

IT AIN'T NECESSARILY S(V)O:
TWO KINDS OF VSO LANGUAGES

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Proceedings of the LFG05 Conference

University of Bergen

Miriam Butt and Tracy Holloway King (Editors)

2005

CSLI Publications

<http://csli-publications.stanford.edu/>

Abstract: Some VSO languages, such as Welsh, show evidence for a VP constituent, with VSO order obtained by positioning the verb in a higher functional projection outside S. However, in other VSO languages, such as Zapotec, constituency tests show no evidence for a VP, and indeed seem to provide evidence against such a constituent. Lexical-Functional Grammar allows us to give different syntactic analyses of these two types of VSO languages that capture their fundamental diversity.

1. Do VSO languages have a VP node?

The issue of whether VSO languages have a VP node is an important one for grammatical theory. If some languages lack VP nodes, then grammatical relations such as SUBJECT and OBJECT cannot be defined in terms of phrase-structure configuration, as has been a frequent assumption of syntactic theory since at least Chomsky (1965). Other syntactic phenomena as well – such as anaphora and incorporation – in many theories also depend on a structural asymmetry between the subject and object.

As a result, many syntacticians have sought evidence for an underlying VP node in VSO languages, with the surface VSO order derived by movement of the verb (Anderson and Chung 1977, McCloskey 1983). For some VSO languages – particularly the Celtic languages – such analyses seem to be essentially correct. These languages show various constituency tests that point to the existence of a VP node. For example, Welsh shows sentences of the following sort, in which a VP constituent is fronted:

- 1) [Adeiladu tai ym Mangor] a wnaeth o.
build houses in Bangor PART do:PST:3SG he

‘He built houses in Bangor.’ (focus on VP)

There is no theoretical obstacle to positing analyses of this sort in Lexical-Functional Grammar. Bresnan (2001:126-131) adopts an extended head analysis of Welsh along the following lines:

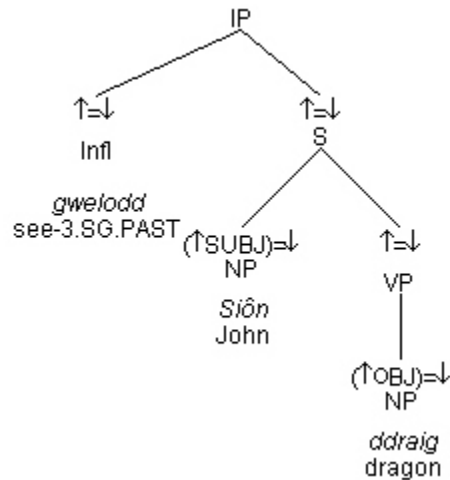


Figure 1 Welsh structure proposed by Bresnan (2001)

This analysis recognizes that Welsh has a VP, and that V (appearing in the Infl position) is the extended head of this VP. This analysis also has a ‘vacated S’ constituent which consists of the SUBJ and OBJ.

However from the evidence that *some* VSO languages have an underlying VP, it clearly does not follow that *all* VSO languages are best analyzed in this way. In this paper, I discuss one VSO language, San Dionisio Ocotepec Zapotec (SDZ), which fails all constituency tests for VP.¹ I argue that it is best treated with a ‘flat’ VSO structure like the following:²

¹ SDZ is an Otomanguan language spoken in San Dionicio Ocotepec, Oaxaca, Mexico by 2,000 - 3,000 people. I thank Cheryl Black, Pamela Munro, and Yuching Tseng for useful discussion of this material. Special thanks to Luisa Martínez, who provided all the SDZ data.

The orthography for SDZ is adapted from the practical orthographies for other Zapotec languages spoken in the Valley of Oaxaca. In the SDZ orthography symbols have their usual phonetic values, with the following exceptions. <x> = /ʃ/ before a vowel and /ʒ/ before a consonant, <xh> = /ʃ/, <dx> = /d ʒ/, <ch> = /tʃ/, <c> = /k/ before back vowels, <qu> = /k/ before front vowels, <rr> = trilled /r/, and <eh> = /ɛ/. Doubled vowels are long. SDZ is a language with four contrastive phonation types: breathy <Vj>, creaky <V’V>, checked <V’>, and plain <V>.

