The Languages of Native America:

HISTORICAL AND COMPARATIVE ASSESSMENT

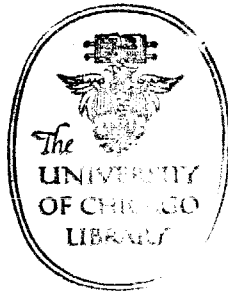*Edited by Lyle Campbell and Marianne Mithun*

UNIVERSITY OF TEXAS PRESS

AUSTIN AND LONDON

Contents

Uto-Aztecan: An Assessment for Historical and Comparative Linguistics

Susan Steele

0. Introduction.

Uto-Aztecanists with a historical bent are in an enviable position among similarly inclined Americanists. Most languages in the Uto-Aztecan language family have received some attention; a fair number have relatively comprehensive descriptions--descriptions of varying quality to be sure, but seldom inaccessible. Thus, it is not surprising that recent research in the language family is characterized by fairly successful efforts to reconstruct aspects of the syntax of the proto-language. This paper is an examination of a number of these reconstructions in conjunction; the structures which are hypothesized to the proto-language are reflected in dramatically different ways in the daughters. This fact raises issues important to theories of diachrony and it is ultimately these which I want to explore.[1]

I will concentrate on three structures which have been reconstructed to the proto-language--the absolutive, the AUX, and reflexive marking.[2] First, it has been hypothesized that virtually all (common) nouns in the proto-language had what Uto-Aztecanists commonly call an "absolutive" suffix. This suffix, posited to be of the shape *-tɨ, was in complementary

distribution with possessive pronominal and postpositional suffixes.

1. N-Absolutive

2. Possessive-N-∅

3. N-∅-Postposition

Relatively straightforward reflexes of the form of the proto absolutive are found in Tubatulabal and Classical Aztec. Tubatulabal has two absolutives-- -l and -t --both of which are descended from the proto form.[3]

TU   4.   hanii-l   'house'   šulun-t   'fingernail'

tabaaya-l 'chipmunk' ka?awɨɨ-t 'grasshopper'(TU-V-G)

Classical Aztec has three surface absolutives-- -L, -Li, and -l(i); the last segment of the stem predicts which absolutive form a stem will take. Again, these are all descended from the proto form.

AZ   5.   koyoo-L   'coyote'   tilma?-Li 'blanket'

siwaa-L   'woman'   okič-Li   'man'

tepee-L   'mountain' wis-Li   'thorn'

yawal-li 'circle'   (AZ-M-A)

As hypothesized for the proto-language, the absolutive in both the languages disappears when the noun has a possessive affix.

TU   6.   hanii-n   'his house'
          house-his

```
    šulu-nini-p      'their fingernails (object)'
    fingernail-object-their                    (TU-V-G)

AZ  7.  no-tilma?       'my blanket'
        my-blanket                             (AZ-A-RL-63)
```

In Classical Aztec, the absolutive disappears as well when

the noun has a postpositional suffix.

```
AZ  8.  tepee-k         'on the mountain'
        mountain-on                            (AS-L-IN)
```

Second, proto Uto-Aztecan has been hypothesized to have had

an AUX which, except under special conditions, occurred in

sentential second position.

```
    9.  #  X  AUX...
```

    (where X indicates the first element in a clause)

The AUX of proto Uto-Aztecan contained elements marking the

notional categories of Modality (modal particles), Tense

(tense clitics), and the number and person of the subject of

the sentence (clitic pronouns). The clitic pronouns preceded

the tense clitics; modal particles were initial to the AUX.

The following represents the relative position of these ele-

ments.

    10. modal particle-clitic pronoun-tense clitic

A relatively straightforward reflex of the hypothesized proto

system is found in Luiseño.

```
LS  11.  noo n-il xwaani ?ariqus
         I CP-Tense John:object was:kicking
            AUX
         'I was kicking John.'               (LS-S-FN)
```

```
LS  12.  noo xu-n-po xwaani ?ari
         I Modality-CP-Tense John:object kick
               AUX
         'I should kick John.'               (LS-S-FN)
```

Third, verbs in the proto-language have been hypothesized to

have had a series of pronominal prefixes varying for number

and person which marked a reflexive object.

    13. Reflexive-Verb

The hypothesized proto forms are given in (14).

```
    14.  *ni-              *ta-

         *?i-              *mo-

         *mo-              *mo-
```

A fairly straightforward reflex of this proto system is found

in Classical Aztec. The reflexive forms of Classical Aztec

are given in (15) and an example in (16).

```
AZ  15.  no-              to-

         mo-              mo-

         mo-              mo-             (AZ-A-RL-21)
```

```
AZ  16.  ni-no-tta
         I-Reflexive-see
         'I see myself.'                 (AZ-A-I-46)
```

    The reflections in the daughter languages of these three

reconstructed structures, viewed comparatively as well as in-

dependently, exemplify certain issues important to diachronic

theory. First, the AUX and the reflexive marking of the

proto-language have quite different fates in the daughter

languages than its absolute. All languages in the language
family have an AUX and all have some way of indicating a re-
flexive object. Many fewer daughter languages in the lan-
guage family maintain an absolutive suffix, even one which
has a different form from that of the proto language. The
problem, then, for diachronic theory is whether this differ-
ence can be explained, that is, predicted <u>a priori</u>. Second,
although all daughter languages have an AUX and a reflexive
marking, this is not to say that the synchronic reflexes ob-
viously resemble the proto-language. The synchronic reflexes
of AUX differ from language to language; the synchronic re-
flexes of the reflexive are slightly less divergent, but
still differ in a number of respects. The problem for dia-
chronic theory is whether this diversity can be explained.
Third, even if the synchronic diversity can be explained, the
fact remains that the AUX's of the daughter languages are
different. The problem is whether the reconstruction itself
can be justified.

By appealing in large part to theories of linguistic
universals and language universals, this paper formulates the
solution to these three problems.[4] That is, this paper will
suggest, from viewing Uto-Aztecan within a broader language
framework, certain constraints on change and certain

constraints on hypotheses about reconstructed language
states.

Before taking up that argument, let me introduce the
language family, with an outline of its internal and external
relationships and a sketch of other hypotheses about the
proto-language.

1. Classification.

Uto-Aztecan was established as a genetic unit in the
first two decades of this century by Kroeber (SHN-K-DC) and
Sapir (UA-S-SPN) and has enjoyed wide acceptance since.
(Lamb (UA-L-C) has written the history of the establishment
of the stock; I refer the interested reader to his paper.)

Nine subfamilies have been hypothesized, eight of which
are well established; the status of Giamina as an independent
language is dubious and, since it is extinct and known only
through very scanty data, will so remain.

