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## INFL AND THE CONFIGURATIONALITY OF VSO LANGUAGES

RICHARD SPROAT

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## 0. Introduction.

One very reasonable question to ask about VSO languages is how best to represent their constituent structure. Their peculiar problem is, of course, that while they seem to, on the one hand, be highly configurational--there are languages like Irish (McCloskey, 1983) and Jacalteco (Craig, 1977), which do not admit of orders other than VSO--they nevertheless apparently lack a VP at S-structure. There have been a number of different proposals in recent years to account for the structure of these languages. For instance, Aoun (1979) proposed a device of cosuperscripting whereby the verb is cosuperscripted with the object NP, and INFL similarly cosuperscripted with the subject NP. The relevant government relations were to be stated on these cosuperscripted pairs, and this proposal therefore allowed for discontinuous constituents at S-structure. Chung (1983) has made a different suggestion: She argues that one can think of the constituent structure of VSO languages as consisting of a pair of S-structures, as in (1), along the lines of Chomsky's (1981) suggestion for non-configurational languages:

$$(1) \quad \left\{ \underset{\alpha}{V \text{ NP}_1 \text{ NP}_2}, \underset{\beta}{\text{NP}_1 \text{ VP}} \right\}$$

The  $\alpha$  structure is the form that feeds into PF, and the  $\beta$  structure is the more abstract "English-like" structure that is relevant for

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Case theory, Binding theory and LF.

In this paper I shall be following a different line of investigation (proposed by various authors such as Jones and Thomas (1977), Harlow (1981), Emonds (1981), and argued most recently for by Koopman (1983) and Sproat (1983)) which maintains that one can view VSO order as being derived from SVO order by a process of verb fronting, much as with verb fronting in other languages (c.f., Koopman (1983)). I shall argue here, as in Sproat (1983), that the reason for the V-fronting process in VSO languages is because INFL in these languages must assign Case rightward, as opposed to SVO languages where there is no such constraint. In the first section of this paper I shall show how an interesting prediction made by these two hypotheses, namely V-fronting and directionality of Case-assignment, is borne out in Celtic languages. I shall also argue, in section 2, that this theory makes the right predictions about Government and ECP effects in VSO languages.

1. INFL in VSO languages and SVO languages.

1.1. The configurationality of VSO languages.

One interesting fact which holds of Celtic languages is that VSO order is intimately connected with the presence of INFL (on this, see also Harlow (1981), pp 222-3). So, while in tensed clauses, VSO order appears, as in (2)

- |        |   |              |
|--------|---|--------------|
| (2) a. | Gwelodd Sion ddraig.<br>saw[+past] J. dragon<br>'John saw a dragon.'  | <u>Welsh</u> |
| b.     | Chonnaic mé an teach.<br>saw[+past] I the house<br>'I saw the house.' | <u>Irish</u> |

in infinitival clauses in both Irish and Welsh, one does not find VSO order, and the important thing to notice for now is that the subject precedes the verb:

- |        |  |              |
|--------|--|--------------|
| (3) a. | Cyn i Sion laddu draig, y mae rhaid iddo<br>before to J. kill[-fin] dragon ptcl. is necessity to-him<br><br>brynu llaeth i'r gath.<br>buy milk for-the cat<br><br>'Before John kills a dragon, he has to buy milk for<br>the cat.' | <u>Welsh</u> |
| b.     | Ghoillfeach sé orm tú imeacht.<br>would-hurt it on-me you leave[-fin]<br>'It would hurt me for you to leave.'  | <u>Irish</u> |

Why should this be the case? Since the difference seems to depend on the tensedness of the clause, one would be making a shrewd guess if one were to assume that VSO order is dependent on the presence of INFL (as in tensed clauses), and thus disappears when INFL is not present (as in infinitivals).

In order to see why this might be the right assumption to make, let us start by investigating the structure of some SVO languages such as English. In particular, let us look at the parallelism between the structure of Ss and that of NPs in English:

- (4) a. Emma destroyed the termite mound.

$[\bar{I} \text{ NP } [\bar{I} \text{ INFL } [\bar{V}_P \text{ V NP}]]]$

- b. Emma's destruction of the termite mound

$[\bar{N} \text{ NP } [\bar{N} \text{ N NP}]]$

The structures I am assuming here are along the lines of Stowell (1981). The point to notice is that the subject of the construction (the possessive in the case of the NP) occurs to the left of a single bar projection of the head, either N or INFL. Now, it is well-known that English is marked in this respect among SVO languages; that is, most SVO languages (c.f., Greenberg, 1966) have NP structures with the head of the NP at the left. But, just to show that the NP/S parallelism is not unique to English, I give some examples in (5) from Lardil, an Australian language, which is SVO (examples from Hale, Farmer, Nash and Simpson, 1981):

- (5) a. Yarraman jembekirakun ngithaan.

horse kicked me  
'The horse kicked me.'

