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# A LAW OF ORDER: WORD ORDER CHANGE IN CLASSICAL AZTEC<sup>1</sup>

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- (1) niman ye nohuian c-altia, qui-mama-tiloa  
then emphatic everywhere him-bathed  
him-rubbed  
*Thereupon she bathed him all over; she massaged him.*<sup>3</sup> (F6-206)
- (2) an-tech-tlazo<sup>3</sup>tla  
you-us-love  
*You love us.* (A-21)
- (3) ni-c-te-po<sup>3</sup>polhuia  
I-it-someone-forgive  
*I forgive someone it.* (A-22)

However, I will be examining the word

0. It is a truism that languages undergo changes in word order. This article is concerned with the process and the causes of word order change. The language under examination is Classical Aztec.

1. A Classical Aztec sentence need contain only a verb and perhaps some particles; subject markers and object markers are prefixed to the verb.<sup>2</sup>

<sup>1</sup> Research for this article was supported by the American Council of Learned Societies. Thanks are due to Kenneth Hale for comments on an early stage of the research; any errors are of course my own.

<sup>2</sup> The examples are written in the (somewhat regularized) orthography of the original source. The sources cited are listed here, preceded by the code which identifies them in the article. Following the letter code is the page number where the sentence is found. The works cited are: (An)—Arthur J. O. Anderson, *Grammatical Examples, Exercises, and Review* (Provo: University of Utah, 1973); (A)—A.J.O. Anderson, trans., *Rules of the Aztec Language* (Provo: University of Utah, 1973) [this is a modified version of Francis

Xavier Clavigero's *Reglas de la Lengua Mexicana*]; (F1)—Arthur J. O. Anderson and Charles E. Dibble, *Florentine Codex*, book 1, *The Gods* (Santa Fe, N.M.: School of American Research and University of Utah, 1970); (F6)—A. J. O. Anderson and C. E. Dibble, *Florentine Codex*, book 6, *Rhetoric and Moral Philosophy* (Santa Fe, N.M.: School of American Research and University of Utah, 1969); (G)—Ángel María Garibay, *Llave del Nahuatl* (Mexico City: Editorial Porrúa, 1970); (HH)—A. Hunt, trans., "Fabulas de Eso-po," in *Proceedings of the XI Congreso Internacional de Americanistas* (Mexico, 1895), pp. 100-116; (H)—Villiana Hyde, *An Introduction to the Luiseño Language* (Banning, Calif.: Malki Museum Press, 1971); (L)—Ronald Langacker, "Possessives in Classical Nahuatl," *IJAL* 38, no. 3 (1972): 173-86.

The Classical Aztec subject markers are:

ni- ti-  
ti- an-  
∅ ∅

The Classical Aztec object markers are:

nech- tech-  
mitz- amech-  
c-/qui- quim-.

<sup>3</sup> Morpheme breaks are indicated by a hyphen. I have not provided a complete morpheme analysis of each word.



## SOV:

- (13) auh in mextli yohual tequitl quitlaza  
and article moon light duty he:takes:  
it  
*And the moon does the night's work.*  
(G-135)

In a sentence containing a transitive verb and a noun subject or a noun object only, the verb and the noun may occur in either order.

## VO:

- (14) inic quimiximachilzquia in iteouh  
thus they:should:have:recognized:  
them article their: gods  
*Thus they should have recognized their gods.* (F1-56)

- (15) quihualtemoa in malacatl  
they:sought:it article spindle  
*They sought the spindle.* (F6-163)

- (16) ic quinzotlacmictia in chaneque  
with:it they:caused:them:to:swoon  
article household:members  
*With it they caused the members of the household to swoon.* (F6-163)

## VS:

- (17) quitlali, quito, in monan, in mota  
they:order:it they:ask:it article your:  
mother article your:father  
*Your mother, your father, order it, request it.* (F6-172)

- (18) quihuenchiuhtihuitz in nantli, in tatli  
they:come:making:her:an:offering  
article mother article father  
*The mother and the father come bringing her as an offering.* (F6-210)

- (19) inic caltiaya ticitl  
thus she:bathed:her midwife  
*The midwife bathed her in the same way.* (F6-205)

## OV:

- (20) in ixquich cihuatlatquitl quihualtemoa  
article all women:equipment they:  
sought:it  
*They sought all the equipment of women.* (F6-163)

## SV:

- (21) auh ce tlacatl quinapalotiuhy  
and one man he:went:arm:carrying:  
it  
*And one man went carrying it in his arms.* (F1-3)

An intransitive sentence with a noun subject may have either VS or SV word order.

