Chapter Two  A Short History of VSO Order

2.0 Introduction

This chapter is the first in a two-chapter discussion on the nature of the derivation of Verb-Subject-Object (VSO) order. In this chapter, I will present a short history of the various analyses of the derivation of VSO in the literature, for both Irish and for VSO languages in general. In chapter 3, I focus narrowly on the syntax of Irish, where I present some previous analyses of Irish within an approach that assumes the verb raises only as high as the left edge of the inflectional complex. I present there an analysis of Irish VSO order there that resolves many of the empirical problems of previous analyses.

Given that this is a thesis about non-verbal predication the reader might be curious why I am choosing to devote two chapters to the behavior of verbal predicates in Irish. The answer is simple: in order to explain the behavior of non-verbal predicates with respect to head-movement, we must first determine how Irish derives its basic word order with verbal predicates. In particular, we must determine whether Irish exploits overt verb raising, and if it does, to what functional category this raising occurs. We must also ask what the

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1The section on Old Irish in this chapter is a revised version of Carnie, Pyatt and Harley (1994).
2For other histories of the derivation of VSO order see Duffield (1991) and Fassi Fehri (1993).
surface positions of the arguments are.

Irish is a VSO language, as is seen in (1):

1) Leanann an t-ainmní an briathar i nGaeilge
follow.PRES the subject the verb in Irish
‘The subject follows the verb in Irish’

This kind of word order is problematic for any theory of grammar that relies on verbs and objects functioning as a single syntactic unit excluding the subject. Since the verb and object in Irish are not contiguous— they are separated by the subject— it would be surprising if they behaved like a syntactic unit (under the not unreasonable assumption that syntactic constituents must be contiguous). Interestingly, as will be seen below, they do behave like such a unit. In this chapter, I will explore the issues surrounding the derivation of VSO order\(^3\) and the history of treatments of VSO in the generative paradigm, with a particular focus on the derivation of Irish word order. The reader who is not interested in such a survey may wish to skip directly to Chapter 3, where more recent analyses of Irish VSO are presented and where I present an account based on the principles and assumptions of the minimalist framework.

In the principles and parameters framework, it has long been assumed that simple differences in word order are the result of binary parameter settings such as the headedness and specifier parameters. For example, SVO order is derived by assuming that both heads and specifiers appear on the left of the phrase structure tree. Similarly, SOV order can be derived by switching the headedness parameter to the right (Speas 1990). It would be a pleasing result if we could derive VSO order in a similar way, i.e., in the form of a VSO parameter as suggested by Sproat\(^4\) (1985). A recurring theme of this chapter, however, will be that this is not a realistic goal, and that (as is noted by McCloskey (forthcoming)) there

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\(^3\)I will focus here on the derivation of VSO; for a look at the typological correspondences to VSO order see Myhill (1985).

\(^4\)Sproat’s VSO parameter is, in fact, not a phrase structure parameter, but one based on the directionality of Case assignment. This will be discussed in more detail below.
is no single VSO parameter. Different VSO languages, despite their surface similarity, may very well derive the order very differently. Although we will examine many different languages, the focus of this and the next chapter will be on how the different theories of VSO apply to Irish.

I wish to give one brief *caveat lector* before we start. The historical survey section of this chapter covers a wide number of languages in a wide number of theories with many diverse assumptions. These assumptions are, in many cases, not consistent with each other. Throughout I will skip from time period to time period within the history of generative syntax. Wherever possible, however, I will try to make clear what particular framework and set of assumptions are being used. In chapter 3, on the other hand, I will remain closely within the spirit and assumptions of the Minimalist Program sketched above in chapter 1 and will deal almost exclusively with Modern Irish. The discussion presented in this chapter is not in any way an argument for the analysis of Irish VSO presented in chapter 3. Rather, the work in chapter 3 should stand on its own for empirical reasons. Again, those readers not interested in a survey and discussion of the VSO literature may want to skip directly to chapter 3, where my analysis of Irish VSO is presented. This said, let us look at the syntax of VSO from a historical perspective.

2.1. Flat Structure in the Syntax of VSO.

Early work in the generative grammar of VSO languages, such as Schwartz (1972), Anderson (1984), Awberry (1976), Tallerman (1990), Stenson (1981), McCloskey (1979, 1980), and Chung (1983), assumed that VSO languages differed from SOV and SVO languages in lacking a VP phrase structure rule:

2) a) SVO: \[ S \rightarrow NP \ VP \]
   \[ VP \rightarrow V \ NP \]
   b) VSO: \[ S \rightarrow V \ NP \ NP \]
This class of languages, then, had a “flat structure” for its underlying word order:

3) 

\[
\text{S} \quad \text{V} \quad \text{NP} \quad \text{NP}
\]

Such a structure makes very clear predictions about the behavior of the subject and object arguments. As noted by Berman (1974), who was replying to McCawley’s (1970) VSO analysis of English, it predicts that subject and object NPs, since they are both post-verbal, should not be distinguishable in contexts where only one NP argument appears. In other words, Verb-Object sequences and Verb-Subject sequences should behave identically with respect to various syntactic processes. Anderson and Chung (1977) argue that this is not true for many languages that are clearly VSO. Samoan and Tongan, two VSO languages of the South Pacific, show demonstrable differences between VO and VS sequences in the interaction of Equi-NP Deletion and Subject-to-Object Raising — two rules that make reference to subjects and not to objects. If the VO and VS sequences are structurally indistinguishable, then verbs that allow both Equi and Subject-to-Object Raising to apply should allow Subject-to-Object Raising to apply to objects, provided Equi has applied to delete the subject in an embedded context. This prediction is false, as seen in the following Samoan data.

4) a) ‘Ua mânana’o tagata e mâlô i le pâlota
   perf want-pl people fut win in the election
   “People wanted to win in the election”

\[\text{I will not discuss here the two arguments that have been advanced in favor of flat structure for VSO languages, since, as will be seen below, the evidence against such an approach is overwhelming. The first of these arguments is presented in Chung (1983), where she argues that the subject position in Chamorro is properly governed, thus accounting for the lack of that-trace effects and Sentential Subject Constraints in that language. I refer the reader to Sproat (1985) for extensive criticism of this approach, and to Chung (1990) for a reinterpretation of these facts. The second argument has to do with the binding facts of Jacaltec discussed in Woolford (1991). This will be discussed briefly below.}\]

\[\text{In more modern terminology these are Subject Control, and Exceptional Case Marking (ECM). In order for their argument to follow, we are required to assume the pre-Principles and Parameters characterization of these processes, i.e., that there aren’t any null arguments, such as PRO, in the representation that could disambiguate VS from VO (in the form of V PRO O). Their argument then is not really consistent with more recent assumptions. However, the empirical facts do show, as will be seen below, that VSO languages distinguish subjects from objects, contra Berman (1974).}\]
b) E mânana’o tagata i le pâlota 'ia manuia
    fut want-pl people at the election irreal be-well
    “People want the election to turn out well”

c) *Sâ mânama’o tageta i le gaoi e pu’e
    past want-pl people at the burglar fut catch
    “People wanted the burglar to catch”

The Samoan verb *mana’o* ‘want’ allows Equi-NP Deletion, as in (4a), as well as Subject-to-Object Raising, as in (4b). Given that we could create a control context in which the subject of an embedded transitive clause was deleted via Equi-NP Deletion, the order VO would result in the embedded clause. If VO and VS sequences are not distinguished in the grammar of a language, then this should act as a valid input to the rule of Subject-to-Object Raising. As shown in (4c) this is incorrect, the object cannot undergo Subject-to-Object Raising; thus, it is clear that Samoan does, indeed, distinguish subjects from objects.

Anderson and Chung present similar evidence from Tongan clitic marking and Breton object marking to show that these languages also distinguish subjects and objects.

Typological arguments against a VP-less analysis (like that in (2)) of VSO languages were first presented in Emonds (1980), based on Greenberg’s (1966) universals. In particular, Emonds argued that VSO languages are all derived from SVO structures. His observations based on the typology of VSO languages are quite insightful and foreshadow much later work on the head movement of verbal predicates. First, he notes that VSO languages are much rarer than SVO languages. This, he claims, follows directly from the fact that VSO order is always derived, and SVO is a base order; the more derivation, he claims, the rarer the word order type. Woolford (1991) points out that given our current assumptions about V to INFL movement in SVO languages such as French (see for example Pollock 1989), such an argument cannot hold, since many SVO languages also

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7It should be noted, as an aside, that in fact Anderson and Chung are not arguing against a flat structure representation of VSO languages. Instead, they are arguing for a model, like that of Relational Grammar that distinguishes subjects from objects as a primitive of the grammar, rather than trying to derive these relations from linear order with respect to the verb (cf. Berman 1974)

8Tomlin (1984) claims that 46.8% of the world’s languages are SOV, 43.6% are SVO, and 9.6% are VSO.
have derived word orders. She accounts for the relative rarity of VSO by the fact that there are simply more ways to derive SVO than VSO (i.e., via head movement to various functional projections, or via non-verb movement).

Emonds’ second typological argument is harder to dispute. Greenberg’s Sixth Universal says that all languages with a VSO order also have an alternate SVO order. The alternations between SVO and VSO would be entirely arbitrary under a flat structure analysis. However, if VSO is derived from SVO, then the correlation between the two orders is direct: SVO alternates are simply the cases where the verb-fronting rule has failed to apply.