- b. bidngenngan jumurr

woman's coolamon  
'the woman's coolamon'

Now, while the option is possible, though marked, for SVO languages to have "SVO" structure in NPs, it is apparently quite impossible for VSO languages. Some examples follow, showing the "VSO" structure in NPs in various VSO languages:

- (6) a. distrywiad Sion o'r dref

destruction J. of-the town  
'John's destruction of the town'

Welsh

- b. s-bak s-sat naj

E3-pit E3-face cl  
'the pit of his face' (i.e., 'eye')

Jacalteco  
(Craig, 1977)

- c. baytu rrajuli

house the-man[gen]  
'the man's house'

Arabic

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- d. ~~galdixela~~ ~~wanadom~~-s-a g<sup>w</sup>a'sela Kwakwala  
(Anderson, 1981)  
 long inlet-case-the Gwasila  
 'the long inlet of the Gwasila tribe'

It seems that VSO languages are rigidly "VSO", both in Ss and in NPs.

What, then, is the difference between SVO and VSO languages? Let us make the assumption that the underlying (D-) structures of VSO languages and SVO languages are identical--basically those given in (4). Not much rests on this idea, but we shall see that even if we make this strong assumption, we can derive the observed facts. Let us make one additional assumption: that the NP subject of an NP gets its genitive Case from the head noun just as the NP subject of a sentence gets its nominative Case from INFL. NPs and Ss will thus be truly parallel both in terms of structure and Case-assignment.

In order to explicate the difference between SVO and VSO languages, let us ask what one would want to say about Case-directionality in SVO languages (see Sproat (1983), which contains the same argument, and also Koopman (1983) for a somewhat different view). What we would need to say is that in the case of verbs and prepositions--[-N] categories--there is rightward Case assignment; these languages have V at the left of the VP and P at the left of the PP. In the case of INFL, though, we would say that it is not constrained to Case-assign in any particular direction; thus, as one would expect from this, there are cases--cases of V-fronting--where INFL apparently could Case-assign rightward in SVO languages, and other cases (i.e., in simple SVO sentences) where it seems to Case-assign leftward. So there seems to be no reason to constrain Case-assignment of INFL in SVO languages. Taken as a class, one could say the same thing about N Case-assignment in SVO languages; there are languages like English where N can Case-assign leftward, and others where it does not. So, to summarize, the right generalization would appear to be that [-N] categories must Case-assign rightward, whereas other categories are not thus constrained.

What, then, about VSO languages? Here, suppose we say that all categories are constrained to Case-assign rightward? Then we would expect, as indeed is the case, that VSO languages are prepositional, and that the V would be leftmost in the VP. But, further than that, we would expect that in the case of INFL and N, assuming that underlying structure of SVO and VSO languages is identical, there would have to be a fronting of the head in order to get them into the right configuration relative to the subject to allow Case assignment to the subject. So one would get S-structures as in (7) and (8a):

- (7)  $[\bar{N} N_i NP [\bar{N} t_i NP]]$   
 $[\bar{N} \text{distrywiad}_i \text{Sion} [\bar{N} t_i \text{o'r dref}]]$
- (8) a.  $[\bar{I} \text{INFL}_i NP [\bar{I} t_i [VP \dots ]]]$

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- b. [ $\bar{I}$  Gwnaeth<sub>i</sub> Sion [ $\bar{I}$  t<sub>i</sub> [ $\bar{V}$  weld y ci]]  
 did[AUX] J. see the dog  
 'John saw the dog.'
- c. [ $\bar{I}$  Gwel<sub>j</sub>-odd<sub>i</sub> Sion [ $\bar{I}$  t<sub>i</sub> [ $\bar{V}$  t<sub>j</sub> y ci]]  
 see-past3sg. J. the dog  
 'John saw the dog.'

In the case of N we have the right S-structure to feed into PF. In the case of INFL, as in (8a), there are in principle a couple of options: If the language has a mechanism, like do-support in English, for morphologically supporting INFL with an auxiliary verb, then INFL may be spelled out in this fashion. Welsh has this option and the verb gwneud 'do' is thus inserted at S-structure giving a form like (8b). The other option is to front the verb leaving its trace as the head of VP, and having the verb support INFL morphologically. This gives a sentence like that in (8c).

