return-FUT (A-G-L-100)

If-Clauses

•

If-clauses are marked in a considerable variety of ways, both across the UA family and even within individual languages. Often there is no single marker that invariably occurs in conditional sentences, but rather an extensive inventory of modal, coordinating, and subordinating elements from which speakers can draw numerous combinations differing subtly in their precise semantic value. There may be a special subordinator for if-clauses, but temporal and general subordinators are also used. Modal elements include such categories as future, potential, dubitative, irrealis, subjunctive, unrealized, and inferential, besides conditional. If-clauses in UA have a strong tendency to precede the main clause, though the opposite order is usually permitted.

- (SP) (66) [suupa=aŋa to"ua-"ka=ni] toko"kwi-paa 'If I hit him, he'll run.'
  if=him hit-when=me run-FUT (SP-S-G-246)

  DS
- (TU) (67) [tan=kiima'a=din kuuyi'a-t] 'if somebody wants you'
  if=someone=you want=PRES (TU-V-G-182)

  ACC
- (H) (68) [kir Ök-e'] sen ti-twa-ni 'If they arrive, they may see
  NFR arrive-COND DUB RDP-see-FUT it.' (H-W-L-44)
  PL SS
- (SR) (69) [ta=či' xalYei'-v mộč] ta≃n pukiv tiivu-ka'
  DUB=you tickle-FUT again DUB=I down drop-gonna
  me
  'If you tickle me again, I'll drop you down.' (SR-H-D)
- (SR) (70) [pivei-pa' čičin-t] Övai't=ta=č miqan-iv
  if-at boy-ABS right=DUB=we kill-FUT
  away
  'If it's a boy, we'll kill him right away,' (SR-H-D)
- (CA) (71) [taxliswe-t esan] pen ax-pax-nem ki-š Indian-ABS DUB and FUT-enter-FUT house-ABS 'If he is an Indian, he enters the house.' (CA-H-BSK-50)
- (CU) (72) [pe=se=pe čiqe kwasi-š] me=če=pe čivin met'iš
  it=DUB=UNR if ripe-ABS and=we=UNR gather much
  'If they're ripe, we'll gather a lot,' (CU-H-G-47)
- (L) (73) [vunaal=po gee-n] pi noo gee-n 'If he leaves, I will leave.'

  | he=FUT leave-FUT and I leave-FUT (L-L-FN)
- (L) (74) [om ivi-y pas-1 pas'i-n] man tee om takwaya-an you this-ACC water-ABS drink-FUT or if you be-FUT ACC sick

  If you drink this water, you'll get sick.' (L-H-I-160)
- (P) (75) [n=a=t g o'odham wo i-bids] k wo i-wako
  SUBR=B=PERF ART person FUT REFL-dirty and FUT REFL-wash
  PERF SS PERF
  'If a person gets dirty, he washes himself.' (P-CH-SR-172)
- (TA) (76) we ne maha-me areko [yone-šua] 'I would really be afraid if such I fear-COND DUB growl-PAST they growled.' (TA-B-G-541)
- (Y) (77) [itom koko-k] ka basiu-ne 'If we die, it can't sprout.'

  fe die-PERF NEG sprout-FUT (Y-J-I-53)
- (Y) (78) [1 hikka'a-tek-o] 'if you should hear it' (Y-J-I-43) It hear-DUB-when

- (HU) (79) [sika pe-mua-ni] ne-pi-maci-seiya-ni 'If you come, I will see if you-come-FUT I-ASSR-you-see-FUT you.' (HU-G-8-66)
- (PO) (80) [ni as n-wis nako] kwago n-wic 'If I don't come now, I'll if NEG I-come now tomorrow I-come come tomorrow,' (PO-B-DMP-25)
- (A) (81) [intlae aka' mo-kši-posteki] ye'waatl iik pa'ti
  if someone REFL-leg-break he thus heal
  'If someone breaks a leg, it is cured in this way.' (A-DA-FC10-161)

The examples above might be termed 'simple' conditional clauses. In many languages they contrast with 'counterfactual' or 'hypothetical' conditional constructions, which presuppose the non-instantiation of the contents of the if-clause or at least its greater contingency. While the markings for the two types are similar, and no sharp distinction can always be made, the hypothetical conditionals are typically more heavily laden with modal elements than the simple ones.