## VS:

- (22) oc no cenca ic paqui in pilhuaque  
ihuan in cihuahua  
yet again much thus rejoiced article  
parents and article husband  
*Her parents and the husband rejoiced therefore even more.* (F6-162)

- (23) auh in ohualquiz tonatiuh  
and subordinator it:had:arrived sun  
*And when the sun had emerged. . .*  
(F6-162)

- (24) nican ompehua in zananillatolli  
here it:begins article fable  
*Here begins the fable.* (HH-116)

## SV:

- (25) ocopilli tlatlaticac  
pine:torch it:stood:burning  
*A pine torch stood burning.* (F6-203)

- (26) mixitl tlapatl ilhuil itequiuh yez  
jimson weed his:deserts his:duty it:  
will:be  
*Jimson weed will be his deserts, his duty.*<sup>5</sup> (F6-198)

<sup>5</sup> Copular sentences with a predicate nominative tend to be like sentence (26): Subject Pre-

TABLE 1  
WORD ORDERS BY RELATIVE FREQUENCY

Transitive, noun subject, noun object	Transitive, noun subject	Transitive, noun object	Intransitive
SVO, VOS	VS	VO	VS
VSO	SV		SV
SOV		OV	

2. The verb in Classical Aztec appears to be slowly moving from the end of the sentence to the beginning.

2.1. The sentence types in 1 do not occur with equal frequency. For transitive sentences with both noun subject and noun object (examples [4]–[13]), the order SOV (sentences like [13]) is very uncommon. The orders VSO, VOS, and SVO (sentences like [4]–[6], [7]–[9], and [10]–[12] respectively) are much more common.<sup>6</sup> That is, it is very rare for both noun subject and noun object to precede the verb; the verb is seldom actually final to a sentence with both noun subject and noun object. For transitive sentences with either only a noun subject or only a noun object (examples [14]–[21]), the orders VO and VS (sentences like [14]–[19]) are more common than the orders OV and SV (sentences like [20]–[21]), although OV sentences like (20) are much rarer than VO sentences like (14)–(16), and SV sentences like (21) are only somewhat less common than VS sentences like (17)–(19). That is, the object tends to follow the verb rather than precede it; the subject may either precede or follow the verb, although it tends slightly more often to follow than to precede. For intransitive sentences (examples [22]–[26]), the order

VS (sentences like [22]–[24]) is more common. That is, the subject of an intransitive sentence tends most often to follow the verb. Table 1 charts the word orders by relative frequency. Each column represents a sentence type; the most common of the type is at the top of each column.<sup>7</sup> The further from the top of the table an order is, the more uncommon it is.

2.2. In contrast, there are a number of indications that the verb should regularly follow both subject and object. First—and ultimately supporting only the possibility that a noun subject should precede the verb—Classical Aztec is a verb-final language. The term “verb-final” pertains to the existence of certain characteristics in a language; it does not refer particularly and exclusively to surface word order. What characteristics typologize a language have been discussed in a number of works.<sup>8</sup> I assume those typologies here and simply discuss what aspects of Classical Aztec best illustrate its verb-final character. Classical Aztec has postpositions.

(27) a-pan  
water-in  
*in the water* (L-180)

<sup>7</sup> Anderson (p. 107) claims that sentences regularly have SOV word order: I found an examination of the texts did not support this claim.

<sup>8</sup> See, for example, Joseph Greenberg, “Some Universals of Grammar with Particular Reference to the Order of Meaningful Elements,” in *Universals of Language*, ed. Joseph Greenberg (Cambridge, Mass.: MIT Press, 1963), pp. 73-113.

dicate-Nom Be. Whether this is a problem for my analysis depends on whether copulas actually act like verbs, and this question demands much more study.

<sup>6</sup> They are not, however, equally common. VOS and SVO are more common than VSO.

(28) lienzo-tica  
bandage-with  
*with a bandage* (L-180)

(29) ilhuica-c  
sky-in  
*in the sky* (L-180)

In Classical Aztec, subject and object markers are prefixed to the verb rather than suffixed to it.

(30) ti-tla- pohuazque?  
we-something-shall:count  
*We shall count something.* (A-26)

(31) ni-mitz-tlazo<sup>2</sup>tla  
I-you-love  
*I love you.* (A-21)

In Classical Aztec, the aspectual auxiliary follows the main verb rather than preceding it. *ca*<sup>2</sup> is the verb *to be*:

(32) nican ti-ca?  
here you-be  
*You are here.* (F6-127)

It is also the present progressive auxiliary.

(33) ni-tla-qua<sup>2</sup>-ti-ca?  
I-something-eat-conjunctive-be  
*I am eating.* (A-41)

(34) nech -itz-ti-ca?  
me-look-conjunctive-be  
*He is looking at me.* (A-41)

These characteristics are compatible with, although they do not insure, a clause-final verb in the surface word order. It is not unlikely that a language with these characteristics would exhibit SVO surface word order, but a clause-initial verb would be very unusual. That is not to say that it is an impossibility; verb-final languages do occasionally exhibit a clause-initial verb, but generally only under specific conditions. For example, in Luiseño, another verb-final language, the verb may not be initial except when certain particles, like the question marker *šu*, are present in the sentence.

s        v        o

(35) xwaan samsaq tukmal  
John is:buying basket  
*John is buying a basket.* (H-55)

o        v        s

(36) tukmal samsaq xwaan

s        o        v

(37) xwaan tukmal samsaq

v        s        o

(38) \*samsaq xwaan tukmal

s Q marker v        o

(39) xwaan *šu* samsaq tukmal  
*Is John buying a basket?*

v Q marker s        o

(40) samsaq *šu* xwaan tukmal

But if similar specific conditions exist in Classical Aztec, I have yet to discover what they are.