Greenberg’s universal number 12 is:

“If a language has dominant order VSO in declarative sentences, it always puts interrogative words or phrases first in interrogative word questions; if it has dominant SOV order in declarative sentences, there is never such an invariant rule.”

In other words, in VSO languages, complementizers —especially interrogative ones— (and frequently inflectional elements as well) are initial in their clause. Emonds correlates this property to what he considers to be the cause of verb movement in VSO languages. Foreshadowing much later work (see section 2.1.3 below), he claims that verb fronting is due to some morphological feature of the Complementizer head. He bases this on a principle he attributes to den Besten (1977):

9It is unclear to me what exactly “an alternate SVO” order means here. We may end up comparing structures that are totally unlike. For example, clauses that involve wh-movement, or tenseless clauses, rarely have the same word order as tensed clauses. Do these count as “alternate” orders? Or do only ordering alternations in clauses of a like-type count as “alternate orders”? We must be careful with such claims not to compare apples and oranges. Some languages such as Arabic appear to allow some type of SVO/VSO alternation in root clauses. Irish, on the other hand, never allows SVO in simple tensed root clauses — these must always be VSO. It does allow SVO order in tensed clauses, but only where the subject has been demonstrably fronted via A-bar movement for some kind of topicalization (as is shown by the presence of a [+wh] complementizer). SVO order is also found in tenseless clauses in some dialects. A related issue concerns what constitutes a “V”. For example, with auxiliaries, do participles constitute “V”s or not? If they do, then Irish allows an Aux SVO order. If they don’t, then this clause type is clearly VSO. A more careful examination of Greenberg’s universal is in order here, determining, in more rigorous terms, what is being compared before we draw any strong conclusions about the theory based upon it.
“All instances of movement to a pre-subject position by a grammatical transformation are attraction to a sentence initial Comp.”

Given this type of principle, the strong correlation between VSO order and clause initial complementizer particles is obvious: VSO order is caused by the clause initial particles. If we were to have a base VSO order, then the correlation between the order and clause initial particles would be mysterious; there would be no direct link between VSO order and clause initial particles.

Now turning away from typology, a great body of empirical evidence has surfaced showing that many VSO languages do not have a flat, underived VSO order. In a great many languages, there are sequences of untensed verbs or participles and objects that function as syntactic constituents, reminiscent of Verb Phrases. McCloskey (1983a) shows that participles and objects in Irish form syntactic constituents. This constituent consists of the progressive participle and object (bold-faced in the sentence below):

5) Tá na Clingeánaí **ag scaoileadh na féasar**
   Be.pres the Klingons prog fire the phasers-gen
   “The Klingons are firing the phasers”

These sequences obey several standard tests for constituency in Irish. Only maximal projections may be clefted, and more specifically only one maximal projection may be clefted at a time. For example, a direct object and an indirect object may not be clefted together:

6) *[Ull][don ghasúr] a thug sé apple to-the boy wh gave he
   “It was an apple to the boy that he gave”

In contrast, the progressive participle and the direct object can be clefted together:

7) Má’s **ag cuartugadh leanbh do dhearbhhratha** a tá tú ...
   if+C prog seek child your brother wh-are you...
   “If it is seeking your brother’s child that you are ...”
   (McCloskey 1983a: 14)

Similar facts are found in Breton:
8) **Lenn eul levr brezhoneg** a ran bembez
   to-read a book breton wh do-1sg everyday
   “Read a Breton book is what I do everyday”
   (Anderson and Chung 1977; 22)

and in Welsh:

9) **Gweld y ci y mae’r dyn**
   See the dog wh be-the man
   “It is seeing the dog that the man is”
   (Sproat 1985: 178)

McCloskey also notes that the participle and object can be the focus of the *ach*
‘only’ particle, an honor reserved only for constituents in Irish (McCloskey 1983):

10) **Ní raibh mé ach ag déanamh grinn**
    Neg be.past I only prog make fun
    “I was only making fun”
    (McCloskey 1983a: 20)

There thus seem to be ample examples of VP-like constituents in VSO languages, lending
strong support to the idea that VSO order is derived from some structure that has a VP constituent.

Driving the final nail into the coffin of flat structure for VSO languages is evidence
concerning the relative prominence of subjects and objects. In flat structure, subjects and
object are sisters to one another, as is seen in (3), repeated here as (11):

11)

\[
S \quad V \quad NP \quad NP
\]

Given this, we expect that there will be no structure dependent subject/object asymmetries
in VSO languages. Once again, this prediction is proven false. First, there is strong
evidence from the binding theory\(^{10}\). For example, in Irish, a reciprocal\(^{11}\) in subject position

\(^{10}\)Duffield (1991) presents similar evidence of subject/object asymmetries which are not dependent upon
binding theory. He notes that, in Irish, resumptive pronouns are allowed in object position, but are not
allowed in subject position. See also the discussion in section 5.7 below.

\(^{11}\)A brief comment about reflexives in Irish is in order here. Strangely, Irish seems to allow completely
unbound instances of the reflexive particle in emphatic contexts:
   Chonaic sé fein an réallong
cannot be bound\textsuperscript{12} by an object (12b), but the reverse is grammatical (12a).

12) a) Chonaic Seán agus Máire lena chéile
   \textit{Saw John and Mary with their other}
   \textit{“John and Mary saw each other”}

b) *Chonaic lena chéile Seán agus Máire
   \textit{Saw with their other John and Mary}
   \textit{“Each other saw John and Mary”}

Similar effects are seen in Niuean, as discussed in Woolford (1991):

13) Fana n-e ia a ia ni neafi
   \textit{shoot empf-erg he abs him refl yesterday}
   \textit{“He shot himself yesterday”}
   \textit{(Seiter 1980; 78)}

If the object and the subject were sisters, as predicted by the flat structure in (11), then we
would expect this to be a Principle B violation: the subject pronominal could be c-
commanded and bound by the object. Since the sentence is grammatical, it follows that the
subject pronoun is not c-commanded by the object, and by extension that the subject and
the object are not both directly dominated by the same node. Choe (1987)\textsuperscript{13} discusses
similar data in Berber:

14) a) *y-utu-t\textsubscript{j} wrba\textsubscript{j} pro\textsubscript{j}
    \textit{3ms-hit-him\textsubscript{j} boy-nom\textsubscript{j}}
    \textit{“The boy\textsubscript{i} hit him\textsubscript{j}” (principle B)}

b) *y-utu ixfnns\textsubscript{j} arba\textsubscript{j}
    \textit{3ms-hit himself\textsubscript{j} boy\textsubscript{j}}
    \textit{“himself\textsubscript{i} hit the boy\textsubscript{j}” (Principle A and C)}

c) *y-utu pro\textsubscript{i} ibbas wrba\textsubscript{i}
    \textit{3ms-hit pro father boy}
    \textit{“he\textsubscript{i} hit the boy\textsubscript{j}’s father” (Principle C)}

\textsuperscript{12}Here, I am operating under the standard, but not incontrovertible, assumption of Reinhart (1981,1983)
that binding theory makes reference to the relations of c-command, rather than simple linear precedence. For
a discussion and different views of anaphora, see Hendrick (1990), Solan (1983), Higginbotham (1983), and
Barss and Lasnik (1986).

\textsuperscript{13}See also Fassi Fehri (1993) for a discussion of the equivalent evidence in Standard Arabic.
Sproat\textsuperscript{14} (1985) presents evidence from parasitic gaps in Welsh that shows the same type of effect: subjects and objects cannot be sisters in Welsh. Chung (1983) points out that in flat structure, in contrast to traditional [S NP VP] structures, both the subject and the object are properly governed by the verb. Thus we do not expect any subject/object asymmetries\textsuperscript{15} with respect to processes and constraints which refer to proper government, such as the ECP. For example, subject extraction in Chamorro, unlike English, is allowed to violate the that-trace filter:

\begin{equation}
15) \quad \text{Manu na katta sinangani hao as Juan na ginin i chi’luña?}
\end{equation}

\begin{description}
\item[which L letter] \INFO.Pass.tell you \Obl Juan that from the sibling-agr
\item[“Which letter did Juan tell you that was from his sister”]
\end{description}

Simplifying somewhat, Kayne (1983) argues that the contrast between parasitic gaps in subjects and those in objects seen in (16) follows from the proper government restriction on the ECP, which licenses such gaps:

\begin{equation}
16) \quad \begin{align}
\text{a) } & \quad \text{*Here are the books [which}_i \text{ they bought}_i \text{ [without knowing whether [reading}_i \text{ would be a good idea.]]]}
\notag \\
\text{b) } & \quad \text{Here are the books [which}_i \text{ they bought}_i \text{ [without knowing whether it would be necessary for them [to read}_i \text{]]]}
\end{align}
\end{equation}

The ungrammaticality of sentence (16a) follows from the fact that the gap within the subject NP of the most embedded clause is not properly governed. In contrast, the parasitic gap in sentence (16b) is in a governed object position, accounting for its improved acceptability. In a flat structure VSO language\textsuperscript{16}, if both the subject and the object are governed by the verb, we expect no such contrast. Sproat shows that this is false; Welsh does show contrasts in its licensing of parasitic gaps parallel to those in (16) above.