Glosses use the following abbreviations: a=animal, aff = affirmative, cer = certainty, com = completive aspect, con = continuative aspect, cs = causative, def = definite future aspect, dem = demonstrative, foc = focus, hab = habitual aspect, neg = negative, p = possessed, plur = plural, pot = potential aspect, q = question, r=respect, ref=reflexive, rel = relative, stat= stative aspect, top=topic.

² There is also a higher CP projection which contains complementizers and interrogative foci. I have omitted it from this discussion for reasons of space.

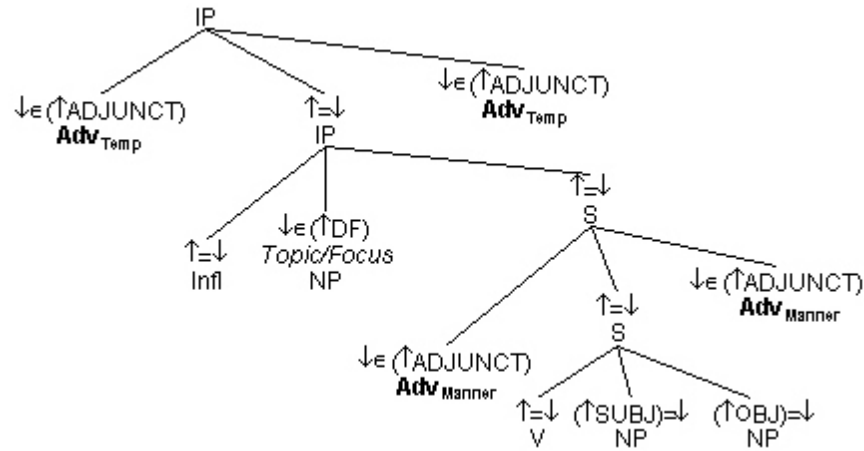


Figure 2 Proposed structure for San Dionicio Ocotepc Zapotec

2. Coordination and flat structure

One extremely useful constituency test in SDZ is coordination. Every phrase shown in the figure above is available for coordination in Zapotec. Consider the following example, which shows coordination of S:

- 2) [Ù-zíí' Juàány gèhèht]_S chì'í
 com-buy Juan tortilla and
 [ù-dàw Màríí lèh'èhn]_S
 com-eat Mary them
 'Juan bought tortillas and Mary ate them.'

However, there is no coordination of any smaller constituent headed by a verb. In particular there is no coordination of the VP or of the 'vacated S' constituents which a verb-movement or extended head analysis posits. Consider the following ungrammatical attempts at coordination of VP and 'vacated S' constituents:

- 3) *Juàány [ù-zíí' gèhèht]_{VP} chì'í [ù-dàw lèh'èhn]_{VP}.
 Juan com-buy tortilla and com-eat them
 (Juan bought tortillas and ate them.)

- 4) *Ù-dàw [Juààny bèjl] chi'í [Màríí bè'l].
 com-eat Juan fish and Maria meat
 (Juan ate fish and Maria meat.³)

The only grammatical coordination pattern for sentences repeats the entire S with a clitic pronoun in the second conjunct:

- 5) [_S Û-zíí' Juààny gèhèht] chi'í [_S ù-dàw=bì lèh'èhn]
 com-buy Juan tortilla and com-eat=3 them
 'Juan bought tortillas and he ate them.'

The extended head analysis posits two constituents (VP and 'vacated S') which are unavailable for coordination in Zapotec. The flat S hypothesis correctly predicts that coordination is only available for the entire clause.

3. Adverb position and flat structure

The proposed tree for Zapotec in figure (2) shows the positions for manner and temporal adverbs. Ernst (2002) shows that manner adverbs usually adjoin to VP and temporal adverbs to IP. In Zapotec, there are no adverbs which may adjoin to the VP or 'vacated S' constituents posited by the extended head analysis:

- 6) *Ù-dàw bèh'cw ngàngá' [_{VP},bèh'l].
 com-eat dog slowly meat
 (The dog ate the meat slowly)
- 7) *Ù-dàw ngàngá' [_S,bèh'cw bèh'l].
 com-eat slowly dog meat
 (The dog ate the meat slowly.)