As a second indication of the substrata of clause-final verbs in Classical Aztec, the verb must follow certain subjects and objects. Examples (1)–(3) above illustrated subject markers and object markers; occasionally, a sentence will contain free pronominal subjects and objects. Both must precede the verb in the sentence. Sentences (41)–(43) are examples of pronominal subjects.

(41) ca yehuatl quiyocoaya  
conjunction he he:created:it  
*For he created it.* (F1-7)

(42) in nehuatl niman mocuitlapan non-  
tlecoz  
article I then your:back I:will:go:up  
*Then I will go up on your back.*  
(HH-116)

(43) teteoé ca nehuatl niyez  
oh: gods emphatic I I:will:be  
*Oh gods, I will!* (G-131)

In (44) is an example of a pronominal object.<sup>9</sup>

(44) niman ic yehuatl connotzque in teteo  
then thus him they:called:him article  
gods  
*Then the gods called him.* (G-131)

Incorporation is an active process in Classical Aztec. Most important to the point at issue, the verb may incorporate

<sup>9</sup> Third-person pronouns are demonstratives; *yehuatl* may be a demonstrative in function in (44).

the object and an incorporated object must precede the verb. Sentences (45)–(48) contain examples of incorporated object nouns.<sup>10</sup>

(45) *ni-naca-qua*

I-meat-eat

*I eat meat.* (A–104)

(46) *ni-xochi-tequi*

I-flower-cut

*I cut flowers.* (A–104)

(47) *ni-quin-tlaxcal-temolia* in *nopilhuan*

I-them-tortilla-seek article my: sons

*I seek bread for my sons.* (A–104)

(48) *ma cana ti-c-cihua-tlanican*

let ? we-him-woman-look: for (imperatively)

*Let us seek a woman for him.* (F6–127)

Of course, the fact that incorporated elements precede the verb may be further evidence for the verb-final substrata. Postpositional phrases can be incorporated in the verb.

(49) *a-huel-lalticpac-quiza* in *piltzintli*

negative-possible-on: earth-arrive article baby

*The baby could not come forth on earth.* (F6–157)

Nouns with various adverbial functions can be incorporated in the verb. In (50)–(51) are incorporated nouns acting as manner adverbials; in (52)–(54) are incorporated nouns acting as instrumentals.

(50) *ni-c-xochi-pe<sup>2</sup>pena* in *cuicatl*

I-it-flower-select article song

*I select a song as if it were a flower.* (A–104)

(51) *ni-c-tlazo<sup>2</sup>-tennamiqui* in *momatzin*

I-it-precious: thing-kiss article your: hand

*I kiss your hand as if it were a precious thing.* (A–103)

(52) *c-on-xochi-cozcati*

him-directional-flower-adorned

<sup>10</sup> An incorporated object replaces the object marker that refers to it. The object markers in (47) and (48) refer to the indirect objects.

*He adorned him with flowers.* (G–155)

(53) *in nota<sup>2</sup>tzin o-qui-tzon-huilan* in *non-antzin*

article my: father perfective-her-hair-dragged article my: mother

*My father dragged my mother around by the hair.* (A–107)

(54) *ni-c-tle-huatza* in *nacatl*

I-it-fire-roast article meat

*I roast meat in the fire.* (A–104)

A final indication of clause-final verbs is the evidence that (at least some) noun subjects actually move past the verb to its right. In sentences (55)–(57) the noun subject follows the verb, but preceding the verb is a pronoun which has as its referent the noun following the verb.

(55) *auh niman ye ic yehuatl oncan ontlatoa onmizquetza* in *Tecociztecatl*

and then he there he: volunteers he: presents: himself article proper: noun

*And then Tecuciztecatl volunteers and presents himself.* (G–131)

(56) *no yehuan quimatacaca* in *mocihuauquetzqui* in *ichtecque*

also they they: diligently: sought: it article proper: noun article thieves

*And the thieves diligently sought the mociuauquetzqui.* (F6–162)

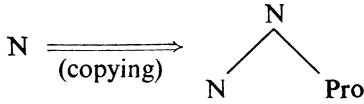
(57) *no yehuantin quitlatlauhiaya* in *temaxxaleque*

also they they: prayed: to: her article sweat: house: owners

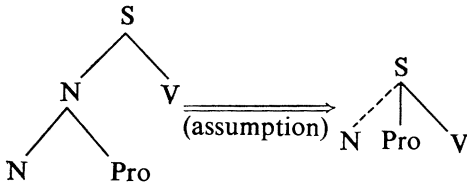
*Owners of sweat houses prayed to her also.* (F1–15)

I will refer to such pronouns as presumptive pronouns; presumptive pronouns are pronouns which occur in the same sentence as, but fill different sentential positions than, their noun referents. Note that in none of examples (55)–(57) could the referent for the pronoun be anything other than the noun subject. The first verb in (55) is intransitive; the object in (56) and (57) is singular.