\textsuperscript{14}See, however, Woolford (1991) for a discussion of Sproat’s arguments.
\textsuperscript{15}In particular, Chung was thinking of the lack of that-trace effects and Sentential Subject Condition violations in VSO languages. She later develops an alternate theory of the lack of these effects not based on government of the subject position by the verb (Chung 1990).
\textsuperscript{16}See Massam (1994), however, for the speculation that such predictions could also be made in non-flat structure VSO languages, provided the subject is VP internal and is thus properly governed by lexical m-command from the trace of the verb.
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17) a) *Dyma’r llyfrau [a brynasant hwy [e_i] [heb wybod os here-the books wh bought they without knowing whether byddai [darllen [e_i]] yn syniad da] would-be read prt idea good. “Here are the books which they bought without knowing whether reading would be a good idea”

b) ?Dyma’r llyfrau [a brynasant hwy [e_i] [heb wybod os here-the books wh bought they without knowing whether byddai rhaid iddynt [darllen [e_i]]] would-be necessity to.3p read “Here are the books which they bought without knowing whether it would be necessary for them to read”

A gap embedded in an object in Welsh is noticeably better than one in a subject position. This kind of contrast is puzzling in a flat structure approach to VSO languages, if we assume that differences between subjects and objects are structurally defined, since both subject and object should be equally governed by the verb and its inflection.

Hendrick (1988, 1990) shows similar evidence from superiority effects in Welsh and Breton. Hendrick assumes that superiority effects like (18) follow from the ECP:

18) a) Who said what
b) *What did who say (*What said who)

He assumes (see May (1985) and Pesetsky (1987) for a discussion of superiority effects) that in sentence (18b), the lower “who” argument adjoins to CP at LF to receive its interpretation. This is a violation of the ECP, however, since the trace of this movement is neither lexically nor antecedent governed.

19) [who_i [CP what_k (did) [IP t_i [VP say t_k]]]]

In (18a) by contrast, the object “what” argument, being lower than V, can adjoin to VP for its interpretation at LF, and both traces are properly governed:

20) [CP who_i [IP t_i [VP what_k [VP say t_k]]]]

The prediction that is made, for a flat structure, VSO language is that both types of wh-movement should be licit, since both argument positions are properly governed by the
verb. This is, unsurprisingly, a false prediction. Both Breton and Welsh show superiority effects, indicative of structural subject/object asymmetries:

21) Welsh:
   a)  Pwy a ddywedodd beth?
       who wh-prt saw what
       “Who saw what”
   b)  *Beth a ddywedodd pwy?
       What wh-prt saw who
       “What saw who” (Hendrick 1988)

22) Breton:
   a)  Piv a lavar petra
       who wh-prt say what
       “Who said what”
   b)  *Petra a lavar piv
       what wh-prt say what
       “What said who” (Hendrick 1990)

Anderson (1984) presents evidence from Kwakwala (also known as Kwakiutl), a Wakasahan VSO language that shows clear subject/object asymmetries. Kwakwala is famous for the fact that case markings and determiners do not cliticize to the word they mark, but to the preceding word; for this reason I have provided bracketings, which may appear in the middle of words, to show NP boundaries. Anderson notes that certain rules of Kwakwala morphology are sensitive to subject/object-hood. For example, the possessive marker, which is found both on simple NPs and on the subjects of nominalized embedded clauses, takes a different form when it is co-referential with the subject NP, than when it is co-referential with any other NP:

23)  ?aχ[-ida bɔgwanemα][-χ-is yanema]
    take-dem man -obj-poss game (hunted animals)
    "The man; took his; game" (Anderson 1984)

24)  ?aχ[-ida bɔgwanemα][-χ yanem-s]
    take-dem man -obj-poss game-poss
    "The man; took his; game" (Anderson 1984)

Only subjects can be relativized in Kwakwala (25). No other element is licit for relativization. In order to make an object oriented relative, the verb must be passivized, as
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in (26):

25) yum[-uχw]da bagwanəm[Ip yəlkwəmas[-x-a watʃi]]
   that-dem man cause.hurt -obj-the dog
   "That's the man who hurt the dog" (Anderson 1984)

26) yum[-uχw]da watʃi [Ip yəlkwəmat-su?[-s-a bagwanəma][-s-a gwaχuəuxw]]
   that-dem dog cause.hurt-pass -inst-the man -inst-the stick
   "That's the dog which the man hurt with a stick" (Anderson 1984)

Finally, only subjects in embedded clauses can be controlled, not any other position.

Again, to control an object, the sentence must be passivized. This is seen in (27):

27) a) yum-ən hiłq'əl-əm hamx?id-x-a K'utəla
   that-my allow-pass eat -obj-the fish
   "That's who I let eat the fish" (e.g., the cat).

   b) yum-ən hiłq'əl-əm hamx?id-su?[-s-a bosí
   that-my allow-pass eat pass-inst-the cat
   "That's who I let the cat eat" (e.g., the fish).

There are thus strong subject/object asymmetries in this language arguing against a flat structure\textsuperscript{17} approach to VSO languages.

This evidence, combined with the binding and parasitic gap facts, the typological arguments of Emonds (1980), the VP clefting facts of Sproat (1985) and McCloskey, and the subject-object asymmetry facts of Anderson and Chung (1977), presents strong reasons to dismiss a flat structure approach to VSO languages like Irish, Breton, Welsh, Samoan, Tongan, and Chamorro, and perhaps to VSO languages in general. We can ask ourselves if there is any evidence for flat structure for any VSO languages. One possible candidate for a flat structure analysis might be Jacaltec, first discussed in Craig (1977) and later in

\textsuperscript{17}It should be noted however, that Anderson does in fact adopt a flat structure analysis of Kwakwala. He claims that the subject/object asymmetries follow from differences in the selectional frames of the verbs in the language. He notes that subjects are always obligatory, but the presence of "VP internal" arguments is a feature of the lexical entry of the predicate involved. He claims that these lexical properties are transferred to the syntax in terms of the relation of Government. He defines government in terms of lexical selection, rather than in terms of structural properties like c-command or precedence. He thus claims that the difference between subjects and objects lies in the fact that objects are lexically governed (selected for by a lexical category like V), whereas subjects are not. Although this accounts for the subject/object asymmetries of Kwakwala, it cannot be extended to the constituency facts of the Celtic languages above. It also has the problem that it takes a relatively well motivated syntactic and structural relation and moves it to the lexical semantic domain. I, for reasons of space, will not discuss this further here.
Jacaltec’s binding facts seem to indicate that the object does mutually c-command the subject, as would be predicted in a flat structure analysis. As noted in Woolford (1991), an R-expression embedded in the subject NP cannot be co-referent with an object pronoun:

28) a) Xil [smamč naj pel] Ø₁
Saw poss-father cl Peter him
“Peter₁’s father saw him₁”
“*Peter₁’s father saw him₁”

This data could be analyzed as a condition C effect (Chomsky 1991) where the object c-commands the R-expression in the subject NP:

29) 

Thus, Jacaltec might well be a candidate for a flat structure VSO language, as Woolford claims. The problem with such an analysis, however, is that Jacaltec does show standard subject-object asymmetries. For example, just as in English, reflexives are not permitted in subject position (Craig 1977). Similarly, only subjects are available for the rule of "Promotion" discussed by Craig. This phenomenon, similar to subject to subject raising, is seen in the following example:

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18Due to constraints on disjoint reference, the object pronoun must surface as null in this construction, see Craig (1977: 158).
30) x'iche smunla naj
    asp.abs.3.began erg.3.work cl
    "He began to work"

This evidence suggests that Jacaltec really does show subject/object asymmetries, and that the government of the R-expression in the subject NP, and resultant condition-C effect in (28) might be due to something other than condition C. Heidi Harley (p.c.) has suggested to me that perhaps the ungrammaticality of (28) with the coreferent reading is due to a condition B violation on the object pronoun. She proposes that the R-expression possessor of the subject NP is functioning like the head of that NP\textsuperscript{19}, thus it its features percolate to the NP node and trigger a condition B violation. The subject NP c-commanding the object.

31)

Harley (pc) has pointed out to me that this kind of head-like behaviour of possessors is found in many languages. For example, Japanese allows passivization of possessor NP (Terada 1991). This kind of analysis is too complex to work out here, but it is more consistent with the other evidence from Jacaltec which suggests that subject/object asymmetries do occur in the language.

\textsuperscript{19}See Napoli (1989) for a related discussion of how the embedded PP in NPs like "that flower of a girl" is the semantic head of the NP. This is shown by the fact that verbs selecting [+human] complements can select for such NPs, despite the fact that the syntactic head of the NP is [-human]. For example, the verb "marry" can only take [+human] complements, yet the sentence "I want to marry that flower of a girl" is (sexism aside) grammatical.
2.2 Subject Lowering

Let us now turn to another early proposal for deriving VSO order, that of subject lowering proposed in Choe (1987) for Berber and Chung (1990) for Chamorro. Choe (1987) argues that a language like Berber derives VSO when the subject NP lowers for case reasons from its base position in the specifier of IP to a position adjoined to the verb:

\[ \text{IP} \]
\[ \text{SubjI' I VP V Obj} \]

She claims, following Sproat (1985), that VSO languages are distinguished from SVO languages in terms of a parameter for their case assignment direction. She claims that all VSO languages follow the following principle:

\[ \text{The Strict Rightward Case Assignment Principle} \]
\[ \text{Case is assigned strictly rightwards (Choe 1987: 127)} \]

In sentence (34) below, we see two crucial pieces of evidence for her approach. First, there is an inflectional element, separate from the verb, which appears before both the verb and the subject. This kind of preverbal inflectional element is found in almost all VSO languages. Second, Berber shows its agreement directly on the verb rather than on the

---

20 An interesting variation on this analysis is found in Shlonsky (1987). He argues there that in VSO languages, the subject lowers to adjoin to VP (not V) and the verb raises to INFL. His analysis is in principle different from the ones discussed in this section and more closely resembles ones using verb raising, and the VP internal subject hypothesis. One might even claim that his analysis is an early notational variant of that analysis. Verb raising and VP internal subjects are discussed in more detail in chapter 3 of this thesis.