To summarize this section, then, we can give the chart in (9). Since I have not studied any SOV languages, I make no claims as to whether or not one would want to consider them languages in which all categories are constrained or only [-N] categories are constrained. It is clear, however, that they should be considered to be leftward Case-assigning.

(9)	All constrained	[-N] constrained
	LEFT	SOV
	RIGHT	SVO

## 1.2. Celtic non-finite clauses.

The prediction of this theory with respect to non-finite clauses is clear<sup>2</sup>: since INFL is not present, the subject will presumably have to get its Case in some other fashion than from INFL, and since the only motivation for V-fronting was to enable INFL to be morphologically supported, we would expect not to get VSO order in these cases. Well, in Welsh, the predictions of the theory are borne out nicely: in the adverbial infinitival clauses of the kind given in (3a) and expanded on in (10) we find SVO order showing up on the surface, and, indeed, no other order is possible:

- (10) a. [ $\bar{S}$  cyn i [ $\bar{S}$  Sion fynd]]  
 before to J. go[-fin]  
 'before John goes'

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- b. [<sub>S</sub> wedi i [<sub>S</sub> Mair ddod]]  
       before to M.   come[-fin]  
       'before Mary comes'
- c. [<sub>S</sub> wrth i [<sub>S</sub> mi siarad â Mair]]  
       as   to   me speak[-fin] with M.  
       'as I was speaking with Mary'

(I assume that the sequences *cyn i*, *wedi i*, *wrth i*, and so forth, are in COMP since I am also assuming that the subject NP gets Case from the preposition *i*, just as with English *for*, which is also, presumably, in COMP.)

Irish is more complicated. Now it is always the case that the subject precedes the verb in embedded infinitivals. And in the Southern dialects, in fact, SVO order obtains, where the subject is overt (in controlled PRO cases, you find OV order as in the North; see exx.(12+)):

- (11) Duirt sé [<sub>S</sub> Séamas a dhúnadh an dorais ]  
       said he    J.       close[-fin] the door  
       'He said for James to close the door.'

However, this infinitival construction is quite marked in these dialects anyway--it is far more common to use a finite embedded clause (McCloskey, p.c.)--and in the Northern dialects, where the embedded infinitivals are common, only SOV order obtains:

- (12) Duirt sé [<sub>S</sub> Séamas an doras a dhúnadh ]  
       'He said for James to close the door.'

Now, it is not my intention here to investigate the reason for this ordering, but it will behoove me to dispel one possible interpretation of the facts, namely that Irish is underlyingly SOV. So, under this interpretation, Irish has a configurational structure with the V at the right of the VP, and this is subsequently moved in tensed clauses to the front of the sentence, presumably, one might imagine, for the reasons of morphological support of INFL as in my story. Yet it is also clear that I cannot tell this story, because if V is underlyingly at the right of the VP, then Irish would presumably be (underlyingly) a leftward Case-assigning language, a possibility not open to this theory, and undesirable anyway since everything else in the language (notable Ps) seems to be rightward Case-assigning. If this were the right analysis, Irish would certainly provide counterevidence to the theory proposed here.

Fortunately, the evidence for the SOV underlying order is not tenable. For one thing, there is strong evidence for the existence of a surface VP in a quite different construction in Irish, namely

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the progressive (McCloskey, 1983). In these cases the (non-finite) verb is absolutely initial in the VP (with the exception of the pre-verbal particle ag):

- (13) Tá Séamas ag dúmádh an dorais.  
 is J. ptcl. close[-fin] the door  
 'James is closing the door.'

This would not make sense under the SOV analysis since here there is presumably no reason for the V to front to the beginning of the VP. On the other hand, under the analysis presented in this paper the facts discussed in McCloskey (1983) make perfect sense since we would merely be witnessing the underlying SVO structure showing up on the surface.