Instead manner adverbs adjoin to S and temporal adverbs adjoin to IP. We can distinguish the adjunction sites because S follows the focus/topic position and IP precedes the same position. Consider the following examples of adjunction of manner adverbs to the S:

³ This example would involve across-the-board movement of the verb from both conjuncts.

- 8) [IP Bèh'cw ngàngá' [S ù-dàw bèh'l]].
 dog slowly com-eat meat
 'The dog (*topic/focus*) ate the meat slowly.'
- 9) [IP Bèh'cw [S ù-dàw bèh'l] ngàngá'].
 dog com-eat meat slowly
 'The dog (*topic/focus*) ate the meat slowly.'
- 10) *Ngàngá' [IP bèh'cw [S ù-dàw bèh'l]].
 slowly dog com-eat meat
 ('The dog (*topic/focus*) ate the meat slowly.)

The following examples show that temporal adverbs are adjoined to IP:

- 11) *[IP Bèh'cw ná'í [S ù-dàw bèh'l]].
 dog yesterday com-eat meat
 (The dog (*topic/focus*) ate the meat yesterday.)
- 12) Ná'í [IP bèh'cw [S ù-dàw bèh'l]].
 yesterday dog com-eat meat
 'The dog (*topic/focus*) ate the meat yesterday.'

The extended projection analysis posits phrase boundaries that ought to be adjunction sites for adverbs. The flat S analysis predicts adjunction to S and IP only, and thus makes the correct predictions about adverb positions in Zapotec.

4. Auxiliaries and VSO

Another important difference between Welsh and Zapotec is found in the order of the auxiliary and main verb. In Welsh, the order is **Aux S V O**, while in Zapotec it is **Aux V S O** (Broadwell 2003). Consider the following Zapotec examples, which show the position of auxiliaries:

- 13) B-yàlòò ù-dòàb Juáany gèhjs.
com-stop com-smoke Juan cigarette

‘Juan stopped smoking.’

- 14) *B-yàlòò Juáany ù-dòàb gèhjs.
com-stop Juan com-smoke cigarette

(Juan stopped smoking.)

Welsh auxiliary order frequently has V and OBJ adjacent to each other, and so a Welsh language learner is exposed to constructions with overt surface VPs. In contrast, Zapotec never shows an order where V and OBJ are adjacent – with the exception of sentences with topicalized or focussed SUBJ constituents. Thus a Zapotec language learner has little evidence to favor a VP constituent.

5. The function of IP in Zapotec

The extended head analysis is not correct for most Zapotec clauses. However in the *definite future* aspect, the verb **is** positioned in Infl⁴. SDZ has two aspects -- the potential and the definite future -- which are both translated into English with the future:

- 15) S-àw báád bèhld yù'ù.
def-eat duck snake earth

‘The duck is going to eat a worm.’

- 16) G-âw báád bèhld yù'ù.
pot-eat duck snake earth

‘The duck is going to eat a worm.’

It is difficult for speakers to explain the difference in meaning between these two sentences, but (as the label implies) the definite future seems to entail a stronger speaker commitment to the truth of the proposition.

Despite the similar translations, however, there are striking syntactic differences. In the

⁴ My analysis here is influenced by the movement-based account given by Lee (1999) for the related language San Lucas Quiavini Zapotec. Lee shows for that language that topicalization is unavailable for sentences with verbs in the definite future aspect.

definite future, the preverbal topic/focus position becomes unavailable. Yet there is no difficulty in using the preverbal topic/focus position with the potential aspect:

- 17) *Báád s-âw bèhld yù'ù.
duck def-eat snake earth

(‘The duck (*topic/focus*) will eat the worm.’)

- 18) Báád g-âw bèhld yù'ù.
duck pot-eat snake earth

‘The duck (*topic/focus*) will eat the worm.’

The definite future also differs from the potential in the behavior of adverbs. Manner adverbs may normally adjoin to either the left or right of S.

- 19) Diáp g-ú'ld Màrì.
strongly pot-sing Maria

‘Maria will sing strongly/loudly.’