21 Choe claims that this is not true for languages like Irish and Welsh. She claims that these languages do not allow an IVSO order and use an ISVO order. In fact, this is based on a misunderstanding of the Irish data. She seems to have mixed Celtic auxiliaries up with inflectional particles. While it is true that Celtic languages, show Aux S V[-tns] Obj Order, it is false to claim that Inflectional particles appear before the
inflectional particle:

34) Ulli    t-ttet Tifa iselman
    Neg.Imp 3fs-eat Tifa fish
    “Tifa is not eating fish”

She claims that since the verb is to the right of the inflectional particle, and that this inflectional particle is independent from the verb, that no raising has applied and that the verb and INFL are in their base positions. She assumes that Agr is the element that assigns nominative case, and since Agr is shown on the verb and not the inflectional particle, it is the V+Agr that assigns nominative case rightwardly to the subject. The only way for the subject to receive nominative case, then, is to lower and adjoin to the V+Agr head.

Choe presents two independent pieces of evidence in favor of this type of approach. First, she notes that unlike most languages, Berber shows verb-subject22 idioms, and verb-object idioms are very rare:

35) a) T-utu tfaccit arba
   3fs-hit toe-stub the boy
   “The boy stubbed his toe” (lit. “the toe-stubbed hit the boy”)

b) T-utu tenzi mucc
   3fs-hit sneeze cat
   “The cat sneezed” (lit “the sneeze hit the cat”)

c) y-fergh wadu i wajjarinw
   3ms-crooked wind to my neighbor
   “My neighbor is miserable” (lit “the wind crooked to my neighbor”)
   (Choe 1987: 134)

Second, she points out that all subjects in Berber are in the construct state (see Guerssel (1987) for more discussion of this construction); a form found usually only in nominal or prepositional complements in other languages (such as Hebrew and Irish). Examples of the subject and not the verb. Both Irish and Welsh show IVSO orders without auxiliaries, and IAux SVO orders in ones with them, the generalization being that Celtic languages do show the almost universal inflection - tensed verb - subject ordering.

22Why these are predicted to be good follows from Choe’s account of the trace of the subject NP, which ccommands its antecedent. This will be discussed in more detail below. Briefly, however, it follows from the fact that she assumes the verb and its subject are inserted “pre-adjoined” into the syntax, thus accounting for their status as idioms. I am unable to see how this really accounts for these facts. In any case, it is entirely possible, as has been pointed out to me by both David Pesetsky and Ken Hale, that these are unaccusative predicates, and the subject in these is a derived one rather than an underlying one.
construct and free state forms of some nouns in Berber are seen in (36):

36) a) Free state Construct State

<table>
<thead>
<tr>
<th>Construct State</th>
<th>Free state</th>
</tr>
</thead>
<tbody>
<tr>
<td>t-emttut-t</td>
<td>t-a-mttut-t‘woman’</td>
</tr>
<tr>
<td>w-ryaz</td>
<td>a-ryaz ‘man’</td>
</tr>
<tr>
<td>t-brat-t</td>
<td>t-a-brat-t ‘letter’</td>
</tr>
</tbody>
</table>

b) y-użn wryaz tabratt i temttutt  
3ms sent man.cs letter.fs to woman.cs  
“The man sent the letter to the woman”

c) ajdid wryaz  
bird man.cs  
“The man’s bird”

She claims that the construct state\(^{23}\) only appears when the N is the sister of a [-V] element. Given that Agr is [+N,-V], the construct state is expected in a configuration where the subject NP is the sister to the Verb+Agr.

Before turning to evidence against this approach, I would like to discuss the other paper that has suggested a subject lowering approach to VSO order: Chung (1990). Like Choe, Chung assumes an IP generated subject; she assumes, however, that parallel to many other Austronesian languages, the underlying order of Chamorro is IVOS and the subject lowers leftwardly to the V, as seen in (37):

37)

---

\(^{23}\)For a more thorough discussion of construct state nominals see section 6.6 below.
Evidence for the underlying order of Chamorro, she claims, comes from the word order of sentences with non-verbal predicates. In these sentences, which lack a verbal copula, the non-verbal predicate and its complement are not separated from one another by the subject:

38) a) Ma’estrokku si jose teacher.1s Jose “Jose was my teacher”

b) Esta un mes i ga’lagu already one month the dog “The dog is already one month (pregnant)

c) I rigalu ginin as nana-hu esti na aniyu the present from obl mother.1s this L ring “This ring is a present from my mother”

Given that subjects follow complements to non-verbal predicates, she extends the analysis to verbal predicates. Foreshadowing work that will appear in later chapters of this thesis, it should be noted that the assumption that the order Predicate - Complement - Subject appears with non-verbal predicates does not necessarily imply a VOS underlying order. For example, the main focus of this thesis will be on sentences like (39) below in Irish, where a non-verbal predicate and its complements and modifiers all precede the subject. However, as will be discussed below there is overwhelming evidence that Irish is SVO underlyingly:

39) Is [NP amhrán [CP \bhuailfidh an píobaire \]
    C   song COMP play.fut. the piper (agr)
    “‘Yellow Submarine’ is a song which the piper is going to play”

Non-verbal predicate - complement - subject order, as will be seen below, need not be taken to be evidence for VOS order.

Chung claims that evidence for the subject lowering approach to VSO comes from the fact that the subject can appear after any projection of V — a fact which only follows from a subject adjunction story, not from one that involves verb raising:
Additional evidence for a subject lowering approach to VSO comes from coordination. Chung notes that Chamorro requires that co-ordinated elements be identical constituents. Interestingly, it appears that you can have the subject of two co-ordinated VPs appear between the verb and the object of the second one:

41) [Tumohgi] ya [ni-rekuknisa si Maria ni gubietnu] Infl.stand and.then Infl.pass.recognize Maria Obl Governor “Maria stood and was recognized by the governor”

She claims that such sentences, can only follow from analysis where the subject starts in the specifier of IP, where it discharges its function as “subject” of both of the conjoined VPs, then lowers and adjoins to the VP.

There is some empirical evidence in Chamorro against such an approach. As noted by Woolford (1991), the position of VP adverbs in Chamorro reported by Chung (1983), is inconsistent with a subject lowering approach. Consider the sentence in (42):

42) Ma’pus esta si Juan pära i tenda Infl.gone already unm Juan to the store “Juan has already gone to the store”

The VP adverb is between the subject and the verb: the regular position of such adverbs in Chamorro. Given that adverbs usually adjoin to maximal categories, the positioning of this adverb between two heads that are supposed to be head-adjoined to one another is, to be blunt, unlikely:

43) [v [v ma’pus] esta ] si Juan ]

It is much more likely that the adverb is in fact VP adjoined, the subject is VP internal and
that the verb has somehow raised outside of the VP (we will consider this line of thought again in later sections). Given that VP adjoined adverbs appear medially in supposed verb-subject adjoined structure, I think there is fairly strong evidence against such an approach.

The same sort of facts are true of Modern Irish; appositive adverbs\textsuperscript{24} in Irish can appear between a verb and a full NP subject:

\begin{align*}
&44) \quad \text{Chonaic, cinnte, an fear an réaltlong} \\
&\quad \text{Saw, certainly, the man the starship} \\
&\quad \text{“The man certainly saw a starship”}
\end{align*}

This suggests that a subject lowering approach is certainly untenable for Modern Irish.

Fassi-Fehri (1993) provides evidence from object enclisis in Standard Arabic, a VS order language, which also argues against a subject lowering account. In Arabic, object clitics appear attached to the verb:

\begin{align*}
&45) \quad \text{дарабا-هu r-rajul-u} \\
&\quad \text{beat-him the-man-nom} \\
&\quad \text{“The man beat him”}
\end{align*}

Under a subject lowering approach we might predict that object enclitics could adjoin to the complex V formed by subject lowering:

\begin{align*}
&46) \\
&\quad \text{VP} \\
&\quad \text{V} \quad \text{← Obj} \\
&\quad \text{V} \quad \text{Subj}
\end{align*}

This would result in an ungrammatical order for enclitics:

\begin{align*}
&47) \quad \text{*дарабa r-rajul-u-hu} \\
&\quad \text{beat the-man-nom-him} \\
&\quad \text{“The man beat him”}
\end{align*}

\textsuperscript{24}It should be noted, however, that Irish does not allow any other type of adverb in this position. For example, McCloskey (1983b) notes that the following are strongly ungrammatical:

\begin{itemize}
  \item [i)] \text{*Chonaic inne na gasræ capall mór bán ansin} \\
  \quad \text{Saw yesterday the boys horse big white there} \\
  \quad \text{“The boys saw a big white horse there yesterday”}
\end{itemize}

Only appositives are allowed in this position, and even they are not allowed when the subject is a clitic pronoun.
This then also provides evidence against subject lowering cross-linguistically.