So the OV ordering would appear to be restricted to embedded infinitival clauses. Furthermore, it is only the object that can appear before the verb: all other NPs, PPs, etc.; must come afterwards. So, even subcategorized PPs, such as dó 'to-him' in (14a) must come after the verb. Also, as (14b-e) show, not even all syntactic objects are allowed to move before the verb, but only those bearing a certain restricted set of thematic roles. So, in (14b-d), we note that the word seachtain 'week' cannot precede the V mairstean 'last'. Note here the parallelism with the impossibility of passivization in the English equivalent of (14b), given in (14e):

- (14) a. Ba mhaith liom [<sub>S</sub> iad a thabhairt dó]  
 I-would-like them give[-fin] to-him  
 'I would like to give them to him.'
- b. Mhair an fheile seachtain.  
 lasted the festival week  
 'The festival lasted a week.'
- c. \*Ba chóir don fheile [<sub>S</sub> seachtain a mhairstean]  
 would-be proper to-the festival week last[-fin]  
 'The festival should last a week.'
- d. Ba chóir don fheile [<sub>S</sub> mairstean seachtain]  
 'The festival should last a week.'
- e. \*A week was lasted by the festival.

So, firstly, V is not final in these constructions anyway, and, secondly, it is not even always the case that the object precedes the verb. This is in marked contrast to real V-final languages (SOV languages) such as German or Japanese where the V is truly final, and there are no thematic restrictions on the placement of V. It seems, then, that the idea that Irish is underlyingly SOV has little evidence for it. In fact, the description of Irish would be complicated if one did make that assumption since one would have to come up with various ad hoc



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mechanisms for accounting for why OV order doesn't obtain in progressive constructions and in cases like (14b-d). Contrariwise, under the assumption that Irish is SVO, one would merely have to posit a rule, idiosyncratic to these constructions, to move objects bearing certain kinds of thematic relations before the V. This seems the simpler solution, and appears theoretically far more tenable than the alternative.

So it appears then that Irish does not provide counterevidence to the theory of VSO languages proposed in this paper.

We turn now to another question, namely that of whether or not the verbal trace in VSO languages properly governs the object position, and whether or not these languages show ECP effects for the subject position. In this I essentially follow the discussion of Sproat (1983).

## 2. Government and the ECP in VSO languages.

Given the representation we have proposed for VSO languages, there are a couple of interesting questions which can be asked. First of all, does the verbal trace properly govern the object position, and, secondly, is the subject position properly governed (presumably by the fronted verb)? We examine each of these questions in turn.

### 2.1. Government of objects in VSO languages.

Torrego (1981) has argued that in cases where there is verb fronting in Spanish, the verbal trace does not properly govern the object position. Her examples involve cases of S-structure and LF extraction from the object position of an embedded clause, where, for one reason or another, long extraction is forced. These cases are all ungrammatical, if the verb of the clause out of which the long extraction takes place is fronted. So, in (15), all the \* sentences have the verb fronted in the lowest clause:

- (15) a. En qué cajón<sub>i</sub> no te explicas por qué ese profesor  
tuyo escondería t<sub>i</sub> siempre la tiza?

'In what drawer don't you understand why that  
professor of yours would always hide the chalk?'

- b. \*En qué cajón<sub>i</sub> no te explicas qué<sub>j</sub> escondería  
ese profesor t<sub>i</sub> t<sub>j</sub>?

'In what drawer don't you understand what the  
professor would hide?'

- c. Quién recuerda quién escribió qué?

'Who remembers who wrote what?'

\*[Wx [Wy: y remembers [Wz: z wrote x]]]

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The reader is referred to Torrego (1981) for a complete discussion.

Because of the nature of the complementizer system in Celtic (for which see McCloskey, 1979; Sproat 1982, 1983), it is impossible to test the S-structure long extraction cases in Welsh. However, there is evidence that long extraction is possible at LF. Thus, in (16a), the interpretation is ambiguous as to whether *ddim byd* has wide or narrow scope. If it has narrow scope, then you get the interpretation in (16b). If there is wide scope, then there is elimination of one of the negatives, and the interpretation in (16c) obtains:

- (16) a. Ddywedais i ddim [y gwelodd Sion ddim byd]  
 I-said I not ptcl. saw J. nothing
- b. [ I did not say [ $\exists$ x: J. saw x]]
- c. [ $\exists$ x: I said [J. saw x]]

Compare this with (15c), where wide scope interpretation for the lowest *qué* is impossible.

So, if Torrego's interpretation of the Spanish facts is right, namely that the verbal trace does not properly govern the object position, then, under the current interpretation of the structure of VSO languages, we must see Welsh as a counterexample to her generalization, since the object position apparently has to be properly governed here.

However, as pointed out by Koopman (1983, and p.c.), it does not generally seem to be true that verbal traces do not properly govern, so the Spanish cases would seem, in fact, to be exceptional. Welsh, then, would seem to fit in with the more general trend that verbal traces do properly govern.