A. 1. Numic (=Plateau Shoshonean)

2. Tubatulabal

3. Takic (=So. California Shoshonean)

4. Hopi

5. Pimic (=Tepiman)

6. Taracahitic

7. Corachol (=Coric)

8. Aztecic

9. Giamina (?)

The independent status of Hopi and Tubatulabal remains a
point of some discussion, some suggesting that the former is
more closely related to Takic and the latter to Numic than to
other branches of the language family.

Subdivisions of the eight subfamilies are given below in
B.; language names are underlined.

B. 1. Numic
        Western Numic
            Northern Paiute (=Paviotso; possible dialect
                                      Bannock)
            Mono (=Monachi)

        Central Numic
            Shoshone (=Shoshoni)
            Comanche

        Southern Numic
            Southern Paiute
            Chemehuevi
            Kawaiisu

    2. Tubatulabal
        Tubatulabal

    3. Takic

        Serranan
            *Serrano
            *Kitanemuk

        Cupan
            Cahuilla-Cupeño
                Cahuilla
                Cupeño
            Luiseño (probable dialect *Juaneño)
            *Gabrielino (probable dialect *Fernandeño)

4. Hopi
        Hopi

5. Pimic
        Papago-Pima
        Pima Bajo
        Northern Tepehuan
        Southern Tepehuan (dialect? *Tepecano)

6. Taracahitic[5]
        Tarahumara
        Yaqui
        *Opata
        Varohio

7. Corachol
        Cora
        Huichol

8. Aztecic
        *Pochutla (=*Pochutec)
        Pipil
        Aztec (including a number of dialects:
                Classical Aztec (=Classical Nahuatl),
                Milpa Alta, Tetelcingo, Matlapa,
                Isthmus Nahuat and many others)

(B) is not to be taken as representing a general consensus;
discussion and controversy continue both over the subgroup-
ings and, inevitably, over what constitutes a separate lan-
guage and what a dialect. In B, Numic has three parallel
branches; but it has been hypothesized that Southern Numic
and Central Numic are more closely related to one another
than either is to Western Numic. (See Freeze and Iannucci
(NUM-FI-IC).) In B, Cupan has three branches--Cahuilla-Cupeño,
Luiseño, and Gabrielino--as suggested in Bright (TAK-B-TNC),
but the position of Gabrielino relative to the other Takic

languages is the least secure. (Kroeber (SHN-K-HIC), on min-
imal data, assigned it to an independent branch of Takic.)
Finally, Campbell and Langacker have recently argued for the
following internal relationships in Aztecic:

C.   Aztecic
Pochutla   General Aztec
Classical Nahuatl   Tetelcingo   Zacapoaxtla   Pipil
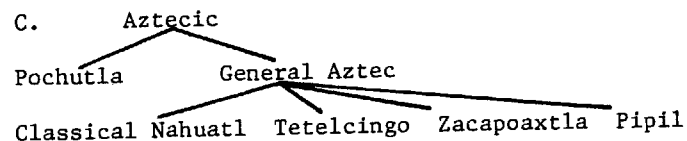
although they are less than adamant about anything other than
the separate status of Pochutla. "We are quite certain that
Pochutec was a separate language, quite different from the
others. It also seems that Pipil is a separate language,
though rather closely related to the rest of [General Aztec].
We venture no guesses as to the status of the other members
of [General Aztec], though in any event they are not differ-
ent from one another. As for Pipil, though it is quite sim-
ilar lexically and phonologically to other [General Aztec],
there are grammatical differences of some significance."
(UA-CL-PV-86-7) Voegelin and Voegelin (UA-VV-SWGBL) discuss
the problems involved in such decisions, specific to Uto-
Aztecan and more generally.

At the other classificatory extreme, the hypothesis,
first made by Sapir (1929), that Uto-Aztecan is to be grouped
with Kiowa-Tanoan into the Azteco-Tanoan macro-phylum has re-
ceived support from various quarters and has fairly uniform

acceptance. (See, for example, Whorf and Trager (ATN-WT-R).)
Such doubts as exist over this hypothesis are probably endem-
ic to hypotheses about such distant relationships.

The major controversy in the classification of Uto-
Aztecan languages pertains to the relationships among the
eight subfamilies listed in A. Three classifications have
been proposed. The first of these, the most conservative,
was suggested by Whorf (UA-W-CL) and continued by Lamb
(UA-L-C); it argues that no larger groupings intercede be-
tween proto Uto-Aztecan and the various subfamilies, that is,
that A is a fair representation of the internal relationships
among the eight subfamilies. The second posits three inter-
mediate groups--Shoshonean, which includes the first four
groups in A; Sonoran, which includes the second three; and
Aztecan. These two classifications agree, then, on Aztecan
as a separate branch; the Shoshonean and Sonoran groups spark
the controversy. Voegelin, Voegelin and Hale's reconstruc-
tion of the phonological system of the proto language was
done in the framework of offering extensive support for this
classification. (UA-VVH-TCG) The third hypothesis about the
classification of Uto-Aztecan languages, suggested by Heath
(UA-H-MS), argues that Sonoran and Aztecan are to be subsumed
under one group--Southern Uto-Aztecan. Shoshonean is re-
named Northern Uto-Aztecan.

Each of these proposed classifications captures a certain set of facts about the language family. The first makes explicit the diversity among the subfamilies; the Takic languages, for example, are very different in essential respects from the Numic languages. The second classification makes explicit the relative similarity between Numic and Takic as opposed to their lack of similarity to the Sonoran languages. The third classification captures the obvious similarity between the Aztec languages and, at least some of, the Sonoran languages--Huichol most obviously. These patterns of similarities and differences will become evident in the discussion of Sections 2, 3, and 4.

2. Other Reconstructions.

2.1 Phonology

The following phonemic inventory for proto Uto-Aztecan is generally agreed on:

D. *p *t *c *k *k^w *?   *i *ɨ *u
            *s   *h
    *m *n
        *l   *o
    *w   *y   *a

                *length

Voegelin, Voegelin, and Hale (UA-VVH-TCG) reconstruct *r and *ŋ but both have been questioned. (See UA-L-NCG and

UA-L-OG.) A main point of controversy has been the vowel *ɨ. Miller (UA-M-CS) reconstructs *e, but subsequent work has argued much more strongly for *ɨ. In four of the eight major subfamilies (Numic, Tubatulabal, Pimic, and Hopi) ɨ is the reflex of the fifth proto Uto-Aztecan vowel; in three (Taracahitic, Corachol, and Aztecan) e is the reflex; and in Takic, there are a variety of reflexes. Langacker (UA-L-VP) argues that *ɨ must be reconstructed for Takic, largely on the grounds that the developments in each of the Takic languages are more plausible with this hypothesis than with another. Campbell and Langacker (UA-CL-PV) argue that *ɨ must be reconstructed to proto Aztecic. Hence, "Six of the eight subfamilies now provide evidence that e was not the primitive quality of the fifth PUA vowel, including the southernmost as well as the five northern subfamilies." (UA-CL-PV-101)[6]