All aesthetic objections to lowering aside (e.g. Chomsky 1992, Kayne 1994), there is also a strong theoretical problem with such approaches. As noted by Fassi Fehri (1993), this has to do with the status of the trace left behind by the subject lowering. In both Chung and Choe’s story, this trace lacks a governing antecedent; it is higher in the tree than the element it is a trace of. Both Chung and Choe have answers to the problem, but they both appear to me to be somewhat *ad hoc*. Choe claims that the chain formed by the lowered subject and the trace comes into the syntax pre-formed before D-structure, thus is not subject to D-structure binding conditions. This kind of approach is clearly untenable in a system like Chomsky (1992, 1993) where all such constraints need be phrased as output conditions. Independent of this, however, the coherence of a notion like “do the movement before you get into the syntax” seems dubious to me. It is logically a contradiction; one is expected to do the syntax for syntactic reasons, before you enter the syntax, so that you can escape a constraint on the syntax. Chung (1990) seems to have a more coherent account. She claims that the trace of the movement is not a true trace, but a null expletive, which forms an expletive-subject chain. Again this seems designed simply to allow an analysis inconsistent with otherwise well-motivated constraints to escape these same constraints.

These theoretical objections aside, however, it is at least plausible that some languages, like Chamorro and Berber, make use of a subject lowering mechanism. Such an approach, unfortunately, is not available for languages like Irish, however. Elizabeth Pyatt has pointed out to me that given a verb plus adjoined subject constituent, we expect to be able to cleft VS sequences, (or at least VSO sequences). This is clearly false, as noted above, Irish never allows VS sequences to be clefted, but does allow VO ones to undergo such movement. This, combined with the fact that Irish allows certain inflectional elements to follow the verb (such as agreement morphology), and behaves as if it is a language with
object raising (see chapter 3 below) constitutes strong evidence against a subject lowering analysis of Irish.

2.3 Verb Raising Analyses: Part I.

In this section, we turn to analyses that claim VSO order is derived via the raising of the verb, or the raising of the verb and some of its arguments. Such approaches have been proposed in Emonds (1980), Sproat (1983, 1985), Sadler (1988), Mohammed (1988), Ouhalla (1994), Duffield (1991), Guilfoyle (1994), Noonan (1992), McCloskey (1991, 1992b, forthcoming), Chung and McCloskey (1987), Kaplan (1991), Fassi Fehri (1993) among many others. At issue is the question of where the verb raises to, and what, if any, NP movement occurs in conjunction with this movement. Various proposals have been put forward, including a V2-like movement of the verb to the complementizer head, and raising to various INFL projections. Similarly, various proposals have suggested that the subject and object NPs are VP internal, or in the specifiers of the Inflectional heads. In this, the final section of this chapter, we will examine first the general evidence in favor of a verb-raising approach to VSO order, independent of the landing site. We will then look at the evidence for and against the raising to C analysis. We will leave discussion of the analysis of VSO as raising to one of the inflectional projections until chapter three.

2.3.1 Irish Ellipsis as evidence for raising.25

McCloskey (1991), building on research by Chung and McCloskey (1987), provides strong evidence in favor of a verb-raising approach to VSO order for Modern Irish. He proposes the analysis schematized abstractly in (48). For the moment, we will abstract away from exactly what heads and specifiers the elements in the Irish sentence

25Discussion of a different kind of evidence for raising coming from adverb placement in Standard Arabic can be found in Fassi Fehri (1993).
actually occupy, since McCloskey’s arguments hold quite independently of what the actual locations of the verb and arguments are. We will return to exact location of these elements in later sections and chapter 3.

In (48) the verb has raised around the subject to a head higher than the surface position of the subject. This is the essence of the verb-raising approach to VSO order. What McCloskey noted is that in a structure like (48), once the verb has raised, there exists a constituent which consists of the subject, the trace of the verb, and the object (represented by ZP in (48)). Again, this is true independent of what the surface location of the verb and its arguments is, as long as the verb has raised around the subject. The claim here is that if such a grouping passes tests for constituency separate from the verb, then we have evidence for the verb raising analysis. In addition, if such a constituent exists, it also forms additional evidence against a flat structure approach to Irish syntax.

McCloskey’s prediction is borne out. There is extensive evidence that the subject and object (and other VP internal material) do, in fact, form a constituent. Let us first consider the test of right node raising. The ZP constituent (the entire sentence minus the finite verb) appears rightmost in a Right Node Raising structure:

26McCloskey (1991), who assumes the VP internal subject hypothesis after Fukui and Speas (1986), Kitagawa (1986), Koopman and Sportiche (1991) etc., claims that the verb is in INFL and the two arguments are in situ; the subject is in the spec of VP and the object is the complement of the verb. See chapter 3, below, for arguments against such an approach.
49) Níor thug, nó is beag má thug, [an pobal aon aird ar an bhean bhocht] neg gave, or C small if gave, the people any attention on the woman poor
“The community paid no attention or almost no attention to the poor woman” (McCloskey (1991))

According to McCloskey, only constituents may participate in such structures. Therefore we may conclude that ZP is such a constituent.

The most convincing evidence for such a constituent, however, comes from ellipsis phenomena in Irish. Irish has a process of VP ellipsis which parallels English VP ellipsis in many ways. It applies under identity to a linguistic (i.e. non-pragmatically defined) antecedent. It is immune to island constraints. It may apply “backwards” (with the antecedent following the elided material). It tolerates antecedent contained deletion. Finally, it shows strict/sloppy pronominal interpretations. McCloskey thus claims that this phenomenon is the Irish equivalent of English VP ellipsis. It differs from English VP ellipsis, however, in what is deleted. In English, the subject obligatorily remains, but the verb and the object (and any other VP internal material) is elided and replaced with did (too). In Irish on the other hand, the verb is the one element which is not elided, rather, it is the ZP constituent which is elided:

50) English: S V O and S V O
    Irish: V S O and V S O

51) Duirt mé go gceannódh sí é agus cheannaigh subj object said I that would.buy she it and bought .
    I said that she would buy it and she did.

As McCloskey notes "...the almost unanimous view in the literature is that the elided material in VP ellipsis forms a syntactic constituent.” The raising analysis, with a ZP constituent, provides us with an elegant account of these facts. The verb has raised outside of the domain of the ellipsis process, whereas the subject and object remain within the ZP constituent, which is elided\(^2\). The evidence from ellipsis is thus in favor of a verb raising approach to VSO order.

\(^{27}\)McCloskey (1991) claims that this constituent is the VP, accounting for the parallels to English VP ellipsis. We will return to this below.
A problem for McCloskey’s story, however, lies in the fact that the ZP constituent fails several standard tests for constituency in Irish. For example, it cannot be the focus of an only phrase (52) and cannot be clefted (53):

52) *Ní chonaic ach [beirt an duine]
    Neg saw but two-people the man
    “only two people saw the man”

53) *[Seán teach i nDoire] a cheannaigh
    John  house in Derry C bought
    “It was John a house in Derry that bought”

McCloskey claims however, that these violations should not be taken as evidence against the constituency of ZP. Instead, he shows that the ungrammaticality of sentences like that in (52) and (53) follows not from a lack of constituency, but rather from a violation of the ECP. Recall that the constituent ZP has the trace of the verb movement in it. If ZP is fronted to the beginning of a clause in a cleft (higher than the verb), or is right adjoined to the clause in an only-focus, then this trace is not antecedent governed by the verb, accounting for the ungrammaticality of the forms. This is seen in the bracketed diagram of a cleft in (54).

54) *[CP[ZP Subj τv Obj ] C [IP V [ tzp]]]
    ↑
    not properly governed

These putative exceptions now accounted for, McCloskey’s claim that the subject and VP material, less the finite verb, form a syntactic constituent is verified, lending strong support to a verb movement analysis of Irish VSO.

In the next section, and in chapter 3, we turn to the question of what the landing site of the verb is, and in chapter 3 we will explore where the arguments of the verb are to be found. In other words, we will be exploring the nature of the constituent we have thus far labeled ZP.
2.3.2 Raising to C

Perhaps the earliest raising analysis of VSO order involves the raising of the verb to the complementizer head in a manner familiar from V2 languages and from question formation in SVO languages like English. This approach to VSO order was first proposed by Emonds (1980) who suggested that all verb fronting was motivated by “attraction to the complementizer.” This approach was also popular in the early work in the Government and Binding framework (Stowell 1989, Déprez and Hale 1986, Hale 1989). More recently it has been proposed to account for the change from V2 in Middle Welsh to VSO in Modern Welsh by Clack (1994) and Sáinz (1994), for Pembrokeshire Welsh by Watanabe (1993) and for Old Irish VSO by Carnie, Pyatt, and Harley (1994).

German and Dutch stand as typical examples of V2 languages. In tensed clauses without an overt complementizer, the verb must appear in “second position.” The first position in the sentence is occupied by any constituent. In example (55) below (data from Haegeman 1991), the verb kaufte always appears in the second position, and any of the other elements (the subject Karl, the object dieses Buch, or the temporal adverb gestern) can appear in the first position. The remaining constituents follow the verb.