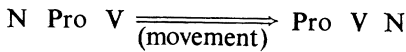
In sentences like (55)–(57), the noun subject has been moved after the verb, leaving behind a pronominal copy. These pronouns are copied after the noun while the noun precedes the verb.



The pronoun assumes the function of the noun.<sup>11</sup>



The noun subject moves from in front of the verb.<sup>12</sup>



Copying is attested elsewhere in Classical Aztec. First, it is needed in possessive constructions with noun possessors. Possessive nouns in Classical Aztec have prefixed to them a possessive prefix.

- (58) no -ta<sup>2</sup>tzin  
 my-father  
*my father* (A-107)

In (58), the possessor noun phrase is pronominal. When the possessor noun phrase is a noun, it cooccurs with the possessive prefix.

<sup>11</sup> The tree which represents the output of the rule where the pronoun assumes the function of the noun is obviously not to be taken too seriously. I do not know how to represent the shift in function. It may very well be some sort of promotion, as the tree would indicate, but the problem is how to indicate what happens to the old head noun.

<sup>12</sup> In (55), the movement of the noun subject past the verb occurs after the two verbs have been conjoined.

- (59) in cihuatl i-yomio  
 article woman her-bones  
*woman's bones* (L-174)  
 (60) in tonatiuh i-nan  
 article sun his-mother  
*mother of the sun* (L-174)

Langacker (n. 2 above) argues that possessive phrases like (59)–(60) are the products of a rule which inserts a pronominal copy of the possessor noun after the possessor noun. (Other rules attach it to the possessed noun and make it a genitive form.) Second, copying is needed for some postpositional phrases. (27)–(29) are examples of postpositional phrases; in them, the postposition is attached as a suffix directly to the noun object of the postposition. Consider now the following.

- (61) in atl i-itic  
 article water it-into  
*into the water* (L-180)  
 (62) huehuenton i-pan mocuep  
 old:man it-into he:changed  
*He changed into an old man.* (G-141)

Langacker argues that in postpositional phrases like those in (61)–(62), a rule inserts a pronominal copy of the noun object after the noun object. (Other rules attach it to the postposition and specify its shape.) This is the same rule that applies to possessives like (59) and (60). A third construction that requires copying is illustrated in (63)–(64). Here a pronominal copy of the noun subject directly follows the noun subject.

- (63) in intlacual yehuatl in tonacayotl  
 article their:food it article maize  
*Their food was maize.* (L-179)  
 (64) in Tolteca yehuantin cenca huel  
 tlayacana  
 article Toltecs they very emphatic  
 they:took:the:lead  
*The Toltecs took the very lead.* (L-179)

Constructions like those in (63)–(64) attest to the validity of the proposal that the pronominal copy of a noun subject



assumes its function. I will call the pronoun in such sentences resumptive pronouns. That the noun in sentences like (63)–(64) is in some sort of apposition to the resumptive pronoun is shown by distributional facts. While nouns in general may follow a verb (see examples [4]–[9]), a noun followed by a resumptive pronoun cannot. There appears to be no sentence like (65).

(65) \*cenca huel tlayacana in Tolteca yehuantin

This looks suspiciously like the distributional facts of pronouns already touched on: a subject or object pronoun must precede a verb; it may not follow it. If the pronoun in sentences like (63)–(64) is actually functioning as subject, the non-occurrence of sentences like (65) follows.<sup>13</sup>

I propose that presumptive pronouns are simply resumptive pronouns where the noun has moved past the verb. For a concrete example, take sentence (57). Copying derives figure 1 from figure 2. yehuantin

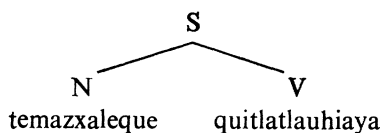


FIG. 1

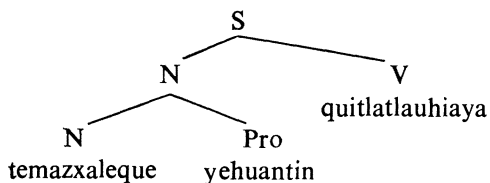


FIG. 2

<sup>13</sup> Langacker argues that noun phrases like: in yehuantin Tolteca article they Toltecs *the Toltecs* (L-182), and in yehuatl Titlacahuan article he Titlacahuan *Titlacahuan* (G-141) are derived from constructions like those in (63)–(64) by a rule of inversion. In both cases, in his analysis, the head of the construction is the noun. Noun phrases like the above may occur after the verb, as expected if the noun is the head; this contrasts with what I have called the resumptive pronoun

assumes the subject function of temazxaleque. And rightward movement derives sentence (57) from figure 3.

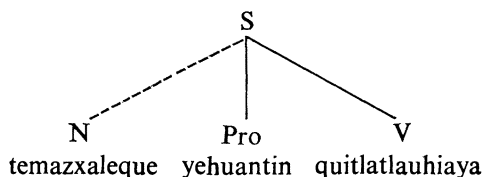


FIG. 3

If the analysis is correct, some noun subjects do actually move past the verb and to its right. Thus, there is a synchronic mechanism for removing (at least some) noun subjects from a position preceding the verb.