- 20) G-ú'ld Màrì diáp.
def-sing Maria strongly

‘Maria will sing strongly/loudly.’

In the definite future aspect, only right adjunction of adverbs is possible.

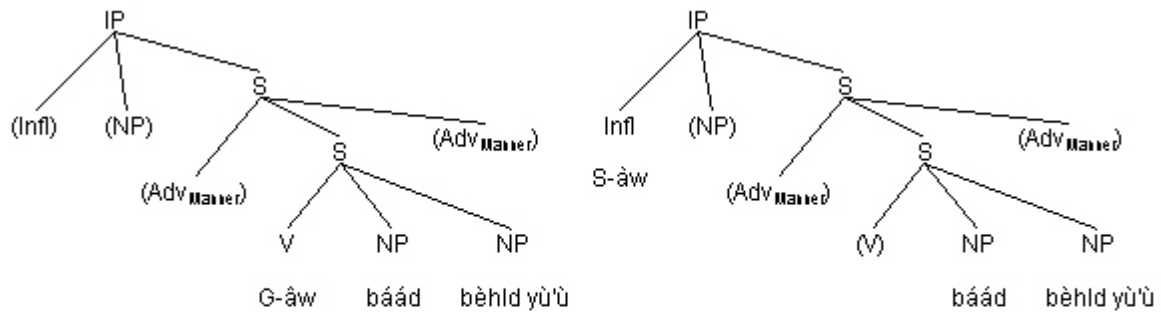
- 21) S-ù'ld Màrì diáp.
def-sing Maria strongly

‘Maria will sing strongly/loudly.’

- 22) *Diáp s-ù'ld Màrìi.
strongly def-sing Maria

(Maria will sing strongly/loudly.)

Both the topicalization and adverb placement facts follow if the potential and definite future aspects have the structures below.



'The duck will eat worms.'
(potential aspect)

'The duck will eat worms.'
(definite future aspect)

Figure 3 Potential and definite future aspect in Zapotec

These trees show that when the verb is in the definite future aspect, it is in Infl, and precedes both the manner adverb position and the [Spec, IP] (topic/focus) position. Thus the initial manner adverb position and the [Spec, IP] (topic/focus) now both follow the verb. This accounts for the ungrammaticality of the following two examples (repeated from above):

- 23) *Diáp s-ù'ld Màrìi.
strongly def-sing Maria

(Maria will sing strongly/loudly.)
- 24) *Báád s-àw bèhld yù'ù.
duck def-eat snake earth

(‘The duck (*topic/focus*) will eat the worm.’)

One might ask whether it is possible in such a case for the adverb or the topic/focus to follow a verb in the definite future aspect. In fact such cases are also ungrammatical:

- 25) *S-ù'ld diáp Màrii.
def-sing strongly Maria

(Maria will sing strongly/loudly.)

- 26) *S-àw báád bèhld yù'ù.
def-eat duck snake earth

(‘The duck (*topic/focus*) will eat the worm.’)

The ungrammaticality of these cases seems to follow from an independent requirement for adjacency between the verb and its subject. Such a restriction on possible orders has been noted for other VSO languages by researchers such as McCloskey (1996) and Black (2000).

6. The diversity of VSO structures

The fact that Zapotec does show some extended head structures supports the idea that syntactic theory must allow such a mechanism. However, the contrast between definite future aspect and other aspects also argues that not all instances of VSO are due to extended head structures.

In most cases, Zapotec VSO is due to a flat S structure. Only in the definite future is it plausible to suggest that the V is in a higher functional position (such as Infl.) And even in cases where V is analysed as occurring in a higher position, there is still no evidence that the underlying structure contains a VP.

Lexical-Functional Grammar allows both flat and extended head analyses of VSO – even for different structures in the same language. This theoretical flexibility accords well with the Zapotec facts.

In contrast, current Principles and Parameters/Minimalist analyses of VSO explicitly reject the possibility of flat structure, and force raising of the V or some phrase containing V, such as VP (Carnie and Guilfoyle 2000). All VSO languages in these analyses derive from underlying SVO. The Zapotec evidence for flat VSO structures presents a problem for this approach, and favors a theory like LFG which allows for the possibility of two kinds of VSO languages.

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