VP Movement and Verb Doubling[*]

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Warning: Work in progress!

1 Introduction

When VP-topicalization (vpt) occurs in V°-to-T° movement contexts, it appears that there are at least two things that can happen:

(1) Verb doubling:

a. [Leer el libro] Juan lo leyó.
   read.inf the book, Juan cl read.pst.3sg

   'As for reading the book, Juan read it.'   *Spanish* (Vicente 2007:110, (113))

b. [Lavar o carro] o João lavou.
   wash.inf the car, the João wash.pst.3sg

   'As for washing the car, John washed it.'   *Portuguese* (Bastos 2001:47, (2))[1]

(2) 'Default' verb (Sw. *göra*, Da. *gøre*, 'do', No. *gjøre*):

a. Johan lovede at køre bilen og [køre bilen] gjorde han.
   Johan promised to drive.inf car.def and drive.inf car.def *gøre*.pst he

   'Johan promised to drive the car, and drive the car he did.'   *Danish* (Platzack 2008:(4b))

b. …och [körde bilen] gjorde han.
   and drive.pst car.def *göra*.pst he.

   'and drive the car he did.'   *Swedish* (Platzack 2008:(5b))

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[*] Many thanks to Ellen Woolford, Kyle Johnson, Mateus Barros, Fernanda Mendes, Luis Vicente, and participants in the Syntax Seminar at UMass (Fall 2012).

[1] Translation from Vicente (2007:65). Bastos 2001 is written in Portuguese so I provide translations from Vicente (2007, 2009) where possible, but unless indicated otherwise I will use my own glosses and translations.

  c. Spille/Spiller golf gjør jeg aldri.
    play.INF/play.PRES golf *gjøre*.PRES I never

    'Play golf, I never do.'   *Norwegian*[2] (Lødrup 1990:(1))

Doubling of the verb is evidently ungrammatical in the latter languages (Houser et al. 2006, Teleman et al. 1999).

(3) *Jasper lovede at vaske bilen, og [vaskede bilen] vaskede Jasper.
    Jasper promised to wash car.DEF and wash.PST car.DEF wash.PST Jasper

   Intended: 'Jasper promised to wash the car, and wash the car he did.' *Danish* (based on
   Houser et al. 2006:(4″))

In addition to this, different languages have different requirements on the form of the verb in the fronted material:

- Spanish and Portuguese require infinitives or past participles.

- Swedish requires inflected forms.

- Danish and Norwegian lets speakers choose one or the other.

There are two main questions I am interested in here:

1. How do we account for differences in verbal morphology in fronted material?

2. What makes one language have verb doubling while another has default verbs?

The supposition I want to follow here is that the answers to these questions lie with morpho-syntactic differences between how verbs get morphology in each language.

- Doubling is associated with verb movement. (Vicente 2007, Bastos 2001, Landau 2006).[3]
  The implication, then, is that if there is no verb movement, then there is no doubling![4]

- Spanish and Portuguese have verb movement in all contexts (Depiante and Vicente 2012, Gallego 2007, Silva 2001), so these languages have verb doubling.

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2 The facts regarding Norwegian *gjøre* appear to be parallel to those in Danish and Swedish (Lødrup 1990). However, I know of no thorough discussion of the facts in Norwegian, at least, none comparable to the discussions of Danish and Swedish, so I will focus on these latter two, occasionally referring to Norwegian to supplement the Danish and Swedish data.

3 I use 'verb movement' as a cover term for any movement of the verb out of *v*P; *e.g.*, V°-to-T° or V°-to-Asp° movement.

4 It's worth noting that it is not clear to me whether movement is strictly necessary in a theory such as Landau's (2006), whose work I reference throughout. For him, copies may be pronounced in order to satisfy certain morpho-phonological requirements that would go unmet if the copies were left unpronounced. This suggests that in a language like English, where verbs do not move, that a verb could be pronounced in order for Lowering/Affix Hopping to occur even when that verb might otherwise not be pronounced. Since issues of lowering in English are a bit far afield of the topic here, I leave this issue aside.