**2.3.** It is possible to view the distribution of sentence types in Classical Aztec, against the background of the verb-final substrata, as the steady movement of the verb from sentence-final position toward the beginning of the sentence.

Some of the indications of a verb-final substrata suggest that Classical Aztec has undergone some changes in word order. It has been suggested that morphologic changes follow word order changes.<sup>14</sup> If true, the morphologic indications of the verb-final character of Classical Aztec indicate an older word order where the

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construction and suggests that the connection between them and the above is not as transparent as Langacker would like.

<sup>14</sup> Talmy Givón, in such works as "Historical Syntax and Synchronic Morphology: An Archaeologist's Field Trip," in *Papers from the Seventh Regional Meeting, Chicago Linguistic Society* (1971):394–415, is one main proponent of this view. There are definite problems which remain to be worked out, the major one of which is that grammatical elements have certain positional tendencies of their own. See Susan Steele, "On Some Factors that Affect and Effect Word Order," in *Word Order and Word Order Change*, ed. Charles Li (Austin: University of Texas Press, 1975), pp. 199–268.

verb was probably not clause-initial, where the verb followed at least the subject of the sentence. The incorporation evidence suggests that an object tended to precede the verb. Incorporated elements should precede, rather than follow, the verb in a verb-final language, but, more important to the question of word order change in Classical Aztec, I expect that if the synchronic word order of a language exhibits different possibilities from the relative order of the incorporated element and the verb, the incorporation order reflects an older order. Finally, the evidence of pronominal position suggests that subject and object generally preceded the verb at an earlier stage of Classical Aztec. It seems generally to be the case in languages that pronouns have less freedom than do nouns; their minimal freedom causes (allows?) them to reflect a more conservative, perhaps an older, word order.

As table 1 illustrates, the verb in Classical Aztec is synchronically almost always initial, unless the sentence is transitive and a noun subject is present. In sum, table 1 illustrates that there is a tendency for the subjects of intransitive verbs and the objects of transitive verbs to follow the verb, and that the subjects of transitive verbs may precede the verb or follow the verb, but they tend to follow it when there is no other noun in the sentence. Assuming that a noun subject and a noun object generally preceded the verb at some earlier stage of Classical Aztec, the verb has moved up in sentential order past what would, if both subject and object preceded the verb, immediately precede the verb—the subject of an intransitive verb and the object of a transitive verb.

$$\begin{array}{ccc} S & O & V \\ & S & V_{\text{intransitive}} \end{array}$$

But the subject of a transitive verb is one step further toward the beginning of the

sentence, in front of the object if there is one. The subject of a transitive verb is the one noun which precedes the verb with some regularity.

I hypothesize the following process: subjects of intransitive verbs and objects of transitive verbs, those nouns that directly precede a clause-final verb, drifted to the right past the verb.

$$\begin{array}{l} SOV \rightarrow SVO \\ SV \rightarrow VS \end{array}$$

Once these orders become somewhat solidified, the subject of transitive verbs occurs where noun objects of transitive verbs and noun subjects of intransitive verbs had occurred; it also drifts past the verb.<sup>15</sup>

$$SVO \rightarrow VOS \sim VSO$$

VOS word order is very common in Classical Aztec, closely vying with SVO word order; the verb may overtake the subject of transitive verbs.

3. The question now is why the verb is moving from the end of the sentence to the beginning. It appears that the sentential space in front of the verb begins to be considered verbal space, that is, a position in the sentence filled only by elements which modify or are dependent in some fashion on the verb. Thus, whatever nouns at one point could appear there no longer can.

3.1. A number of processes in Classical Aztec create constructions preceding the verb which are bound to it. I have given

<sup>15</sup> VSO is probably not the direct result of the rightward movement of the subject of a transitive verb; rather, it is probably a later development from VOS. The reason for the reordering may have something to do with Greenberg's (n. 8 above) observation about the relative order of subject and object. In any case, it is a fact that VSO is less common than VOS.

examples of incorporation. It is possible to view incorporation as one way to obviate the problem of a free noun preceding the verb—make it part of the verb. Of course, incorporation pertains in large part only to nouns which could have difficulty maintaining themselves. First, nonsubject, non-object nouns are incorporated. (See examples [50]–[54].) These are adverbials of a sort and thus have close semantic ties to the verb. Second, those object nouns which are incorporated in the verb tend to be inanimate. Consider that if the verb has both indirect object and direct object, it is the direct object that is incorporated.

- (66) ni-quin-tlaxcal-temolia in nopilhuan  
I-them-tortilla-seek article my: sons  
*I seek bread for my sons.* (A-104)

Of the two, the direct object tends to be the inanimate noun.<sup>16</sup> It is clear in many languages that there is a hierarchy of nouns in terms of their animacy which may exhibit itself in a number of ways. One way is in the sort of relationship the noun may have to the verb; animate nouns generally are more free.<sup>17</sup>

The presumptive and resumptive pronoun constructions are another way of removing free nouns from in front of the verb, thus creating verbal space. It is not particularly unusual for nouns to drift to the right past the verb in certain sorts of verb-final languages; it is particularly not unusual in Uto-Aztec languages, of which Classical Aztec is one. Presumptive pro-

nouns and resumptive pronouns are, however, not so usual. With both, the noun subject is removed from in front of the verb and replaced by pronominal forms. Pronominal forms generally, not just in Classical Aztec, tend to be more closely bound to the verb than are nouns. Thus, they would occur in a position more bound to the verb.