Two other important aspects of the phonology of the proto-language have received at least preliminary formulation--stress and consonant gradation. As to the former, Sapir (UA-S-SPN) suggests that the proto-language had alternating stress, and Munro (UA-M-RS) hypothesizes that primary stress in the proto-language was on the second mora. The major piece of evidence for Munro's hypothesis is the contrast between the relative infrequency of second syllable or second mora stress cross-linguistically and the relative frequency

of this stress pattern in the Uto-Aztecan daughters. Conso-
nant gradation is the process by which consonants are altered
word internally based on the immediately preceding morpheme;
e.g. in Shoshone a morpheme initial, word-internal p̱ can occur
geminated (p̱p̱), spirantized (β), prenasalized (^{m}p̱) or pre-
aspirated (p̱) depending on the stem to which it attaches.
Regular processes of consonant gradation exist only in Numic;
however, remnants of the process have been argued to exist in
other branches of the language family. (See e.g. UA-L-NCG.)

2.2 Syntax

Proto Uto-Aztecan has been reconstructed as a verb final
language with relatively free word order. (UA-S-AHS) The
language had postpositions, and postpositional constructions
are hypothesized to have had a number of possible forms.
(UA-L-SP) Postpositions could be attached to a pronominal
base:

17. Pronoun-Postposition

or directly to a non-human or an inanimate noun.

18. Noun-Postposition

With human or animate nouns, the postposition was attached to
a pronoun copy of the noun.

19. Noun Pronoun-Postposition

The elements in the construction in (19) could occur as well
in an inverted order:

20. Pronoun-Postposition Noun

or discontinuously.

21. Pronoun-Postposition...Noun

Prefixed to the verb were bound pronominal forms indicating
the number and person of the object (UA-G-PSP), as well as a
prefix *tɨ- 'unspecified subject', a prefix *ta- 'unspecified
object', and a prefix *nɨ- 'unspecified human subject core-
ferential to the object' (UA-L-NA). Suffixed to the verb were
tense elements--at least a future tense suffix (UA-S-AHS);
the verb could also take a complex suffix *-tɨwa which indi-
cated passive, a suffix which preceded the tense suffix
(UA-L-NA).

22. $*\begin{Bmatrix} t\text{ɨ-} & \begin{Bmatrix} \text{object} \\ \text{ta} \end{Bmatrix} \\ n\text{ɨ-} \end{Bmatrix}$V - passive - future:tense

Possessed nouns had possessive prefixes.

23. Possessive-Noun

A noun posséssor occurred in addition to the possessive pre-
fix on the possessed noun.

24. Noun Possessive-Noun

At least animate nouns were marked for object, by a suffix
*-a. The object suffix in the proto-language followed the
absolutive ending.

25. Noun-Absolutive-Object

Nominal objects of verbs, nominal objects of postpositions in constructions like (19), and nominal possessors in constructions like (24) took both absolutive and objective endings. (UA-L-AS)

The evidence for these reconstructions and the reconstructions with which we are to be primarily concerned can be found in the works cited in the bibliography. I have presented them here as facts; they are of course simply hypotheses. However, there is evidence for some of them beyond the type of evidence generally adduced in their support in the works which proposed them. The reconstructions are internally consistent, by and large, with one another. The notion--and examination of the manifestation--of typological consistency is to be ascribed mainly to the work of Greenberg; although his conclusions along this line are open to considerable debate, Lehmann (especially Lehmann (1973)) has presented a case for the application of the concept of typological consistency to historical reconstruction. The reconstructions discussed above were done by more than a single person; with few exceptions none of them have considered whether their reconstructions were consistent with the reconstructions of others. Yet, the results of these efforts are in the main internally and typologically consistent.

As Greenberg (1966) argues, postpositional languages are regularly also verb final languages; proto Uto-Aztecan has been hypothesized to be both, independently. Furthermore, while it has not been studied in any detail, it appears that languages with relative freedom of word order within constituents will also have relatively free word order within the sentence. Thus, the relative freedom of subject, object, and verb relative to one another hypothesized for the protolanguage is consonant with the reconstruction of possible reordering in postpositional phrases. The hypothesis that the proto-language had modality elements at the beginning of the clause--in sentential second position--does not contradict the hypothesized word order type of the proto-language; in Steele (1975) it is shown that modality elements in verb final languages can occur either at the beginning or at the end of the clause. And the presence of subject clitic pronouns is to be expected in a language with relatively free word order, as shown in Steele (1978b). Finally, the hypothesis that the proto-language had object prefixes on the verb as well as reflexive prefixes are mutually supportive. While again the phenomenon hasn't been studied in any detail, a language which has bound pronominal reflexive objects will generally, if not always, also have bound object pronouns and the reflexive

object pronouns will occur in the same position as the most bound object pronouns.

2.3. Other

Other reconstructions, which could be labelled somewhat inadequately semantic, have been proposed for Uto-Aztecan. Of course, there are the usual lists of cognate sets; see primarily Voegelin, Voegelin, and Hale (UA-VVH-HCG) and Miller (UA-M-CS). But there have also been attempts to trace changes in the meanings of various grammatical elements. In Heath (UA-H-NCV) is reconstructed a class of verbs, the *-na class. "The core of this domain was formed by verbs denoting simple physical events, especially those which leave an imprint on a surface or object..." (2) He traces the changes in the morphology of this verb class in the daughter languages and the extension or reduction of this class to various semantic domains. Other attempts of a different sort are to be found in UA-S-FIP (revised in UA-S-ME), UA-S-PI, and UA-L-NA. All three are concerned with the semantic changes in various grammatical elements--the first two explicitly so, the last as a corollary to certain syntactic and morphological changes. The first relates synchronic elements which mark futurity, intention, or possibility; the second, elements which mark past tense or irrealis; the third, elements which mark passive, impersonal,

reflexive, or reciprocal constructions. To relate the elements, all three draw on hypotheses which are not specific to Uto-Aztecan. Futurity, intention, and possibility, and past and irrealis are claimed to be related through a semantic primitive; passive, impersonal, reflexive, and reciprocal constructions are claimed to be related through the notion of non-distinct arguments. All three papers are subject to some debate among Uto-Aztecanists--and to language-family-external confirmation.