- Although Scandinavian has verb movement in matrix clauses,[5] it does not generally have it in embedded clauses (Vikner 1995). This means that at least in some contexts we expect verb doubling not to occur.

- Consequently, we might expect to see differences in just this domain.

The difference in verbal morphology on the fronted material can be tied to these facts.

- Verb raising apparently occurs in Spanish and Portuguese in order to assign morphology to the verb. Thus if the fronted material contains the morphology, it will appear in the fronted material as well.

- Scandinavian, because it does not have obligatory raising, has to assign morphology in some other way. If we assume that the morphology is assigned via Agree in the syntax (as suggested by Adger (2003)), then the features the verb can be copied into the fronted material.

However, the fact that default verbs must occur in Scandinavian is more difficult.

- This will raise more questions than I can answer.

A roadmap for today:

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2   Verb movement in Romance and Scandinavian

In this section I describe the various differences between verb movement in Romance and Scandinavian.

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5   What I call the Scandinavian languages here – Danish, Norwegian, and Swedish – are more properly referred to as the Mainland North Germanic languages. Writing that out multiple times gets tedious, though.

2.1 Spanish and Portuguese

Verbs move out of the VP in Spanish and Portuguese, to T° when they are finite, or to an Asp° position when they occur with auxiliaries.

- This has been shown for Spanish (see discussion in Depiante and Vicente 2012:90–94)

- …and for Portuguese (see Silva 2001).

Finding where the verb is in these languages is not as simple as using adverb placement, since adverbs may appear on either side of the verb (Pollock 1989:370, n.8):

(4) a. Juan ⃞lee⃞ siempre los libros.
         Juan reads always   the books

     b. Juan siempre ⃞lee⃞ los libros.
         Juan always   reads the books

         'Juan always reads the books.'[6]   *Spanish* (Depiante and Vicente 2012:90, (4))

(5) a. A Bia ⃞faz⃞ sempre o   dever de casa.
         the Bia does always the work of house

     b. A Bia sempre ⃞faz⃞ o   dever de casa.
         the Bia always does the work of house

         'Bia aways does the homework.'   *Brazilian Portuguese* (Silva 2001:60, (43a,b))

However, there are other ways of telling. Instances of VSO order in Spanish are typically taken to be an instance of the subject remaining in Spec$v$P, while the verb moves to T° (Gallego 2007:268).

(6) Todos los días [$_{TP}$ compra [$_{vP}$ Juan [$_{VP}$ el diario]]].
     all   the days [buy-3SG [Juan [the newspaper]]]
     'Juan buys the newspaper every day'   *Spanish* (Gallego 2007:262, (223a))

For Portuguese, Silva (2001:29–76) still uses adverb placement (but it's really complicated, so I won't discuss it here). However, Portuguese also strands verbs under verb phrase ellipsis (Cyrino and Matos 2002):

(7) A Ana não <u>leva</u>   o computador para as aulas, porque os amigos
     the Ana not bring.PRES.3SG the computer   to   the classes, because the friends
     também não <u>levam</u>   Δ.
     too   not bring.PRES.3PL

     'Ana does not bring her computer to the classes because her friends do not either.' Portuguese (Cyrino and Matos 2002:120, (9))

- The assumption here, following Goldberg (2005), is that a verb moves out of the VP and the verb phrase subsequently deletes at PF.[7]

- This is therefore evidence that verbs escape the VP in Portuguese.

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6 My glosses and translation.
7 Indeed, verb stranding ellipsis and verb doubling are related phenomena. See Appendix A.

2.2   Scandinavian

In the mainland North Germanic languages, there is an asymmetry in the placement of verbs:

- In matrix clauses (8), verbs show up to the left of negation and VP-adverbs.

- In embedded clauses (9), verbs (by default) show up to the right of negation and VP-adverbs.