55) a) Karl kaufte gestern dieses Buch
       Karl bought yesterday this book
       ‘Karl bought this book yesterday’

b) Dieses Buch kaufte Karl gestern
     ‘Karl bought this book yesterday’

c) Gestern kaufte Karl dieses Buch
     ‘Karl bought this book yesterday’

In clauses with overt complementizers, by contrast, there is no V2 ordering. The verb appears in final position:

56) Ich dachte daß Karl gestern das Buch gekauft hat
    I thought that Karl yesterday the book bought has
    ‘I thought that Karl bought the book yesterday’
The standard analyses (see, e.g., McCloskey 1992a) of V2 hold that there is a requirement that the complementizer position be filled in tensed clauses. The verb raises to the empty complementizer position in matrix clauses. There is then an additional requirement that the specifier of a matrix complementizer be filled by some element giving the V2 order.

57)

\[
\text{[CP} \quad \text{[C} \quad \text{[IP subj} \quad \text{[I} \quad \text{[VP V ] ]]}\text{]}\]

In embedded clauses, however, the complementizer position is filled, and the verb cannot raise to it. Thus V2 ordering is blocked.

An obvious extension of this approach is to posit a set of “V1” languages where the requirement on filling the specifier of CP is not imposed, resulting in a VSO ordering. In this analysis, a Modern Irish VSO sentence like (58a) would have a derivation as in (58b).

55) a) Leanann an t-ainmní an briathar i nGaeilge

follow.PRES the subject the verb in Irish
‘The subject follows the verb in Irish’ (Modern Irish)

b)

\[
\text{CP} \quad \text{[C} \quad \text{[IP subj} \quad \text{[I} \quad \text{[INFL VP V ] ]]}\text{]}\]

The verb raises through its inflectional complex to C° and all the other arguments stay in their canonical positions. VSO order, under this approach, is thus a ‘weak V2’
phenomenon:

59) **The Weak V2 Hypothesis** \((V \to C^o)\)

VSO order is derived via head movement of the verb to \(C^o\). There is a requirement that \(C^o\)s in VSO languages be filled, but the specifier of CP need not be filled.

2.3.1.2 McCloskey (1992b): Evidence against raising to \(C^o\)

McCloskey (1992b) has argued that this approach is unavailable for deriving basic VSO order in Modern Irish. First off, as first noted in Koopman and Sportiche (1991) there is the question of word order in embedded clauses with complementizers. Recall that in German, when a clause is embedded, the complementizer position is filled, and V2 order does not arise. If Irish were to have a comparable analysis then we would expect the order \(C^o\)-SOV or \(C^o\)-SVO in embedded clauses. This prediction is immediately falsified by the facts of Irish. In fact we only get \(C^o\)-VSO order. The verb still must raise:

60) Ceapaim [ go bhfaca sé an madra ]
think.PRES.1s [ that see.PST.DEP he.NOM the dog ]
COMP V Subj Obj
‘I think that he saw the dog.’

The motivation for this verb-first ordering cannot be an obligatorily filled \(C^o\) requirement; since there is a filled complementizer, the verb should not have to raise.

McCloskey (1992b) presents a more complicated argument using the behavior of adverbs showing that the verb is no higher than the left edge of IP in Modern Irish. In English, there is a set of adverbs and adverbial clauses which appear to the right of complementizers but to the left of subjects (data from McCloskey 1992b):

61) a. That **in general** he understands what is going on seems fairly clear
   b. It’s surprising that **most of the time** he understands what is going on.

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28See also Fassi Fehri (1993), chapter 2, for arguments from particles in Arabic on this issue.
29A recursive CP structure like that posited for many "embedded V2 languages" like Yiddish (see Iatridou and Kroch (1992) among many others) could also account for this order. I will not discuss this option here because of the convincing nature of McCloskey's (1992b) arguments (discussed below) against a raising to \(C^o\) approach for Modern Irish VSO order.
These adverbial elements can never appear to the left of the complementizer in English (the following sentence is to be read with the adverb having scope only over the embedded clause, as in the sentence in (62)):

(62) *It’s surprising in general that he understands what is going on.

McCloskey (1992a) argues that the pattern seen above follows from the Adjunction Prohibition of Chomsky (1986):

(63) *Adjunction Prohibition* (after McCloskey 1992b)  
Adjunction to a phrase selected by a lexical head is ungrammatical.

Under this principle, adverbials are allowed to adjoin to IPs that are complements to C°, a functional head. However, they are forbidden to adjoin to CPs that are selected by a verbal head, a lexical category. In this sense, then, the adverbials shown above in (61) and (62) can be called IP adjoined adverbs. In contrast, in matrix clauses, where there is no lexical selection of CPs, these same adverbials can appear to the left of a wh-complementizer:

(64) a) *When you get home, what do you want to do?*  
b) *Next Christmas, whose parents should we go see?*

In Irish, surprisingly, the order of adverbials and complementizers is different. Adverbials appear to the left of both complementizers and subjects in both matrix and embedded CPs (data again from McCloskey 1992b):

(65) Líonaim d’eagla dá dtógfainn mo radharc dóibh go dtitfinn  
Fill.1s of fear if lift-1s.cond my sight from.3.s that fall.1.s  
“I fill up with fear that, were I to take my eyes off, then I would fall”

Thus Irish shows the converse pattern to English as is schematized in (66):

(66)  

<table>
<thead>
<tr>
<th>...Adv that [IP ...</th>
<th>English</th>
<th>Irish</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*(embedded)</td>
<td>ok</td>
</tr>
<tr>
<td>...that Adv [IP ...</td>
<td>ok</td>
<td>* (always)</td>
</tr>
</tbody>
</table>

At first glance, it might appear that Irish lacks the Adjunction Prohibition. However, under closer examination it becomes apparent that this is not the case. Irish does have restriction
on adjunction to embedded CPs. Consider the following example (data from McCloskey):

67) *Ni bhfuair siad amach ariamh an bhliain sin cé a bhí ag goid a gcuid móna
Neg found they out ever that year who C° was prog steal their turf
“They never found out who was stealing their turf that year”

In this case—a selected wh-interrogative CP, where you have both a C° and a wh-head marking the left edge of CP—the adverb is illicit to the left of the wh-word. For this case, then, the Adjunction Prohibition holds. This must be accounted for.

McCloskey suggests that the solution to this paradox is that the adverbs in (65) are IP adjoined, despite the fact they appear to the left of the complementizer. He claims that the C° in Modern Irish lowers\(^{30}\) to attach to the verb\(^{31}\) because it requires support as a clitic, as illustrated in (68).

68) \[
\text{IP} \quad \text{CP} \quad \text{C} \quad \text{IP} \quad \text{Adv} \quad \text{IP} \quad \text{I+V \ [ \ldots \ ]]}
\]

This kind of analysis is supported by two kinds of evidence. First, the lowering analysis of complementizer clitics in Irish predicts that the adverb will appear between the complementizer and any element in the specifier of CP. This is true, as is shown in (69):

69) a) Cé riamb a chuala í
   “Who ever heard her”

b) Cé t_C [IP riamb [IP C_C + Chuala t_i í]

This appearance of an adverb between a specifier and a head is a clearly an anomaly, and this data lends itself nicely to the idea that the complementizer has lowered itself around the adverb to the verb. The second kind of evidence comes from the phenomena of Narrative Fronting. Irish in formal narrative style allows an inversion of certain indefinite NPs in

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\(^{30}\)A lowering analysis of Irish complementizers is subject to the same problems found with Chung (1990) and Choe’s (1987) account of subject positions, in that the trace of the movement is ungoverned. This might be dealt with by claiming that this clitic-lowering only occurs in the phonology, thus need not meet a syntactic requirement like the ECP.

\(^{31}\)See Bobaljik (1993) for an alternative analyses of these facts.
negative contexts. An example of this is seen in (70):

\[ Brasn \text{ eile } ní bhfaighir t\ddot{u} \]
\[ \text{drop other neg+C get-2} \]
"Another drop you will not get!"

These fronted NPs, like IP adverbs, appear to the left of complementizers, but more interestingly, they appear to the right of (and thus lower than) IP adjoined adverbs (71). McCloskey then claims that these fronted elements are also IP adjoined. In the following sentence, we have two IP adjoined adverbs indicated in bold, and a narrative-fronted NP indicated in italics. Both of these precede the underlined determiner.

\[ Tá \text{ sé ráite } [\text{ariamh} ] [\text{má chaíneann tú sagart}] \text{ maithiúnas} ní bhfaighidh tú t\ddot{u} \]
\[ \text{is it ever if criticize you priest forgiveness negC get.fut you} \]
It is said that if you criticize a priest you will not ever be forgiven.
(or It is always said that if you criticize a priest you will not be forgiven)

McCloskey argues that if the complementizer is lowering for phonological reasons (at PF), to adjoin to the verb, then its LF position should license negative polarity items which have IP adjoined via narrative fronting. This prediction is borne out:

\[ \text{Pingin rua} \]
\[ \text{char caith mé ar an bhád} \]
"Not a red cent did I spend on the boat"
(lit "Red Cent, did I not spend on the boat.")

In this sentence, the negative polarity item *pingin rua* 'red cent' is licensed by the negative complementizer *char*, which follows it. The fact that the lowering is a PF phenomenon, accounts for why the polarity item is licensed. The LF position of the negative complementizer c-commands the IP adjoined position of the negative polarity item

Given these assumptions about complementizer lowering, where does this leave us with VSO? Since the verb is to the right of the adverbs, and these adverbs mark the left edge of IP, then it follows that the verb must be no higher than the left edge of IP, and is not in C, and Modern Irish is not a weak V2 language.
We can now ask if there is any language which uses a weak V2 strategy for VSO. Carnie, Pyatt, and Harley (1994) suggest that the form of Irish spoken in the fourth to the twelfth century, Old Irish, has weak V2 in certain contexts. We turn to these arguments in the next subsection.