2.4 Conclusion

These remarks on the state of reconstruction in Uto-Aztecan have been necessarily brief, but they give a good idea of the amount of work that has been done--and of the amount which awaits us. Specifically, in regard to phonology, the fine details of the phonological development of the synchronic phonological inventories from the posited proto system has yet to be explored in anything near comprehension. Specifically, in regard to syntax, we know little about agreement phenomena; the structure of non-declarative sentences has received only passing consideration; the syntax of subordinate clauses remains a vast, uncharted area. (Heath (UA-H-RC), however, has surveyed the relative clause types in Uto-

Aztecan.) Specifically, in regard to semantics and the lexi-
con, we've only just begun.

I turn now to a consideration of the synchronic reflexes
of the three reconstructions with which we are to be concerned
in this paper and the changes which produced them.

3. Synchronic Diversity.

3.0 Introduction

This section considers how each of the reconstructions
fares in the daughter languages, that is, how the daughter
languages diverge from the proto-language in terms of an ab-
solutive, an AUX, and reflexive marking.

3.1 The Absolutive

Assuming that the proto-language had an absolutive of
the form noted above, in complementary distribution with at
least those elements discussed above, a number of differences
from the proto-language are attested. Some daughter languages
have maintained the form of the proto absolutive but reana-
lyzed its function; some daughter languages have some morpheme
which acts like the proto absolutive but which is obviously
not descended from it; some daughter languages have lost the
proto absolutive form and do not exhibit anything which

patterns remotely like it. Although all three possibilities
are not equally attested, the number of daughter languages
evidencing such changes from the proto-language are more
numerous than those daughter languages which more nearly re-
resemble the proto-language. But, no daughter language
mirrors the hypothesized proto-language precisely.

Before discussing those languages which diverge dramati-
cally from the proto system, let me consider the more subtle
differences from the proto-language exhibited by those lan-
guages which have the old absolutive, acting like the old
absolutive. First, there are languages like Luiseño, lan-
guages for which the statement of the form of the absolutive
is more complicated than that hypothesized for the proto-
language. The Luiseño absolutives are in complementary dis-
tribution with possessive prefixes and postpositional suf-
fixes.

LS 26. ki-ča   'house'   wiirula-š   'flute'

         huu-la 'arrow'   tukma-l   'baby wildcat'

         muu-ta 'owl'   hunwu-t   'bear'   (LS-S-FN)

LS 27. no-huu 'my arrow'
         my-arrow   (LS-S-FN)

LS 28. huu-tal 'with an arrow'
         arrow-with   (LS-S-FN)

In form, however, the Luiseño absolutive is to be distin-
guished from that of the proto-language. The consonants of

the absolutives in (26) are descended from the consonant of
the old absolutive /t/; the vowel /a/ is hypothesized to be an
old object suffix. So, the longer forms are diachronically
complex and do not in entirety reflect the form of the old
absolutive. More importantly, the absolutive form which a
particular noun takes is only partly predictable; hence in
Luiseño, it appears necessary to posit more than one under-
lying absolutive. Given that there is a regular rule by
which /č/ becomes /š/ word finally (see LS-MB-RRO), (26) sug-
gests that there are three pairs of absolutives-- -ča and -š,
-la and -l, and -ta and -t -- the first member of which occurs
on monosyllabic stems. But a few monosyllabic stems take the
shorter absolutive-- pe-t 'road, path',   for example--and
a number of longer stems take the longer absolutive--wanii-ča
'river' and qaƚi-la 'lizard', for example. It might be possi-
ble to explain some of these apparent exceptions; a long
vowel in the syllable immediately preceding the absolutive
appears to condition the appearance of the longer absolutive
in polysyllabic stems and the word for lizard is part of a
set of animal and plant names that apparently condition the
absolutive -la. But even if the exceptions to what condi-
tions the long or short form of the absolutive can be
explained, predicting which of the three remaining absolu-
tives a particular noun stem will take remains problematic.

Thus, it appears to be necessary to analyze Luiseño as having
more than a single absolutive; even though these absolutives
pattern, by and large, as hypothesized for the proto-language,
Luiseño diverges somewhat from it.

A second divergence from the proto language among those
languages which most nearly resemble it is in the patterning
of the absolutive. The reconstruction of the proto absolutive
has gone only as far as claiming that the absolutive was in
complementary distribution with possessive affixes and post-
positional suffixes. In at least one daughter language,
Tubatulabal, the absolutive alternates only with possessive
affixes; there are no postpositional suffixes, only indepen-
dent adpositional elements. In more daughter languages, the
absolutive has a slightly more extended alternation than the
two argued for the proto-language.

Classical Aztec and Serrano are the strongholds of the
extended absolutive. In these languages virtually all nouns
end in an absolutive suffix, which descends from the proto
absolutive.[7] In Classical Aztec, as was seen in Section 0,
it is -L(i), where L is a regular reflex of *t. In Serrano,
there are three absolutives-- -t -č, and -c.

SR 29. wici-t   'bird'

        kii-č   'house'

        muuča-c̣   'worm'   (SR-C-AMMM)

All of the three are regular reflexes of */t/, but the factors
which condition the variation have been in part obscured, so
the form of the absolutive in Serrano, like that of Luiseño,
is no longer always synchronically predictable. In these two
languages, not only does the absolutive vary with a possessive
affix:

AZ 30.   no-tilma?   'my blanket'
          my-blanket   (AZ-A-RL-63)

SR 31.   mɨ-ki   'your house'
          your-house   (SR-C-SSPP)

and with a postpositional suffix:

AZ 32.   tepee-k   'on the mountain'
          mountain-on   (AZ-L-IN)

SR 33.   kii-ka?   'to the house'
          house-to   (SR-C-SSPP)

but also with a plural suffix on the noun.

AZ 34.   okič-tin   'men'   (AZ-A-I-145)
          man-pl

SR 35.   muuča-m   'worms'
          worm-pl   (SR-C-BIE)

Since the full reconstruction of the absolutive awaits us, the
exact environments for the alternation of the proto absolu-
tive remain to be elucidated; however, the arguments later in
this paper will suggest that this last was an extension of
the old absolutive pattern.[8]

    Now let's return to those languages which are more dra-
matically different from the proto language. The first

possibility mentioned above was that the form of the absolu-
tive be maintained but pattern differently. In Yaqui, for
example, there is no element which patterns like that hypo-
thesized for the proto-language, but any non-subject noun,
that is, any noun which is a direct or indirect object, an
object of a postposition, or a possessor, takes the suffix
-ta.

YA 36.   hunume oowim itom ču?u-ta me?ak
          this:pl men our dog-TA killed
          'The men killed our dog.'   (YA-L-S)

YA 37.   sawa-ta betuk   'under a tree'
          tree-TA under   (YA-L-S)

YA 38.   hoan-ta kari   'John's house'
          John-TA house   (YA-L-S)

At least the /t/ of this suffix is descended from the proto
absolutive; the /a/ is hypothesized to have descended from
the old object marker. In Hopi, similarly lacking an element,
which patterns like the old absolutive,[9] any non-possessed
noun which is not a subject takes the suffix -t.