(8)   Peter ⟨drikker⟩ <u>ofte</u> kaffe om morgenen.
      Peter drinks   often coffee in   morning.DEF
      'Peter often drinks coffee in the morning.'   DA (Vikner 1995:47, (33c))

(9)   Vi ved [$_{CP}$ at   Peter <u>ofte</u> ⟨drikker⟩ kaffe om morgenen]
      we know [that Peter often drinks   coffee in   morning.DEF]
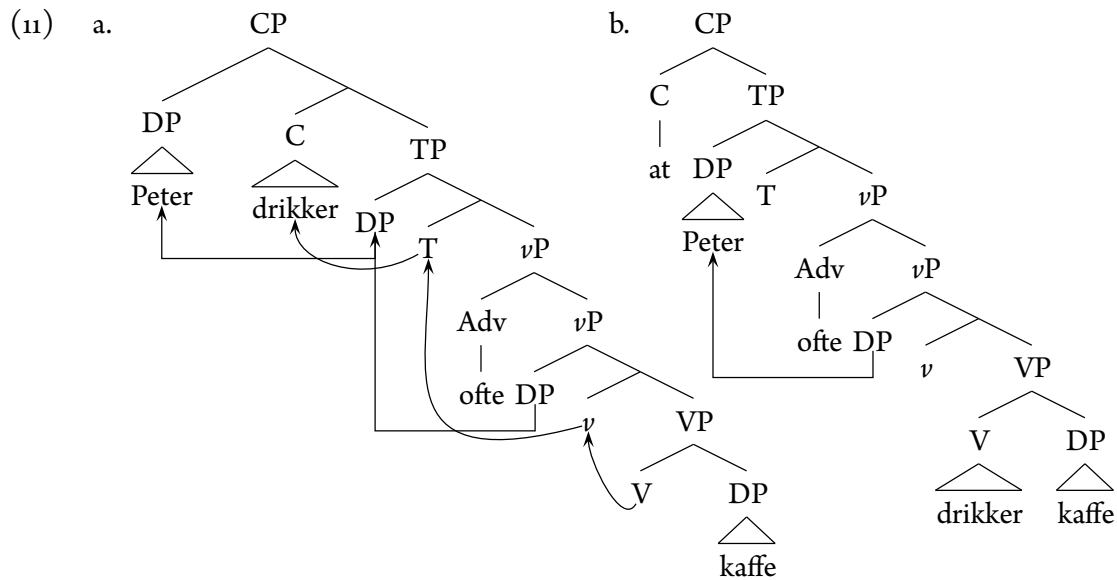   'We know that Peter often drinks coffee in the morning'   DA (Vikner 1995:47, (33f))

In matrix clauses, excepting a few cases that do not concern us here, the finite verb is always preceded by some phrasal element—the subject in (8) above, or some other fronted elements, like the direct object *denne bog* in (10).

- The position of the verb is traditionally called SECOND POSITION.

- The the element before the verb is said to be in FIRST POSITION.

(10) $\overbrace{\text{Denne bog}}^{1} \overbrace{\text{har}}^{2}$ Peter læst.
       this book   has Peter read.
       'This book Peter has read.'   DA

The standard account, usually attributed to Vikner (1995), is that in matrix clauses there is V°-to-T°-to-C° movement, whereas verbs in embedded clauses remain *in situ*.

- C° is second position.

- SpecCP is first position.

(11)   a.

```
                    CP
              _____|_____
            DP       C      TP
           /\       /\    ___|___
         Peter   drikker DP      ...
                         T   vP
                          Adv   vP
                          |   ___|___
                        ofte DP   vP
                              v     VP
                                  __|__
                                 V     DP
                                      /\
                                    kaffe
```

b.

```
              CP
           ___|___
          C       TP
          |    ___|___
          at  DP      T   vP
             /\      Adv   vP
           Peter     |   ___|___
                   ofte DP  v    VP
                          __|__
                         V      DP
                        /\      /\
                     drikker  kaffe
```

- Some authors have argued that the verb does not always make it to C° in matrix clauses (see, for instance, Mikkelsen 2010).