2.2.2.1 *Old Irish, a language with raising to C*[^32].

Carnie, Pyatt and Harley (1994) (henceforth CPH) argue that Old Irish has *both* raising to the left edge of IP, like Modern Irish, and also a filled C requirement[^33]. Although the complex arguments from adverbial interpretation are not available for Old Irish, there is some evidence that in most cases Old Irish only moves its verb to the left edge of IP, just like Modern Irish. This evidence comes from the complementizer system. Old Irish has VSO word order in declarative sentences (73)[^34]:

73) Beogidir in spirut in corp
    vivifies-3s the spirit the body
    ‘The spirit vivifies the body’

As in Modern Irish, when the complementizer is filled with a particle, the verb is still otherwise clause initial:

74) Ní beir in fer in claideb
    Neg.C°carries-3s-conjthe man the sword
    ‘The man does not carry the sword.’

This being the case, Old Irish must be a language with raising to the left edge of IP in its derivation of VSO order.

[^32]: This section owes a great deal to my co-authors Heidi Harley and Elizabeth Pyatt; many thanks to them both.
[^33]: Breton, another Celtic language, seems to be both VSO and V2 (VSO in embedded clauses and V2 in matrix ones). It would then be a language that has both a left edge INFL strategy and has a full (not weak) V2 requirement. For more discussion see Schafer (1995).
[^34]: Throughout, I will use the traditional spelling system of Old Irish. I refer the reader to Thurneysen (1980) for the complete details of how Old Irish is pronounced. The Old Irish examples have been taken from Strachan (1984), Strachan (1944), McConé (1987) and Thurneysen (1980) who take them from various primary sources.
CPH claim, however, using evidence from the placement of enclitic pronouns and phonological behavior of certain verbal elements, that Old Irish also has a filled C° requirement. This requirement can be met by complementizers, by verbs, or by subparts of morphologically complex verbs. Thus Old Irish is a language that has both raising to C° and raising to the left edge of IP.

A major difference between Old Irish and Modern Irish lies in the complexity of the verbal system (for discussion see McCloskey 1978 and McCone 1987). The morphology of the Old Irish verb includes verbal roots, inflectional endings and a series of preverbal particles. The preverbal particles are of three types: conjunct particles (C), preverbs (P) and object enclitics (E). These particles, the verb, and person/number endings form what is called the “verbal complex”. Excluding the enclitics for the moment, there is a strict ordering to these forms (75b). An example of a maximal verbal complex is given in (76).

75) Old Irish Verbal Complex
   a.\*\*\*\*
   Con conjunct particles (C) - negation, question marker, C°s
   Pre preverbs (P) - Alters verb meaning, adds perfective aspect
   Verb (V)+Subject inflection (S) - The verb root itself and person agreement.
   Enclitics (E) - Object clitics and relative markers
   b. C > P > V-S

76) Ní-m• accai  (Ní + m + ad + ci+3sng)
    Neg-me•see-3s  C (E)    P   V-S
    ‘he does not see me’

Following Duffield (1991), CPH assume the conjunct particle position (C) corresponds to the C° position. This might explain why it must be ordered before the other preverbal particles. In Modern Irish, the conjunct particles form phonological units with overt complementizers (see Duffield 1991 for discussion):

77) \( go \ 'that' \ + \ ní 'neg' \rightarrow nach \ 'neg.comp' \)
    \( go \ 'that' \ + \ níor 'neg-past' \rightarrow nár \ 'neg.past.comp' \)

Similar facts are found in Old Irish, thus CPH assume that the conjunct particles correspond to C° in the older form of the language as well.
Given this cast of characters, CPH show how certain morphological, phonological and syntactic processes argue for Old Irish having both raising of the verb to the left edge of IP and for the raising of the verb to C°. In Old Irish, the verb and its inflection take two different forms depending upon whether or not these are in absolute initial position. These two forms are called absolute and conjunct (78) (examples taken from Strachan 1984):

<table>
<thead>
<tr>
<th>Absolute</th>
<th>Conjunct</th>
</tr>
</thead>
<tbody>
<tr>
<td>berid</td>
<td>-beir</td>
</tr>
<tr>
<td>berait</td>
<td>-berat</td>
</tr>
<tr>
<td>marbfa</td>
<td>-marbub</td>
</tr>
<tr>
<td>midimmir</td>
<td>-midemmar</td>
</tr>
</tbody>
</table>

The absolute form is used when the verbal root is in absolute first position in the sentence, that is when the inflected verb is not preceded by any conjunct particles, preverbs or pronouns (79). The conjunct form is used when the verb is preceded by a conjunct particle or a preverb (80).

Interestingly, the appearance of a verb in its conjunct form is not necessarily a function of the presence of the preverbs or conjunct particles. Rather, the conjunct form is found anywhere that the verb is not in absolute first position. This is called "Bergin’s law" (Bergin 1938). This is especially true in some poetic forms where strict VSO order is not obligatory. Take for example the following lines from the Énna Labraid Luad Cáich as cited in Carney (1978):

35Bergin’s law is usually not phrased exactly this way. In Thurneysen (1980:§513) for example it is articulated as “simple and compound verbs may be placed at the end of the clause; the form they have conjunct flexion...”. However, Carney (1978) argues that the formulation adopted in the text above is more accurate since verbs can appear medially in some poetic registers.
Conjunct verbal inflection, then, is a feature of non-initial position. CPH claim that this
distribution is definable in a systematic way: when the verb has raised to C° it takes the
absolute morphology. When the verb is in any other position (either at the left edge of IP or
in verb medial order as in the poem fragment above), it takes the more basic conjunct form.
In (80) above, the C° has been filled with the conjunct particle ni 'neg' thus blocking the
raising of beir "carries-3s-conj" to C°. The verb raises to the left edge of INFL just like it
would in Modern Irish (McCloskey 1992b); the inflected verb is thus realized as beir. The
resultant S-structure is seen in (82).

82) \[
[CP ni[IP beiri\+INFL [IP in fer [VP ti in claideb]]]]
\]
In (79), by contrast, there is no overt complementizer or any other type of preverbal
particle. Thus the filled C° requirement forces the verb to raise from INFL to C° (83).

83) \[
[CP beri\+C°[IP ti [VP in fer [V\+ ti in claideb]]]]
\]
When the inflected verb beir "carries" raises to C°, it actually is incorporating into a null C°.
This C-INFL-V complex is then realized as absolute berid instead of conjunct beir. An
interesting variation to this pattern occurs in relative clauses. If the null C° is [+wh], then a
third form of the verb is used in lieu of the absolute form (84). For example, in the
sentence below, the inflected verb of the relative clause gaibid "grabs" surfaces as gaibes,
the relative form of the verb.

84) \[
is o\text{\textit{inferi \[CP \emptyset_i gaibesi [IP ti b\text{\textv{u}}\text{\textit{aid}]}}\]
cop one-man Op. grabs-3s-rel victory
'It is one man who grabs victory.'
\]
The differences between the relative form and the absolute form show that the morphology
of the absolute is used to signal which null C° ([\pm wh]) is present in the complementizer
position. Since the verb forms in absolute initial position vary depending upon what type of
complementizer is present in the clause, it lends support to the theory that these verbs are in
CPH also use alternations in the status of preverbs to support their conclusion. The preverbs are the prepositional components of Old Irish compound verbs. For example, given the basic verb *berid* ‘carries’, the addition of a preverbal particle shifts the meaning in unpredictable ways: *as•berid* means “says” (literally “out-carry”). Similar forms, such as *shine/outshine* and *blow/blow up*, are occasionally found in English. In Old Irish, however, the use of these particles is quite common, and help to form a large class of Old Irish verbal morphology. CPH claim that depending upon what other elements appear in the complex, these preverbal particles can behave as if they were either in C° or as if they were combined with the verb in INFL. In particular, it seems that given a compound verb with no conjunct particle, a preverbal particle satisfies the filled C° requirement.

Consider the following compound verb: *as•beir* “says-3s”. This is composed of the preverbal particle *as-* and *beir* “carries”. However, when this verb comes after a conjunct complementizer particle *ní* “neg”, the form of the verb is radically changed. In the example below, the form for “say-1s” is *as•biur* when there is no conjunct particle (85), but *epur* when it follows a conjunct particle like *ní* (86).