HO 39.   nɨ? tiyo?ya-t paklawna
          I boy-T made:cry
          'I made the boy cry.'   (HO-MH-CN)

HO 40.   mi-t tiyo?a-t po?ko?at warikiwta
          that-T boy-T dog:his is:running
          'The boy's dog is running.'   (HO-MH-CN)

HO 41.   nɨ? taqa-t ?a?pa coqa-t lelwi
          I Taqa-T on mud-T smeared
          'I smeared mud on Taqa.'   (HO-MH-CN)

In addition, a non-singular subject noun takes -t.

HO 42. a. ʔiʔ tiyo paklawɨ
             this boy cried

             'This boy cried.'   (HO-MH-CN)

        b. ʔima tiyo-t paklawɨ
             these boy-T cried

             'These boys (dual) cried.'   (HO-MH-CN)

Again, the -t is descended from the proto absolutive.

The second difference suggested above is the loss of the
absolutive form found in the proto-language but the mainte-
nance of something which patterns, at least roughly, like it.
In Southern Paiute, there are a number of suffixes to nouns
which Sapir says may "suggest classification of the noun
under a general category" or which have "little assignable
significance". (SP-S-G-111) So, -pi is found on nouns
"referring chiefly to animals, topographical features, and
objects..." (SP-S-G-113) and -pɨ, on nouns which are the
names of plants.

SP 43. poʔa-pi   'louse'

         kɨɨ-pi   'locust'

         waʔa-pɨ   'cedar'

         soopi-pɨ   'cottonwood'   (SP-S-G)

Although these suffixes may disappear when the noun is pos-
sessed, there does not appear to be the regularity to this
alternation that is attested in e.g. Luiseño.

SP 44. poʔa=ni   'my louse'
         louse=my

         kɨɨ -pi=ni   'my locust'
         locust-absolutive-my   (SP-S-G)

As Sapir says, "Some of these elements disappear...when the
noun is used with a possessive pronominal enclitic, others
may or may not. Some nouns appear with or without an absolu-
tive suffix, e.g. nɨŋwɨ and nɨŋwɨ-ci 'person'." (SP-S-G-111)
There are a number of such elements in Southern Paiute, none
of which are obviously descended from the proto absolutive
but each of which patterns, at least in possessive construc-
tions, roughly analogously.

The final difference suggested above is the loss of both
the form of the old absolutive and anything which resembles
its patterning. Papago has nothing which patterns like the
old absolutive and except for a tiny corner of the grammar no
remnants of its form either. The pair in (45) is meant to
suggest that nothing alternates with the possessive affixes
of Papago:

PA 45. a. ki   'house'

         b. ʔɨm-ki   'your house'   (PA-L-SS)

and many postpositions are independent elements, thus not pro-
viding the trigger for the alternation.

PA 46. čukʂon wui   'to Tucson'
         Tucson to   (PA-SS-D)

However, between certain postpositions and the noun to which

they attach is a -t̲ or -c̲̆, remnants of the old absolutive.

PA 47. haiwan-t-ʔamǰɨd̪   'from the cow'
         cow-T-from

         kolai-c̆-ʔid̪   'in the corral'
         corral-c̆-in   (PA-L-SS-18)

I have discussed these four synchronic states as if they

were absolutely distinct from one another. They are not. In

Papago, the only remnant of the absolutive occurs where the

reanalyzed absolutive of Hopi and Yaqui occurs. Pochutla is

close to having lost the old absolutive, although it still

patterns, if sporadically, like the proto absolutive. In

Pochutla, many nouns end in -t̲ or -l̲, the first of which is

undoubtedly descended from the proto absolutive.[10]

PO 48. at   'water'

         tot   'rock'

         teyul   'cord'

         nenepil   'language'   (PO-B-DM-14)

But many nouns end in neither of these.

PO 49. aten   'road'

         kwisom   'iguana'   (PO-B-DM-14)

In possessives, at least the old absolutive appears to dis-

appear.

PO 50. atʔbet   'pueblo'

         no-atʔbew   'my pueblo'   (PO-B-DM-16)

But since many nouns don't end in something which descends

from the old absolutive, there is considerable irregularity.

Finally, one detail that was omitted from the discussion of

Serrano suggests an overlap between this language with an ab-

solutive much like the proto-language and languages like Hopi

and Yaqui. In Serrano, nouns which do not regularly take an

absolutive, like proper nouns, have an absolutive suffix when

they function as possessors, objects of postpositions, or

subject of subordinate verbs. An example of the first is

given in (52) below.[11]

SR 52. hʷaan-t ʔanaʔ   'John's father'
         John-T his:father   (SR-C-AMMM-4)

Regardless of such overlaps and their implications for

the discreteness of the categories of language types dis-

cussed, it is quite clear that the absolutive has undergone

substantial modification. No daughter language reflects the

proto-language precisely. Most daughter languages in fact

exhibit dramatic differences from the proto-language and,

most importantly, a fair number of daughter languages have

lost something which patterns like the old absolutive.

3.2 The AUX

Assuming the reconstruction of the AUX set forth at the

beginning of this paper, that is, a second position

constituent composed of modality particles, subject clitic
pronouns, and tense clitics in that relative order, the dif-
ferences between proto Uto-Aztecan, and the daughter languages
are of a different character than those found for the absolu-
tive above. All daughter languages have an AUX.[12] But in
some languages it has a different position than that hypothe-
sized for the proto-language. And, it can have a different
composition from that hypothesized to the proto-language.
That is, the proto AUX marked the notional categories of Mo-
dality (by modal particles), Subject Marking (by subject clitic
pronouns), and Tense (by tense clitics); the AUX of a Uto-
Aztecan daughter language may mark some additional notional
category, or some subset of these three, or some additional
notional category as well as some subset of these. Finally,
the relative order of the elements found in AUX is often dif-
ferent from that hypothesized to the proto-language, even for
those languages with essentially its composition. E below
outlines the position of the AUX's in the daughter languages;
F, their composition and internal order.

E. Position of AUX[13]

NP # X AUX ...

MO # X AUX ...

SH # X AUX ...

CM # X AUX ...

SP # X AUX ...

CH # X AUX ...

TU # X AUX ...