- (H) (82) [n±' as nim-e'] so'on qa t±wa-ni
  I IMPOT go -COND NEG NEG see-FUT
  Loome SS
  'If I had gone home, I would have seen it.' (H-W-L-44)
- (CA) (83) [ne' pe-n-namq-alu] man pe-n-pepaqin-pu'

  I him-I-meet-POT and him-I-hit-POT

  'If I had ever met him, I would have hit him.' (CUP-J-SC-42)
- (CU) (84) [qay=qwe=p mi'a'aw] me=qwe=n=pe a'a'as NEG=POT=UNR arrive and=POT=I=UNR bathe COND COND 'If he hadn't come, I would have taken a bath.' (CUP-J-SC-73)
- (L) (85) [noo=xu=no=p=k"a tiiwi pomoom=i waxaam] noo=xu=no=p=ka I=COND=I=FUT=POT see them-ACC yesterday I=COND=I=FUT=POT neči pom-ik 'If I had seen them yesterday, I would have paid pay them-to them.' (L-KG-SG-153)
- (P) (86) [n=t hims wo sa gi gaat-ka-d] & o čim gatwi
  I=PERF IRR FUT DUB POS gun-have-FUT and FUT IMPOT shoot
  DUR SS PERF
  higai siiki 'If I had had a gun, I would have shot that deer.'
  that deer (P-H-P-205)
- (TA) (87) [mači-saa ka] weka namuti řue-me areko know-PAST IRR many thing tell-COND DUB

  GER
  'If he knew, he would tell you many things.' (TA-B-G-542)
- (Y) (88) [si ne yuin tomi-ta hipwee-tek-o] mehiko-u bičaa sim-'ean if I much money-ACC have-DUB-when PN-to toward go-COND 'If I had much money, I would go to Mexico.' (Y-I-S-84)

(A) (89) ye'waatl toonatiw ye-skiya in meec-tli teekwsisteekatl he sun be-COND ART moon-ABS PN

[intlaa ye' acto on-weci-ni tle-ko]
if AFF first away-fall-SBJNCT fire-in
'The moon Tecuciztecatl would have been the sun if he had
fullen into the fire first.' (A-G-L-135)

## Other

Numerous other kinds of adverbial clauses are found in the UA languages. Some types ar: fairly widely distributed, and others only sparsely attested. For the most part there is little one can presently say in comparative terms, as markings are diverse and information highly limited. I can do little more than cite some examples.

One type involves notions such as 'because', 'therefore', and 'so'. Such clauses are marked by verb suffixes, special words or particles, or other subordinators. Not uncommonly the construction includes a semantically appropriate postposition.

(SH) (90) [wa'i-"pā-a nā kopa-"pā-hpaa<sup>n</sup>tu] kia nā su<sup>n</sup>tāmā"ki-nu woman-ABS-ACC me hug-PERF-by DUB me cast-COMPL PRTC means spell

'Because I put my arms around the woman, he put a spell on me.' (SH-M-SG-97)

- (H) (91) n:' wari [ci'a-t tiwa-qa'e] 'I ran because I saw a rattle-I run rattlesnake-ACC see-SUBR snake.' (H-W-i-45)
  SS
- (H) (92) nm' wari [ci's ni-y tiwa-q'8] 'I ran because the rattle-I run rattlesnake I-ACC see-SUBR snake saw me.' (H-W-L-46)
- (SR) (93) smai' tuuk=t suaçk-iv [ayai'-p hakup ičii]
  today night=DUB freeze-FUT then-at very cold
  It will freeze tonight because it's very cold,' (6R-H-D)
- (CU) (94) [mi-pem-čix-nin-ve-qax] 'because they had killed them' them-they-die-CAUS-R-from (CUP-J-SC-289)
- (P) (95) p: a=n=t wo hii [hig hika] m=a=t wo juu]

  NIG B=I=PERF FUT go that with SUBR=B=PERF FUT rain

  PERF because PERF

  'I'm not going, because it will rain.' (P-SS-D-148)
- (P) (96) pi a=n=t wo hii n=a=t pi wo Juu
  NIG B=I=PERF FUT go Q=B=PERF NEG FUT rain
  PERF
  'I'm not going, because it will rain.'/'I'm not going
  wen't it rain?' (P-SS-D-149)