## 2.2. Government of subjects in VSO languages.

A much more controversial question is whether or not the subject position is properly governed in VSO languages, or, to put it another way, whether or not there are ECP effects in these languages. Chung (1983) has recently argued that Chamorro, a VSO language, has its subject position properly governed, and this, she claims, is characteristic of VSO languages as a class. She shows that Chamorro apparently lacks both standard that-t effects and the Sentential Subject Constraint, and argues that since these are both derivable in current theories (c.f., Kayne, 1982; Huang, 1982) from some version of the ECP, therefore the ECP does not hold of Chamorro, in these cases, and the subject position must therefore be properly governed. Some examples of hers follow:

- (17) a. Hayi<sub>j</sub> na palao'an ti un-tungu' [na ginin t-um-átangis e<sub>j</sub> ]  
 who? LINKER woman not INFL-2s-know COMP imperf. INFL(s)-  
 cry+imperfective  
 'Which girl didn't you realize had been crying?'

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- b. Hayi<sub>j</sub> siguru [na p̄ra u-gin̄nna i karera e<sub>j</sub>]  
 who? INFL(s)-certain COMP fut INFL(3s)-be+won the race  
 'Who is it certain that the race will be won by?'

So, in (17a) we find an example of an extraction out of the subject position of an embedded clause with an overt complementizer and in (17b) we find an example of an extraction out of a sentential subject.

Now, as I argued in Sproat (1983), the Chamorro data do not seem that conclusive. For one thing, as Chung herself notes, there is in Chamorro a rule of "free" subject inversion of the kind found in other pro-drop languages, notably Italian. If this is so, we might expect, as in Italian, to find apparent violations of the that-t filter for reasons which are perfectly compatible with the improper government of the subject position, as quite elegantly worked out in Rizzi (1982).

The second example (17b) could also be interpreted in a way different from Chung's interpretation. The basic problem is that we cannot be sure that the clause [na p̄ra u-gin̄nna i karera] is in fact the subject of the higher clause. Now, one thing that seems to be true about sentential subjects is that they are a marked construction. So, in English, (18a) seems much more marked than the extraposed counterpart in (18b):

- (18) a. [That John will win the race] is certain.  
 b. It<sub>i</sub> is certain [that John will win the race]<sub>i</sub>

In fact, some languages don't even allow subjects to be sentential (e.g., Welsh and Irish); in these cases the embedded clause is extraposed obligatorily. So one might well imagine that the language learner is going to treat examples like (18a) as marked, and opt for a structure like (18b) whenever possible--i.e., whenever there is no evidence to force the sentential subject analysis. Now, Chamorro, being a VSO language, and being pro-drop, is not going to ever present such evidence; since it is pro-drop, expletive elements such as it in English would, in the unmarked case, be phonologically null. So, for a sentence like (17b), the learner would have two possible structures to posit:

- (19) a. V S  
 b. V e<sub>i</sub> S<sub>i</sub>

But, with no evidence to choose between the two analyses, we expect the learner to fix the structure as the unmarked option, which is (19b). This is the extraposed structure equivalent to (18b). And if Chamorro sentences such as (17b) are cases of extraposition, we would expect (17b) to be grammatical for the exact same reason as the English sentence in (20) is grammatical; presumably because

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the extraposed clause is somehow properly governed by the verb:

- (20) Who is it certain that the race will be won by?

So it seems that Chung's examples do not show that Chamorro lacks ECP effects, and the subject position is therefore quite possibly improperly governed here.

In fact, there are examples from Welsh which would counter-exemplify this claim anyway. Again, it is not possible, because of the nature of the Celtic complementizer system, to test for that-t effects directly in Welsh, but there are constructions with parasitic gaps of the kind discussed in Kayne (1982) which show that there are clear subject-object asymmetries in the language, this presumably being derivable from the ECP. So in (21) we find examples of embedded clauses containing parasitic gaps:

- (21) a. ?Dyma'r llyfrau<sub>i</sub> [<sub>S</sub> O<sub>i</sub> [<sub>S</sub> a brynasant hwy [e]<sub>i</sub>  
 here-the books ptcl. they-bought they  
 [<sub>S</sub> heb wybod [<sub>S</sub> os byddai rhaid iddynt<sub>j</sub>  
 without know if would-be necessity to-them  
 [<sub>S</sub> PRO<sub>j</sub> ddarllen [e]<sub>i</sub>]]]]]  
 ?'Here are the books<sub>i</sub> which they bought e<sub>i</sub> without  
 knowing whether they had to read e<sub>i</sub> .'
- b. \*Dyma'r llyfrau<sub>i</sub> [<sub>S</sub> O<sub>i</sub> [<sub>S</sub> a brynasant hwy [e]<sub>i</sub>  
 [<sub>S</sub> heb wybod [<sub>S</sub> os byddai [<sub>S</sub> PRO darllen [e]<sub>i</sub>]  
 read  
 yn syniad da]]]]]  
 ptcl. idea good  
 \*'Here are the books<sub>i</sub> which they bought e<sub>i</sub> without  
 knowing whether reading e<sub>i</sub> would be a good idea.'

In (21a), there is an example of a parasitic gap (the underlined [e]) in an embedded clause in object position. Presumably the clause [PRO ddarllen [e]] is properly governed in that position, and the sentence is indeed at least marginally acceptable as is its English counterpart. In (21b), [PRO darllen [e]] is in subject position, and the sentence is out, with the interpretation that the object of darllen 'read' is llyfrau 'books'. Note the parallel ungrammaticality of the English example.

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What does this suggest? It suggests that the subject position in Welsh is not properly governed by the verb or by anything else. Now, if the fronted verb did govern the subject position, it would presumably properly govern it, as is the wont of verbs. If the verb, on the other hand, doesn't govern the subject at all, then the only thing around to govern it is INFL, which, we would assume, only improperly governs, as in English. So, the facts for Welsh appear to be more in line with the assumption that the subject position is not governed at all by the verb, but then it could be asked why the verb wouldn't govern the position given that it seems to be in the right structural relationship to do so. The answer is given in the definition of government presented by Stowell (1981):

- (21) In the configuration  $[\gamma \dots \beta \dots \alpha \dots \beta \dots]$ ,  $\alpha$  governs  $\beta$  where:
- i.  $\alpha = X^0$ , and  $\gamma = X^i$  (i.e.,  $\gamma$  is an X-bar projection of  $\alpha$ ), and
  - ii. for each maximal projection  $\delta, \delta \neq \alpha^n$ , if  $\delta$  dominates  $\beta$ , then  $\delta$  also dominates  $\alpha$ .

This basically says that a governor only governs within its maximal projection. The fronted verb would not govern the subject for the simple reason that neither S nor  $\bar{S}$  is a maximal projection of V, since they are projections of INFL. So only INFL could govern the subject position. The verbal trace, however, would govern the object position since it would be the head of VP, and furthermore, since it undoubtedly gets all its features from its antecedent V, would properly govern. So the government facts for Welsh seem to fall out quite neatly from a quite straightforward notion of government.

### 3. Summary.

I have shown in this paper that one can derive some interesting facts about VSO languages, in particular the Celtic languages, by assuming what I take to be the null hypothesis; that VSO languages are structurally identical to SVO languages, the difference being trivially derivable from the application of a V-fronting rule in the former case. The obligatoriness of the V-fronting rule can be motivated by a simple assumption about the government directionality of INFL in SVO and VSO languages, an assumption quite in the spirit of (if not necessarily agreeing in the details of) recent work by Koopman (1983) and Travis (work in progress, MIT). Furthermore, with a restricted notion of government such as that of Stowell (1981), we can derive the government facts of Welsh quite simply, these facts being quite parallel to those of an SVO language such as English.

The conclusion: SVO and VSO languages are truly minimally distinct, the difference being reducible to one simple parameter setting, surely a desirable result.

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## FOOTNOTES

<sup>1</sup>In Sproat (1983) I discussed government directionality. However, it is pretty clear that what I am really talking about (and was then) is Case assignment, not government, and I thus use the latter terminology here. In addition to Case directionality, Koopman (1983) also discusses  $\theta$  directionality, so what I am discussing in this paper is only one of a number of possible configurational parameters.

<sup>2</sup>The reason for choosing Celtic in this investigation is that it is the only group of VSO languages which has a clear finite/non-finite distinction. Jacaltec actually does have infinitives, but only in control cases (Craig, 1977), so one can't tell where the subject is. Arabic and Kwakwala both have non-finite verbal nouns, and constructions with these are VSO. But they are clearly nominal in character anyway--genitive Case is assigned to the subject--and one would thus, under the analysis of the previous section, expect VSO order anyway. See also (Anderson, 1981) for other arguments as to why the verbal noun clauses in Kwakwala must be treated differently from tensed clauses.

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