HO   ... AUX #

KT # X AUX

SR # X AUX

CA # X AUX

CU # X AUX

LS # X AUX

PA # X AUX

TE # AUX

TR   ... AUX #

CR # AUX

HU # AUX

AZ # AUX

F. Composition and Relative Order[14]

NP Modality

MO Modality

SH $\left\{\begin{array}{l}\text{Modality}\\\text{Tense}\end{array}\right\}$

CM $\left\{\begin{array}{c}\text{Modality Subject Marking}\\\text{Tense}\end{array}\right\}$

SP Modality Tense SM/OM Modality

CH $\begin{Bmatrix} \text{Tense SM/OM} \\ \text{Aspect} \end{Bmatrix}$

TU Modality SM/OM Tense

HO $\begin{Bmatrix} \text{Tense} \\ \text{Aspect} \end{Bmatrix}$

KT Tense Object Marking

SR Modality SM/OM Tense

CA Modality

CU Modality Subject Marking Tense

LS Modality Subject Marking Tense

PA Subject Marking Tense/Aspect Modality

TE Subject Marking Tense/Aspect

TR Tense
  and
Aspect
  and
Subject Agreement

CR Subject Marking $\begin{Bmatrix} \text{Modality} \\ \text{Tense} \end{Bmatrix}$

HU Modality

AZ Modality

An examination of E and F reveals only two languages which have an AUX exhibiting the position, composition, and relative order hypothesized to the proto-languages. Examples were given at the beginning of this paper of the Luiseño AUX;

Cupeño has a second position AUX of the same form.

CU   53.   nə? qwə-nə-p su?iči qwa?
       I <u>Modality-CP-Tense</u> rabbit eat
             AUX
       'I might eat the jackrabbit.'   (CUP-J-SC-29)

All the other daughter languages differ in one of the three respects noted above. A number have an AUX which occurs other than in sentential second position. In Classical Aztec, Huichol, Cora, and Tepecano, there is an AUX occurring sentence initially.

AZ   54.   kʷiš tokonmokʷiilis
       <u>Modality</u> you:will:take:it:from:him
        AUX
       'Perhaps you will take it from me.'
                             (AZ-DA-FCG-27)

HU   55.   tieti ?iraawe yianeekaitini
       <u>Modality</u> wolf it:was being
        AUX
       'It must have been a wolf doing it.'   (HU-G-S-60)

In Tarahumara and Hopi, there is an AUX which occurs sentence finally.[15]

HO   56.   mi' wi'ti tayati-ŋʷi
       that woman laugh-<u>Aspect</u>
                 AUX
       'That woman always laughs.'   (HO-MH-CN)

The differences in composition are the most involved. First, there are languages like Tubatulabal and Serrano. The AUX's of Tubatulabal and Serrano have the three notional categories reconstructed to the proto AUX; however, each has

in addition object clitic pronouns which mark the number and

person of the object of the sentence (Object Marking). (57)

contains examples of the Tubatulabal AUX, (58) of the Serrano

AUX.

TU   57.   a.   miya=ama-luuc-biiš
               go=Modality-SM-Tense
                  ‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾
                        AUX
               'Let us go immediately.'   (TU-V-T-196)

          b.   haš=ǰiya?aŋ-da alaawinat
               negative=OM-SM are:talking
                        ‾‾‾‾‾
                        AUX
               'They are not talking to us.'   (TU-V-G-138)

SR   58.   a.   ?ačam kʷɨ-č čaacu?
               we Modality-SM sing
                  ‾‾‾‾‾‾‾‾‾‾‾
                     AUX
               'We might sing.'   (SR-C-ME-10)

          b.   ?iip=vɨ-? wahi? pɨŋq
               here=SM-Tense coyote pass
                    ‾‾‾‾‾‾‾‾
                     AUX
               'The coyote passed here.'   (SR-H-G-18)

Second, there are languages like Huichol and Classical Aztec.
Both of these languages include in AUX only the notional cate-
gory of Modality; that is, these languages include a subset of
the notional categories hypothesized to the AUX of the proto-
language. (54) and (55) above are examples. Finally, there
are languages like Kitanemuk and Hopi. The AUX's of both
these languages include only a subset of the notional cate-
gories hypothesized to the AUX of the proto-language, but both
include in addition some other notional category. (59) is a

Kitanemuk example.

KT   59.   nə?=mat-um niǰəhk
           I=Tense-OM I:answer
               ‾‾‾‾‾‾
               AUX
           'I'll answer you.'   (KT-A-PR-6)

There are two basic differences between the hypothesis
about the relative order of elements in the AUX of the proto-
language and the relative order of elements in the AUX's of
the daughter languages. First, Modality may occur final to
the AUX, as in Papago.[16]

PA   60.   kokṣa ?a-ñi-ki
           fall:asleep base-SM-Modality
                       ‾‾‾‾‾‾‾‾‾‾‾‾‾‾
                            AUX
           'Apparently I was falling asleep.'   (PA-H-IN)

Second, Subject Marking may follow Tense, as in Southern
Paiute.

SP   61.   suapak-aŋu=ⁿča-ni-?
           nearly:killed=Tense-OM-SM
                         ‾‾‾‾‾‾‾‾‾‾‾
                            AUX
           'You nearly killed me.'   (SP-S-G-100)

In summary, all languages in the Uto-Aztecan language
family have an AUX, as did the proto-language. However, only
two of the daughter languages reflect with any precision the
hypotheses about the proto-language. All other daughter lan-
guages AUX are to be distinguished in position, composition,
or order -- or some combination thereof -- from the hypothe-
ses about the AUX of the proto-language.

3.3 Reflexives

As noted in Section 0 above, the proto-language is hypothesized to have had reflexive prefixes on the verb, prefixes which varied for number and person. The differences between the daughter languages and the hypothesized proto Uto-Aztecan situation are easier to state for the reflexives than for either of the two preceding reconstructions. All daughter languages resemble the proto-language to the extent that they have some explicitly reflexive indication.[17] While some daughter languages maintain the type of reflexive found in the proto-language, some indicate a reflexive object with a genitive construction consisting of a possessive pronominal prefix and a noun stem, usually meaning 'body' or 'self' and a much larger number have a reflexive which is either invariant for number and person or distinguishes only number.

The genitive reflexive is found exclusively in the Takic branch of the language family; the following is an example from Luiseño.

LS   62.   a.   noo notaax toowq
                    I no-taax see
                      my-body
                    'I see myself.'

             b.   wunaal potaax toowq
                    he po-taax sees
                      his-body
                    'He sees himself.'   (LS-S-FN)

Cupeño and Serrano are parallel.

The invariant reflexive is the most widespread. Although it is centered in the Numic branch of the language family, it is to be found in Tubatulabal, Hopi, Cahuilla, Tarahumara, and possibly Pochutla as well. The following Hopi examples are illustrative.

HO   63.   pam cayhoya naa-kɨki
             that child Reflexive-bit
             'That child bit itself.'   (HO-MH-CN)

HO   64.   nɨʔ naa-kɨki
             I Reflexive-bit
             'I bit myself.'   (HO-MH-CN)

In Hopi, this reflexive element is bound, occurring in (63) and (64) as a verb prefix. While the majority of Uto-Aztecan languages with this type of reflexive resemble Hopi in this respect, they need not. In Tubatulabal, the reflexive, an invariant particle, is an independent element.