- (TA) (97) ga'ra me'a [ma\*pu\*gite ku o'ina-ma]
  good kill SUBR=it=for again get-FUT
  up
  'Kill it good, because it's gonna get up again,' (TA-B-G-575)
- (Y) (98) pahko-ta=ne kaa biča-k [bwe'ituk ne ko'okwe] ceremony-ACC=I NEG see-PERF because I sick 'I didn't see the ceremony, because I'm sick.' (Y-L-S-84)
- (Y) (99) aspo kas ho's-po kate-k kielekun ne ka=s biča-k she NEG house-st be-PERF therefore I NEG-her see-PERF 'She wasn't at home, so I didn't see her.' (Y-L-S-85)
- (MU) (100) asa me-pi-'anene [yu-mama-cie kwiniya me-m-e-seiya-ki]
  bad they-ASSR-be REFL-hands-in sickness they-SUBR-away-have-with
  PL POSSR
  'They (flies) are bad because they have disease in their hands.'
  (UA-H-URC-232)
- (PO) (101) as n-wi wetul [ampa ayago tumin] 'I am not going to Huatulco
  NEG I-go PN because not money because there is no money.'
  (PO-B-DMP-24)
- (A) (102) [ii-pampa ka ye'waatl acto m-iib-kec]
  its-on AFF he first REFL-face-stood
  account
  of
  'because he presented himself first' (A-G-L-135)

A second type consists of clauses in the general semantic domain 'so that'/'for'/'in order to'. As one might expect, modal and aspectual elements of unrealization figure prominently in these constructions.

- (H) (103) nima [miina-t tiwa-ni-qay] 'He went home in order to see the go river-ACC see-FUT-SUBR river.' (H-W-VC-278)
- (SR) (104) uvia pái-na' kwin čurup-q kii-yka' [mimi'-qa']
  already their-father QUOT enter-PNCT house-to die-gonna
  'Their father had gone into the house to die.' (SR-H-G-225)
- (CA) (105) pe' neke-' ay iswe-t [pey-qwa'i-k]

  DEM come-PAST already wolf-ABS him-est-gonna
  'The wolf came now to eat him.' (CA-B-IN)
- (L) (106) čam-ča hati'ax-on [neči-ktum] 'We went to pay.'

  we=we go-TNS pay-gonna (L-KG-SG-145)

  PI. PI.

- (P) (107) am a=t hii g pančo [m=a=t wo fi±i g hosi]
  there B=PERF go ART PN SUBR=B=PERF FUT see ART PN
  PERF
  'Pancho went there to see Joe.' (P-SS-D-114)
- (TA) (108) ne ko bire čiwawa-ra naki [ma=ne=gite to-mea]
  I then one sack-ABE want SUBR=I=for carry-FUT
  'I want a sack to carry them.' (TA-B-G-367)
- (TA) (109) nehe ani-mea [ma=mu ga'ra umeru-ma newa-ya]

  I tell-FUT SUER=you good can-FUT do-GER
  'I will tell you in order that you might do well.' (TA-B-G-365)
- (Y) (110) inepo in koarto-wi kibake-k [supe-te-bae-kai]

  I my room-to go-PERF shirt-put-DESID-while
  on
  'I went to my room in order to get dressed.' (Y-L-S-82)
- (HU) (111) [ne-'u-nua-ke] pi-neci-wiiti 'That I may arrive, he guides I-RESTR-arrive-IRR ASSR-me-guide me.' (HU-G-S-65)
- (PO) (112) nen n-ya-n [kočo-s] 'Let me go to sleep.' (PO-B-DMP-23)
  I I-go-SBJNCT sleep-FUT
- (A) (113) ye'waatl on-tlaso'ti-s [in-ii-k ti-nemi-s-ke']

  he away-arrange-FUT SUBR-its-at we-live-FUT-PL
  'He will arrange for us to live.' (A-G-L-74)

A third type consists of clauses meaning 'although', 'even though', or 'even if'. Special words and particles mark such constructions.

- (CU) (114) iviy-ta=ne=pe [minčen qaawi] 'Here I will (stay), even if this-on=I=UNR even die I die.' (CU-HN-M-141)
- (L) (115) [awox xwaan tiw'-ax hunwut-i] pi qay ya'an-ax though PN see-PAST bear-ACC and NEG run-PAST away
  'Though John saw a bear, he didn't run away,' (L-L-FN)
- (TA) (116) [ta ce re ko nauru-e] 'even though you may be sick'

  NEG then DUB IRR sick-PAST (TA-B-G-583)