Support for the claim of a bond between pronouns and verbs and further evidence of the hypothesized rearrangement of sentential space is found in postpositional phrases. Postpositional phrases may follow the verb:

- (67) onmomayauhtihuetz in tle-co  
he: threw: himself article fire-into  
*He threw himself into the fire.* (G-133)

But they most often precede it.

- (68) niman ye atlacomolten-co i-ca hueztzcatinemi  
then already on: well: rim at: him he:  
continued: to: laugh  
*He was already going around the well-rim laughing at him.* (HH-116)
- (69) quauhtlapech-co contlaliaya in yehuayo  
wood: bench-on they: left: it her: skin  
*They left her skin upon a wooden bench.* (F1-16)

There is a general tendency for the postpositional phrase which occurs in front of the verb to simplify. Whatever free nominal part of the construction there is will move to the right past the verb; under certain conditions the entire postpositional phrase will do the same. In either case, a pronominal copy of the moved element is left in front of the verb. Postpositional phrases with noun objects may occur, as has been shown, with the postposition either attached to the noun or to a pronominal copy of the noun. (See examples [27]–[29] and [61]–[62].) The noun objects of the latter may move past the verb.

<sup>16</sup> In light of sentences like: ma cana ti-cihua-tlanican let ? we-him-woman-look:for (imperatively) *let us seek a woman for him*, perhaps the best statement is that the direct object is viewed as less animate than the indirect object.

<sup>17</sup> See, for example, Kenneth Hale, "A Note on Subject-Object Inversion in Navajo" (manuscript), and Nancy Frishberg, "The Great Chain of Being in Navajo," in *Syntax and Semantics*, vol. 1, ed. John P. Kimball (New York: Seminar Press, 1972), pp. 259–66.

(70) i-tloc onmomanaco in tonatiuh  
 it-with he:presented:himself article  
 sun  
*He presented himself with the sun.*  
 (G-134)

(71) in-pan tequiyauh in Tolteca  
 them-on rocks:rained article Toltecs  
*Rocks rained on the Toltecs.* (G-147)

It is not only the noun object of a postposition which may move past the verb; if the object of a postposition is possessed, the noun possessor will generally occur to the right of the verb. Sentences (72)–(74) contain examples of possessives moved to the right of the verb out of postpositional phrases.

(72) inic in-ma-c anquizazque in *diabolsme*  
 thus their-hands-in you:will:con-  
 clude article devils  
*So that you may escape the hands of  
 the devils.* (F1-55)

(73) oncan in-ma-c concahua in *cihua* in  
 tonatiuh, in yehuantin quauhtin,  
 ocelo, in yaomicque  
 there their-hands-in they:delivered:it  
 article woman article sun article  
 demonstrative eagles ocelots article  
 they:war:died  
*There these eagle-ocelot warriors,  
 those who had died in war, delivered  
 the sun into the hands of the women.*  
 (F6-163)

(74) in iquac i-yel-pan i-yollo-pan quitla-  
 lilia atl, in ticitl in *piltontli*  
 subordinator when his-chest-on his  
 heart-on she:places:it water article  
 midwife article baby  
*And when the midwife places the water  
 on the chest, on the heart of the  
 baby. . .* (F6-205)

Certain sorts of postpositional phrases tend not to occur in front of the verb at all, even if the noun object is attached directly to the postposition. They follow the verb and are replaced in front of the verb by a

proform onpan or onpa *there*.<sup>18</sup> (Both forms contain on *that* and a postposition; in the former, the postposition is pan *in, on* (location) and in the latter, pa *in, from* (motion)).

(75) yu onpan huetzticac in *i-qua-c*  
 thus there it:grew article his-head-to  
*Thus it grew to his head.* (G-149)

(76) ca onpa yauh in *ilhuica-c* in tonatiuh  
 ichan  
 conjunction there she:went article  
 sky-in article sun his:house  
*She went there to the heavens, to the  
 house of the sun.* (F6-162)

(77) auh ye onpa nemi in *tlapco-pa*  
 and emphatic there they:lived article  
 east-in  
*And they lived there in the east.*  
 (F6-162)

**3.2.** The reorganization of sentential space in Classical Aztec is a result of the presence of certain elements at the beginning of the sentence which also show an attraction for the verb. Their attraction for the verb causes the sentential space between them and the verb to contain as few elements as possible which do not modify the verb or which are not bound in some fashion to the verb.

Sentences (78)–(81) contain examples of modal particles in Classical Aztec.