TU   65.   pišgi uumugiin omoix
             then:I hurt Reflexive
             'Then I hurt myself.'   (TU-V-T)

Finally, the languages which have a reflexive type like that reconstructed for the proto-language are centered in the southern part of the language family. An example was given in Section 0 from Classical Aztec; the following is from Papago.

PA   66.   ?aañi ?añ ñi-ñɨid̯
             I AUX Reflexive-see

             'I see myself.'   (PA-H-IN)

Huichol, Cora, Tepecano, and Yaqui are similar. There is a

difference to be noted among these languages, however, both

synchronically and in terms of the reconstruction. The recon-

struction of the form of the reflexive prefixes suggests that

there was no distinction between third person singular, third

person plural, and second person plural.[18] All the daughter

languages with this type of reflexive, except for Tepecano,

are like the proto-language in not marking all number and per-

son distinctions.[19] Huichol and Cora are precisely like the

proto-language; the form of the Huichol reflexive prefixes is

given below:

HU   67.   ne   ta

             ?a   yu

             yu   yu   (UA-L-NA-36)

But Papago and Classical Aztec collapse all second and third

persons in one form, to be distinguished from the first per-

son which maintains a number distinction. The forms of the

Classical Aztec reflexive prefixes were given in (15) above;

the following are from Papago.

PA   68.   ñi   t

             ?ɨ   ?ɨ

             ?ɨ   ?ɨ   (PA-H-IN)

And Yaqui has yet another pattern.

YA   69.   ?ino   ?ito

             ?omo   ?omo

             ?aw   ?omo   (UA-L-NA-33)

In summary, there are two ways a daughter language can

differ from the reflexive reconstruction hypothesized for the

proto-language. If it has a reflexive like that of the proto-

language, it can collapse certain numbers and persons in a

fashion different from that suggested for the proto-language.

Or, and more importantly, it can have a different reflexive

type -- one of two. Most daughter languages differ in reflex-

ive type.[20]

4. Theory.

4.0 Introduction

The preceding section discussed the synchronic states

of the daughter languages as they differ from those hypothe-

sized for the proto-language. Although non-Uto-Aztecanists

should now have some sense of what a Uto-Aztecan language

looks like and what proto Uto-Aztecan looked like, instilling

this sense is not the sole purpose of this paper. The point

at issue is that noted at the beginning of this paper: the

Uto-Aztecan data exemplify three problems which an adequate

diachronic theory must solve. First, all languages in the
language family resemble the proto-language in that they have
an AUX, and all resemble the proto-language in that they have
some way of indicating a specifically reflexive object; a
number of daughter languages do not, on the other hand, have
some form which patterns like the hypothesized proto absolu-
tive. A theory of diachronic change must predict what
changes are impossible. Second, the synchronic reflexes of
the proto AUX and the synchronic reflexes of the proto reflex-
ive exhibit a number of forms. A theory of diachrony must
specify, given the fact of a change, its possible results.
Finally, the synchronic reflexes of AUX appear different
enough that the choice as to a reconstruction seems arbitrary.
A theory of diachrony must constrain hypotheses about recon-
structed language states.

4.1 Remove the Absolutive

Certain characteristics of language are necessary pro-
perties; others are not. A non-controversial hypothesis
about change would posit that a language will maintain the
essential, necessarily, but that it need not maintain the
non-essential. Although for any comprehensive theory of lan-
guage change we would need a theory which so characterized
various possible language properties, for the purposes here

we need only be able to contrast in these terms the three
constructions under consideration.

AUX is not a category idiosyncratic to Uto-Aztecan. As
discussed in Footnote 12, it was first proposed for English
and its cross-linguistic identification is made possible by
the definition adopted in Akmajian, Steele, and Wasow. The
question, then, is whether a grammar is obliged to include
the category or whether it is an optional choice, perhaps
contingent on some other characteristic of the language.

The definition of AUX is primarily a method of identi-
fying AUX across languages; it does not, by any means exhaust
the generalizations to be made about the category. In Steele
(UA-S-AHS), three empirically based, generalizations about
the category are argued for at some length. Let me state
them very briefly here. First, an AUX can occur in one of
only three sentential positions -- first, second, or final.

70. $[\text{AUX}\ldots\ldots\ldots]_{\text{sentence}}$

$[\text{X}\quad\text{AUX}\ldots\ldots]_{\text{sentence}}$ (where X is the first ele-
ment in a clause)

$[\ldots\ldots\ldots\text{AUX}]_{\text{sentence}}$

Second, an AUX can contain elements expressing a limited set
of notional categories. The list includes elements marking
Modality, Tense, Subject Agreement or Marking, Aspect, Ques-
tion Marking, Negation and a very few others. Finally, the

relative order of elements within AUX is constrained by the
properties of the particular categories marked there. For
example, in Luiseño Modality occurs at the periphery of AUX.
(See (12) above.) Elements marking Modality will always
occur at the periphery of AUX because they may be stressed
while other elements, as e.g. Tense, may not.

A theory of AUX which explains these seemingly unre-
lated characteristics of the category also answers the ques-
tion posed above about its obligatory or optional nature.
The theory of AUX is this: The AUX, a category containing
at least the notional categories of Tense and/or Modality,
maps a sentence radical into a sentence. By <u>sentence radical</u>
is meant a series of arguments and a predicate. That is,
AUX provides a judgement about a series of arguments and a
predicate; AUX is what makes a sentence out of a series of
arguments and a predicate. This hypothesis argues that AUX
is an obligatory category in the grammar of every language;
all languages contain sentences, not (merely) sentence ra-
dicals.

The three empirical generalizations above make sense
in light of this hypothesis. First, a sentence necessarily
has an initial position, a final position, and a second posi-
tion. If AUX maps a sentence radical into a sentence, it
follows that it should occur in some position which is always

and necessarily available. Second, all, but one, of the no-
tional types to be found in AUX can pertain to the sentence.
If AUX maps a sentence radical into a sentence, it follows
that it should be composed of exactly this type of element.
Finally, the ordering possibilities that the generalization
about relative ordering rules out should be impossible if AUX
maps a sentence radical into a sentence. If the order of
elements within AUX can depend only on characteristics of the
categories themselves, it does not depend on their scope
relationships nor does it follow from some general categorial
structure. If AUX maps a sentence radical into a sentence,
each of the elements which AUX may contain pertains to the
sentence; thus, none of these should be more critical than
any of the others. These seemingly unrelated characteris-
tics of the category follow naturally from the theory. The
point of linguistic argumentation is to bring coherence to
apparently disparate phenomena; the theory of AUX, thus, is
precisely what is required.