  DUR
- (Y) (117) aapo bino-ta hinn-k [ella'apo si behe'e]
  he wind-ACC buy-PERF although much cost
  'He bought wine, although it is very expensive.' (Y-L-8-85)
- (Y) (118) itepo aman kat-ne [ili usi-ta ko'okwe huni'i]
  we there go-FUT little child-ACC sick in
  spite
  of
  'We will go there although the child is sick.' (Y-I-S-85)

- (HU) (119) ti-yee-kaanii [ceepaa m-aa-yee-hisi]
  DISTR-RESTR-lie although SUBR-surface-RESTR-eye
  'He lies there even though he has his eves open.' (HU-G-S-66)
- (A) (120) [masnel močin-tin tee-teo-' oo-mik-e'] sannel a'moc although all-PL RDP-god-PL PERF-die-PL nevertheless NEG wel iik oliin 'Although all the gods died, nevertheless it can thus moved couldn't move.' (A-G-L-135)

Given the device of sequential clauses treated earlier, there is no overriding need for special clause types to express the notion 'before'. Several UA languages do however have a 'before' construction involving one of the basic temporal clause constructions of the language.

- (H) (121) [ni' warik-ni-k'an] naasina-n'i 'Before running, I rest.'
  I run-FUT-while rest-HAB (H-W-L-46a)
  SS
- (SR) (122) [uvia ni'mi-aqa] xwaan=vi='ni-yka'viravira'n already I go-gonna PN=he=PAST me-to speak 'Before I left, John talked to me,' (SR-C-IN)
- (L) (123) waxaam noo pilač-ax [qay pitowli naqma'i-nik] yesterday I learn-PAST NEG yet listen-having SS
  'Yesterday I learned before listening.' (L-L-FN)
- (TA) (124) [peca co muku-y-o] nava-ma ne ba

  NEG yet die-GER-SUBR arrive-FUT I EMPH
  'Before he dies I will arrive.' (TA-B-G-553)

Other types include 'until' and 'without' clauses. Neither appears common on the basis of present information.

- (TU) (125) [aa-naayuw-iibii'i=gi] ii-mi 'Without fighting, I went.'

  RDP-fight-without=I RDP-go (TU-V-G-124)

  PERF
- (CU) (126) [cem-tan-in-weni-yka] 'until we would be dancing' our-dance-ACT-DUR-to (CUP-J-SC-257)

  PL
- (TA) (127) a ne buwe-ma ora-e=ke [ma=pu=ši čona-ra]

  AFF I wait-FUT do-PAST=EMPH SUBR=it=until get-POT

  DUR dark

  'I was going to wait until it got dark.' (TA-B-G-555)

#### TEXTS

The value of texts to illustrate grammatical points, and to bring out structural phenomena having domains larger than that of single sentences.

would be hard to overestimate. Most of the grammatical sketches in the later volumes conclude with one or more short texts, fully analyzed in terms of the analyses and notations presented in the sketches. One text in particular, The Coyote and the Jackrabbit, was composed by the editor to incorporate a large number of interesting grammatical constructions and to provide a ready basis for comparison. The individual authors were then responsible for rendering this text in different UA languages, taking great care not to impose English (or spanish) grammar on the native speakers with whom they worked in doing this. The original English version is given below. It has been changed and adapted in various ways and degrees during the process of re-composing it in the individual UA languages.

### The Coyote and the Jackrabbit

One day, when he was very hungry, a big coyote was chasing a jackrabbit in a field. The jackrabbit was very frightened, but he knew he could not keep running very long, because he was old and his legs were tired. So suddenly the jackrabbit stopped and faced the coyote.

"Stop!" he said. "Why are you chasing me? Are you going to eat me?"
"Yes." Haid the covote. "I am going to eat you."

"Do not eat me," answered the jackrabbit, "because if you eat me you will die. You think I am a jackrabbit, but I am really a rattlesnake, and when you eat me my poison will kill you."

"What should I est then?" asked the coyote.

"Eat these berries that I picked. I was carrying them with me in this basket to my house to eat when you started chasing me."

"Jackrabbits eat berries," said the coyote, "but berries are never eaten by rattlesnakes, so you must be a jackrabbit despite what you say. You may fool yourself, but you cannot fool me. It is good that you are a jackrabbit. Jackrabbits can be eaten, but I do not like to eat rattle-snakes."

So the coyote ate the jackrabbit who had tried to fool him. He also ate the berries that were in the jackrabbit's basket. Having eaten the jackrabbit's berries, the coyote soon died, while sitting under a tree. The berries were poisonous.