85) 

| as•biur in so |
| say-1s this |
| ‘I say this.’ |

86) 

| Ní  epur/%as•biur  a n-anman sund |
| Neg say-1s their names here |
| ‘I do not say their names here.’ |

Despite the obvious differences between these forms, there is no suppletion here. Instead, rules of stress shift, syncope, provection, reduplication and lenition all interact to muddy the forms (see McCloskey 1978 for more detailed discussion). The domain of application of these phonological rules provides evidence for CPH’s analysis. The entire verbal complex forms a single phonological unit that cannot be broken apart by adverbs and other
intrusive material. This grouping, CPH call the “clitic group” - (κ). However, there is a smaller phonological unit, the word (ω) which is the domain of stress and syncope. Consistently, conjunct particles (C) and enclitic pronouns stand outside the phonological word (87a). Preverbal particles (P) on the other hand vary in their position, depending upon what other material is in the clitic group (87b).

\[ \kappa \ C \ [\omega \ P \ (P) \ (P) \ V]\]
\[ \kappa \ P \ [\omega \ P \ (P) \ V]\]

For concreteness let us consider the example of stress. Stress in Old Irish is always on the leftmost syllable in the word. This is true of absolute verbs, nouns, and adjectives. When the verb is complex however, either with a conjunct particle or with a preverb, the stress falls on the second non-enclitic morphological unit:

88) a) \ C •P (P) (P) V
b) \ C • V
c) \ P •P (P) V
d) \ P • V

There thus appears to be a special “pre-tonic” slot in initial position for a preverb or conjunct particle, which does not participate in the metrical structure of the rest of the verbal complex. CPH indicate the division between the pre-tonic position and the rest of the complex with the use of the symbol <•> (following Thurneysen 1946). Usually, the enclitic and any syllabic material it brings with it will be part of the pre-tonic. We can thus describe the distribution of the elements as follows:

89) i. Conjunct particles are always pretonic
   ii. If there is no conjunct particle, then the first preverb is pretonic

If we add a conjunct particle to a verb with preverbs, then the previously pretonic preverb joins the rest of the verbal complex and participates in its metrical structure, causing stress pattern to change as seen in (90).

90) a. as•biur “say-1s” /as.bjuɾ /
b. •epur “say-1s” /e.bur/

The underlined syllable is the one that receives the stress. In (90a) the preverb as appears
in pretonic position and does not participate in the metrical structure of the verb (stress falls on *biur*). When the conjunct particle is added (90b), the preverb behaves as if it is part of the second element in the complex, and takes main stress. The other phonological alternations (/a/~e/ and /sb/~/p/) follow from this shift in metrical structure. See McCone (1987) for more details.

As the conjunct particles always fall in the pretonic position, CPH conclude that the pretonic position is associated with the complementizer head. Since one preverb is required to be pretonic when there is no conjunct complementizer, it follows that a preverb can satisfy the filled C° requirement. When there is no overt complementizer, only the preverb, not the entire inflected verb, raises to C° to satisfy the Filled-C° requirement.

Let us consider a derivation of this type. CPH assume that the preverbal particles are reflexes of a Hale & Keyser (1991) type complex VP, or of Pesetsky's (1995) stacked PP "cascade" structure. We will consider the sentence in (85) with the base form in (91)

91)  
[CP [Ø] [IP [INFL] [VP pro [V' as [V' biur [ADVP in so]]]]]]

The preverb *as* raises to C° to satisfy the filled C° requirement. The verbal root *biur* raises to I°, as in modern Irish, accounting for the difference in phonological domains. The two domains correspond to distinct heads: INFL and C°.

92)  
[CP [as₁] [IP [biur₁] [VP pro [V' t₁ [V' t_j [ADVP in so]]]]]]

When a conjunct particle complementizer like *ní* "neg" is present, however, the preverb remains at the left edge of IP with the rest of the verb, putting it into the same metrical unit with the root verb. (93)

93)  
[CP Ní [IP[1° epur (as +biur) ] a n-anman sund]]

Neg say-1s their names here

‘I do not say their names’.

The reader may have noticed that in allowing the two verbal heads (the preverbal and
the verbal root) to raise to separate functional categories, CPH may well have created a violation of the Head Movement Constraint (HMC) (Travis 1984). Consider (94), which is a diagram representing a strict interpretation of CPH's analysis:

94)

\[
\begin{array}{ccc}
\text{CP} & \text{IP} \\
\text{as} & \text{VP} \\
\text{I buir} & \text{Subj} \\
\text{Pro} & \text{V'} \\
\text{V} & \text{V'} \\
\text{t} & \text{V'} \\
\text{in so} & \text{ADVP}
\end{array}
\]

It appears as if the verbal root skips the intermediate preverb on its way to INFL. Similarly, the preverb seems to skip the intermediate inflectional heads on its way to C°.

This problem is especially acute in the cases where more than one preverb appears, as in (95). In *ad·cosnai* "strives after" (*ad-com-sní*), the first preverb moves to the C° head, but the other preverb is incorporated with the verbal root (*com + sní → •cosnai*). This type of example shows that there are cases where the verbal root *does* incorporate into a preverb.

95)

\[
\begin{array}{ccc}
\text{ad} & \text{VP} \\
\text{com} & \text{V'} \\
\text{sní} & \text{V'} \\
\text{to C} & \text{to INFL}
\end{array}
\]

This incorporation suggests a solution to the HMC violation. The verb head-moves from
preverb to preverb, skipping none (in compliance with the HMC) and incorporating each preverb as it raises. After the verb has raised to the highest projection in the inflectional complex, the filled C° requirement is still not met. In order to satisfy this requirement, the first preverb in the string (the least embedded preverb) excorporates (see Watanabe (1993) for more discussion) and moves into C°. This is illustrated in (96).

96)

This excorporation account, satisfying the requirement on filled C°s, gives good empirical coverage of the phonological distribution of the preverbs. The HMC problem aside, the two different phonological domains formed by the complementizer head and the verbal head and the alternations in the shape of the preverbs strongly suggest that Old Irish had a weak V2 requirement.

The final piece of evidence which CPH present in favor of their approach comes from the position of object enclitics. Old Irish has Wackernaglian second position enclitics (E) which include object pronouns, relative pronouns, and conjunctions. The enclitic pronouns are always found after the first morphological element in the verbal complex (97). The following examples are taken from Strachan (1984):
The distribution of enclitics is somewhat puzzling from a syntactic perspective; sometimes they precede the verb (when there is a preverb or conjunct particle); other times they follow the verb (when the verb is absolute). This distribution is transparent when we assume, following CPH, that Old Irish had a filled C° requirement. Once we make this claim, the distribution of enclitic pronouns is straightforward:

(98) Enclitics (E) adjoin to C°.37,38

This is true whether the C is filled by a conjunct particle, a preverb or an absolute verb form.

Let us consider a few derivations. The underlying structure and verb raising to the left edge of IP of the sentence bertaigth-i “he shakes him” is shown in (99).

99) \[
\begin{array}{c}
\text{CP} \\
[Ø]\text{IP} \\
[\text{INFL}] \\
[\text{v’ bertaigth}\text{ i}] \\
\end{array}
\]

The filled C° requirement must still be met, as must the requirement on object pronominal encliticization. So the verb raises to C°, and the object clitic adjoins to it (100):

---

36 This form is later replaced by no-s•mbertaigedar, where the clitic is hosted by the semantically null preverb no. However, the absolutive form continues to be used when there is no object pronoun. We will be concerned mainly with the period when object clitics adjoined after the main verb.

37 An equally empirically adequate account, consistent with the analysis of verb movement to C° proposed here, is found in Duffield (1994). He proposes that there is an extra position between the highest Inflectional position and the C°. This is the “Wackernaglian” head. The pronominal clitics could occupy this position in Old Irish and still be consistent with the analysis of verb movement presented here.

38 Old English clitics have been analyzed as marking the left edge of IP in a similar manner, see, e.g., Pintzuk (1991). This principle could equally be termed as the left adjunction of enclitics to IP in a similar manner.
With this structure, then, we get the correct absolute inflectional marking and the correct object enclitic placement.

Let us now consider the more complicated example of a verb with a preverb such as aton•cí “he sees us”. The underlying structure will look like (101):

The C° requirement is met by raising the preverb ad-. The verb raises, through all of the inflectional heads to the left edge of IP, and the object cliticizes to C° (102):
Finally, let us consider the complicated case of a verb with both a preverb and a conjunct particle: *Ní-t• accai* ("he does not see you"). The underlying structure is:

103) \[
[C_P[Ní] [I_P [I_NFL [V_P pro [V· [ad] [v [cí] (obj-t-) ]]]]]]
\]

The conjunct particle occupies C° and satisfies the filled C° requirement. The pronominal object cliticizes to C°. The verb first incorporates into its preverb then proceeds through the inflectional heads (104) to the left edge of IP:

104) \[
[C_P [C+E Ní-t] [I_P [I_N+V ad+cí] [v_p pro […]]]
\]

CPH thus account for the complex and intricate behavior of verbs, preverbs, particles and clitics in the Old Irish verbal complex. They argue that Old Irish makes use of raising to C° due to a filled C° requirement. The fact that the pretonic and the rest of the complex behave metrically like two words rather than one follows from the fact that the two elements are in different structural positions in the sentence, forming a "clitic group" rather than a single phonological word. The distribution of absolute inflection is now definable in a systematic way: when the verb has raised to C° it takes different morphology. Finally, the position of enclitics is now uniformly accounted for. They always attach to C°, whether this be a preverb, conjunct particle, or the verb itself. The fact that this analysis provides a systematic account for these facts is a strong argument for the raising to C° analysis. The filled-Comp requirement, not active in Modern Irish, thus explains many facts about the Old Irish verbal complex that would otherwise remain mysterious.
2.4 Chapter Summary

In this chapter, I've attempted to provide some strong evidence against both the flat structure and subject lowering approaches to VSO order, in particular for Irish. I have also attempted to show, following McCloskey (1991) that in principle, the approach of verb raising is the correct one for Irish. Within the confines of this approach, I have presented evidence that such an option may well be present for deriving VSO order in Old Irish, but that following McCloskey (1992b) it is not tenable for Modern Irish. With this as background I turn, in the next chapter, to the possibility that VSO order in Modern Irish involves raising to the highest head in the inflectional complex. I will survey the various versions of such an analysis and will present one of my own, synthesizing the best aspects of these previous analyses.