(78) auh ic *huel* ontlecoc  
 and thus modal he:went:up  
*And thus he could go up.* (G-138)

(79) *cuix* toconmocuiliz  
 modal you:will:take:from:him  
*Perhaps you will take from him.*  
 (F6-27)

<sup>18</sup> Word-final /n/ disappears in the Classical Aztec texts with some regularity, perhaps because of the orthographic practices of the Spanish-speaking scribes or because of a Classical Aztec rule. Thus, onpan and onpa may actually be one form, onpan.

- (80) *za* nicnottiliz  
 modal I:will:see:him  
*I have to see him.*<sup>19</sup> (G-141)
- (81) *ma* timitzcihuahatlanican  
 modal we:find:you:a:woman (imperatively)  
*Let us find you a woman.* (F6-127)
- Almost all modal particles in Classical Aztec are sentence-initial elements as the following sentences with noun and pronoun subjects and objects illustrate somewhat more forcefully.
- (82) *amo huel* ic otlatocac in teotl tonatiuh  
 negative modal thus he:went:on article god sun  
*The sun could not go on.* (G-135)
- (83) *cuix* toconmotlatiliz in mototonca, in moyamanca  
 modal you:will:hide:it article your:heat article your:warmth  
*Perhaps you will hide your heat, your warmth.* (F6-27)
- (84) *ma* ceme yehuantin quitztiani  
 modal each they they:would:look:at:it  
*Would that each of them would look at it.* (G-156)

I have argued elsewhere<sup>20</sup> that modal elements have two positional tendencies cross-linguistically; they tend to occur at the beginning of the sentence, but they also exhibit an attraction to the verb (see fig. 4). In some languages, one tendency predominates; in others, the other pre-

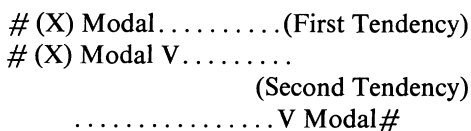


FIG. 4

<sup>19</sup> *za* occasionally occurs as *zan*; I assume they are the same form. See n. 18 above.

<sup>20</sup> Susan M. Steele, "The Positional Tendencies of Modal Elements and Their Theoretical Implications" (Ph.D. diss., University of California, San Diego, 1973), and "Factors that Affect and Effect Word Order" (n. 14 above).

dominates. However, these two tendencies are in basic conflict in a language where the verb is final to the clause. In Classical Aztec, modals are sentence-initial elements and, if one hypothesis of this article is correct, at an earlier stage of Classical Aztec, verb-final surface word order was relatively common. The two tendencies would have been in conflict; they no longer are because what may intervene between modal and verb is restricted to elements which are closely bound to the verb. A noun subject or a noun object, in general, may not intervene. Postpositional phrases may intervene. But sentence (49) above illustrated that postpositional phrases can be incorporated and, thus, may be bound to the verb. Furthermore, the postpositional phrases that occur between modal and verb are generally of the form pronoun-postposition, rather than noun-postposition.

- (85) *za* i-tech ninaxitiz  
 modal him-before I:will:come  
*I have to come before him.* (G-141)

And pronouns may occur between modal and verb. But I have already suggested that pronouns do not have the freedom of nouns, that pronouns are, in fact, attracted to the verb.

- (86) *ma* ceme yehuantin quitztiani  
 modal each they they:would:look:at:it  
*Would that each of them would look at it.* (G-156)

Thus, it appears that the sentential space between the modal and the verb is actually verbal space, and this probably represents a reanalysis if subject and object tended at an earlier stage of Classical Aztec to precede the verb. Since modals in Classical Aztec tend very strongly to be initial, nouns can precede them only under special conditions (see 4). To get out of the verbal space between modal and verb, noun subject and noun objects have to occur after the verb.

I expect that the development of this verbal space between modal and verb began as a reduction of what could occur there; perhaps, therefore, in transitive sentences the object tended to move to the right of the verb. The movement was generalized to whatever noun directly preceded the verb—the subjects of intransitive verbs. Later, when the objects of transitive verbs and the subjects of intransitive verbs generally followed the verb, the rightward movement began to apply to the noun subject of a transitive verb. Once most nouns tended not to precede the verb, the space in front of the verb began to solidify as verbal space. Incorporation, re- and presumptive pronouns, and the simplification of preverbal postpositional phrases may exist in Classical Aztec to reduce what occurs between modal and verb, but they also increase the potential that the space between the modal and the verb will be interpreted as verbal space.

Since noun subjects of intransitive and transitive verbs and noun objects of transitive verbs can still occasionally precede the verb in Classical Aztec, the process described above is not complete. There is, however, an interesting parallel in the presumptive pronoun construction. I could not find presumptive pronouns for noun objects; presumptive pronouns for the subjects of intransitive verbs are rare; presumptive pronouns most commonly are used with the subject of transitive verbs.

3.3. One aspect of the analysis requires examination. The hypothesized development also requires the assumption that modal elements are generally present in a Classical Aztec sentence. This would appear to be an untenable assumption given the evidence of, say, English, where simple declarative sentences generally contain no modal. But the assumption is tenable for Classical Aztec; the analysis

does not weight the effect of modals too heavily. The reason is that modals in Classical Aztec are obviously connected with conjunctive elements—elements that act to link one sentence with another. The element *za(n)* in examples (78)–(81) and (85) is a modal indicating necessity.<sup>21</sup> The element *za(n)* is also a conjunction that marks contrast.