On first consideration, the absolutive appears totally
idiosyncratic to Uto-Aztecan. No other language or language
family, to my knowledge, has a morpheme in the noun morpho-
logy that patterns similarly. As such, given the hypotheses
above, the absolutive need not be maintained over time. How-
ever, if we expand the scope of the comparison, similarities

do suggest themselves. Consider the indefinite article of

English. In English, the indefinite article alternates with

indications of plurality:

    71.   a. I see a dog.

          b. I see dogs.

And, like the definite article, with pronominal possessives.

    72.   I see his dog.

Except for the absolutive's alternation with a postpositional

suffix, the comparison to Uto-Aztecan languages like Serrano

or Classical Aztec isn't totally preposterous. If the abso-

lutive could actually be classed in some fashion with the

English article (and presumably with like elements in other

languages), the total idiosyncracy of the absolutive -- and

hence this as a reason for its disappearance -- cannot be

maintained.[21]

    Thus, the question of the essential or non-essential

character of the absolutive depends on assigning it some

function or label. At the moment, the best hypothesis, for

the absolutive of the proto-language, is that it indicated

that the element to which it attached was a member of the

category Noun. Since postpositional suffixes and possessive

prefixes are affixed to nouns, the absolutive is absent where

there is otherwise an overt indication, on the stem itself,

of the categorial status of the stem. Now, if this

hypothesis is correct, the absolutive is again to be consid-

ered among the set of non-essential language properties. It

is not the case that a category must be distinguished by its

inflectional morphology from whatever other categories a lan-

guage might have. Numerous examples to this effect could be

given; let me present here one which is closest to the issue

at hand.[22] The inflectional morphology of the categories

Adjective and Noun in Luiseño are strikingly parallel. Both

take object marking.

LS   73. a.   ʔawaal ʔoyokval xaariq
                dog quiet is:growling

                'The quiet dog is growling.'

          b. noo ʔawaal-i ʔoyokval-i tiiwʔyax
              I dog-object quiet-object saw

              'I saw the quiet dog.'   (LS-S-FN)

Both take plural marking.

LS   74.   ʔawaal-um ʔoyokval-um xaariwun
            dog-plural quiet-plural are:growling

            'The quiet dogs are growling.'   (LS-S-FN)

And, most critically, most adjectives end in -t, -š, or -l,

and these consonants alternate with postpositional suffixes.[23]

LS   75.   yot   'big'

         noo too-nga yo-nga yawaq
         I rock-on big-on am:sitting

         'I'm sitting on the big rock.'   (LS-S-FN)

LS   76.   ʔexmawiš   'dirty'

noo paa-nga ʔexmawi-nga ʔaaɟaq
I water-in dirty-in am:bathing

'I am bathing in the dirty water.'   (LS-S-FN)

In sum, for the absolutive, there are two possibili-

ties -- either of which concludes with the hypothesis that it

is a non-essential characteristic of human language. The

absolutive may be totally idiosyncratic.[24] If it is, it is

obviously non-essential. If it is not idiosyncractic, its

apparent function is to mark the category Noun, an apparently

non-essential function. Thus, although we can't predict in

either case that the absolutive will disappear, there is no

necessity that it be maintained in the daughter languages.

The predictions about the relative fates of the AUX

and the absolutive depended entirely on a theory of linguis-

tic universals, that is, a theory of what are the possible

elements of a grammar, and the distinction to be made in that

respect between essential and non-essential elements. A

similar prediction for the reflexive cannot depend on this

basic distinction alone; it must appeal as well to a theory

of implicational language universals. Not all languages have

specifically reflexive elements. For example, in Lardil a

reflexive object is marked by the passive morphology of the

verb.

77.   a.   ngawa pe-tha-kun yadaman-in
             dog bite-increment-instantive horse-accusative

'The dog bit the horse.'

b.   yadaman pe-yi-kun ngawu-n
      horse bite-passive-instantive dog-agentive

'The horse was bitten by the dog.'

c.   ngawa pe-yi-kun
      dog bite-passive-instantive

'The dog bit himself.' (Kenneth Hale, personal
                        communication)

Other languages use the regular object pronouns. Thus, we

cannot claim that there is an obligatory and distinct element

which is labelled Reflexive. However, the vast majority of

languages appear to have such an element. If languages can

be divided into those with and those without specifically

reflexive elements, it is possible that there is some impli-

cational statement which predicts the difference. Further-

more, since most languages appear to have specifically

reflexive elements, the implicational statement should, in

all probability, predict only when a language will not. That

is, a typologically diverse set of languages will exhibit

specifically reflexive elements; those languages without such

elements will have some characteristic in common which pre-

dicts the lack. Diachronically, then, the possibility of

acquiring specifically reflexive elements -- or of maintain-

ing the characteristic of marking Reflexive with some dis-

tinct element -- is always available; in contrast, the

possibility of losing specifically reflexive elements is available only under special conditions. Thus, Uto-Aztecan languages, languages descended from a language with specifically reflexive elements, would have a very small chance of losing such elements.

4.2 Possible Results

The preceding discussion suggests that a theory of diachronic change which depends on a theory of linguistic universals supplemented by a theory of implicational language universals could predict the difference in maintenance between the AUX and the reflexive on the one hand and the absolutive on the other. Obviously, it is not the case that the characteristics of a language which are either necessarily maintained or encouraged to continue will resemble that from which they descend; the reflexive markings in the daughter languages are distributed among three types and the AUX's of the daughter languages appear to be even more diverse. The question is whether such diversity can be predictable. The claim here is that it can; the prediction depends on establishing the possibilities for any particular linguistic characteristic and their relative likelihood. That is, the prediction can be made only in the context of a typological study of language.

The first task, then, in regard to the AUX and the reflexive of Uto-Aztecan is to consider the available options. First, there are three types of reflexive elements cross-linguistically. A reflexive object may be indicated by a genitive construction, i.e. a possessive pronoun and a noun, usually a noun meaning body or self; by a special series of reflexive pronouns which vary for person and number, or by an element which is either invariant or distinguishes only number. Languages use one of these exclusively or primarily, so English reflexives are of the first type; French, the second; and Korean, the third. These are exactly the three types of reflexives found in Uto-Aztecan.

A much larger number of AUX's are possible. In Section 4.1, the parameters to the category AUX were stated: an AUX can occur in one of three sentential positions, can contain elements marking any one of a number of notional types, and can have a number of possible internal orders. The combination of these possibilities gives a large number of possible AUX's; e.g. one language may have an AUX which contains the notional categories of Tense, Aspect, and Subject Agreement and occurs sentence finally, while another language may have an AUX with exactly this composition but which occurs in sentential second position.