(87) *ulnappa tlaelnappa in yuh quichiu h*  
*moyeheco zan niman ahuel onmo-*  
*mayauh in tleco*

four:times four:times subordinator  
emphatic he:did:it subordinator  
he:finished conjunction then not:  
possible he:threw:himself article  
in:fire

*It was four times he did it, that he con-*  
*cluded, but he couldn't throw him-*  
*self into the fire. (G-133)*

*huel* in (78)–(81) is a modal indicating possibility; it is also a summary conjunction. The final sentence in the story “El Baile Fatal” (G-145-6) begins with *huel*.

(88) *huel mixtaltiaya in Tolteca*  
conjunction they:destroyed:them-  
selves article Toltecs  
*Thus, the Toltecs destroyed themselves.*  
(G-146)

And in the next example, *huel* is found in the sentence that sums up the two which precede it.

(89) *niman ic inuentic niman ye ic chocha*  
*huel yellelquiza*

then he:got:drunk then he:cried  
conjunction he:courage:concluded  
*Then he got drunk, then he cried, (in*  
*sum) his courage left him. (G-141)*

*za(n)* and *huel* are not the only elements with modal and conjunctive functions, but they are adequate to illustrate the point. An explanation of the semantic link between

<sup>21</sup> Actually, *za(n)* may be an emphatic which emphasizes the necessity sense of the future verb suffix *-z*.

the modal and conjunctive meanings is far beyond the scope of this article.

A somewhat less direct proof of the close relationship between conjunction and modality in Classical Aztec is the fact that modals are generally initial. Cross-linguistically, modals are seldom actually initial to a clause; they generally are in sentential second position.<sup>22</sup> Classical Aztec is unusual. However, conjunctions tend to be initial to a clause cross-linguistically; the clause-initial position of Classical Aztec modals supports their conjunctive function.

Since modals and conjunctions are obviously connected in Classical Aztec and since it is to be expected that conjunctions would be very common, it is quite likely that the elements which have modal functions would be far more common in sentences than otherwise expected.

4. I have argued that the verb in Classical Aztec is slowly moving from the end of the sentence to the beginning; I have argued that the reason for this is the attraction to the verb of sentence-initial modal particles. The first point suggests that examinations of word order change must consider the relative position of elements—not just whether they are subjects, objects, or the like. The second suggests that studies of word order change must look to grammatical elements, like modals and conjunctions, and their positions and functions in the sentence for predictions of word order change.

In conclusion, it is not the claim of this article that the word order of Classical Aztec will change from its former predominately clause-final verb word order to a predominately clause-initial verb word order. Rather, there is another set of factors in Classical Aztec which may act to temper that change.

<sup>22</sup> The proof for this claim is found in the works cited in n. 20 above.

Topicalization in Classical Aztec moves a noun to sentence-initial position and separates it from the rest of the sentence. The separation may be effected by punctuation, which I assume indicates a pause. In the following examples, the gloss indicates a topicalized element, and the element is separated from the rest of the sentence by a punctuation mark.

(90) in ozomatli imacpal:in pochteca cenca  
quitemoa  
article monkey his:paw article mer-  
chants very they:diligently:search:  
for:it

*The monkey's paw, merchants dili-  
gently search for it.* (An-109)

(91) in yehuatl metlatl, quimotetzahuiaya  
in nican tlaca  
article demonstrative metate they:  
regard:it:as:an:auger article here  
people

*This metate, the people here regard it  
as an auger.* (An-109)

The separation may also be effected by the presence of conjunctive/modal elements, those elements which are generally sentence-initial and which, therefore, will separate what precedes them from the rest of the sentence.

(92) auh in atl in tepetl cuix iyo nican  
iteputzco ica necacayahualoz  
and article water article rock modal  
interrogative here on:his:backside  
another:time it:will:be:mocked

*And the city, will it perhaps here in his  
absence be mocked?* (F6-22)

(93) in cocoliztli ca oconpolo  
article sickness conjunctive it:de-  
stroyed:it

*The sickness, it destroyed it.* (G-143)

That there is a direct connection between topic and subject has been noted many times.<sup>23</sup> Furthermore, it appears to be the

<sup>23</sup> See Jeffrey Gruber, "Topicalization in Child Language," in *Modern Studies in English*, ed. David A. Reibel and Sanford A. Schane

case that topic develops to subject. The exact process has yet to be fully elucidated; probably the strict topic notion illustrated

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(Englewood Cliffs, N.J.: Prentice-Hall, 1969), pp. 422-47; and S.-Y. Kuroda, "Generative Grammatical Studies in the Japanese Language" (Ph.D. diss., Massachusetts Institute of Technology, 1965), chap. 2, "Wa."

above loosens up to what the sentence is about. And, loosely speaking, the subject of a sentence is what the sentence is about. If topic were to develop to subject in post-Classical Aztec, it would have the following effect on the word order:

topic modal V . . . > subject modal V . . .