- There is still general consensus, however, that the verb does make it as far as T° to get past the adverb, which is the more important fact here.

An important conclusion to be reached from this is that Scandinavian must have some mechanism other than verb movement for placing morphology on verbs.

- The verb does not always move through T° or Asp°, but the verbs still receive that morphology anyway.

- This indicates that verb movement is not (always) responsible for verbal morphology.

> - In other words, verb movement is obligatory when possible, but Scandinavian does not need to use it to join the verb with tense or aspect morphology.

Work on English has turned up a number of suggestions for how to deal with observations like this. For instance:

- Affix hopping (Chomsky 1957)

- Post-syntactic lowering (Embick and Noyer 2001:556, 561-562; a.o.)

- Feature valuation by agree (Adger 2003)

I will say more about this in §4.2.

What I want to suggest in the coming sections is that this separate mechanism for assigning verbal morphology is in part responsible for the differences between Romance and Scandinavian.

- The hope is that we can derive some of the differences between the two sets of languages if we assume that the mechanism for assigning morphology always applies in Scandinavian but never does in Romance.

- Mikkelsen (2006) mentions a similar idea. She suggests that V°-to-C° movement in Scandinavian happens for purely syntactic reasons rather than for morphological reasons.[8]

2.3   Summary

> Both Romance and Scandinavian have verb movement.
>
> - Romance has it in all clauses.
>
> - Scandinavian only has it in matrix clauses. In embedded clauses, the verb remains low.
>
> - Because verbs remain low, Scandinavian must have some other means of placing tense morphology on verbs.

3   Properties of fronted verb phrases

In this section I describe the various differences between the fronted material in verb phrase fronting.

- It appears that in both languages, the fronted verb phrases is a vP.

- In Romance, we will see that, under normal circumstances, the fronted verb phrase must contain a verb in the infinitive unless the phrase is passive.

- Scandinavian is subject to considerably more variation. All languages permit, to some degree, the fronting of inflected verb forms in addition to infinitives.

3.1   Romance

3.1.1   Morphological properties

In both Spanish and Portuguese, the verb in the fronted VP must be in the infinitive form.

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8   In the context of her work, this is meant to explain why there is no doubling in VPE contexts, though I believe she goes on to suggest that head movement functions differently in each language.

(12)   <u>Leer</u>   el libro rápido, Juan lo leyó.
        read.INF the book fast   Juan CL read.PST.3SG

        'Read the book quickly, John did.'   SP (Vicente 2007:76, (41))

(13)   <u>Lavar</u>   o   carro, o   João lavou.
        wash.INF the car,   the João wash.PST.3SG

        'Wash the car, John did.'   PT

The exception is in passives (at least in Spanish), where the fronted verb is in the participle form.

(14)   <u>Entregada</u>/*Entregar   al   ganador, la medalla   ha sido
        awarded.PASS.FEM/award.INF to.the winner,   the medal[FEM] has been

        entregada.
        awarded.PASS.FEM

        'Awarded to the winner, the medal has been.'   *Spanish* (Vicente 2009:171, (20))

3.1.2 Syntactic properties

Vicente (2007:71–78) argues that the fronted material must be exactly a *v*P.

- Assuming that *v*° carries information about the voice of the clause (following Kratzer 1996), and assuming that the verb moves to this position, data like that in (14) suggest that the fronted material contains *v*°.

- Other considerations include the fact that higher material, such as aspectual morphology, is never included in the fronted material, and that irregular forms of verbal roots conditioned by tense do not appear in the fronted material (*c.f.* Yiddish (Cable 2004) and Hungarian (Vicente 2007)).

In both Spanish and Portuguese, the fronted verb phrase seems to be a topic in the sense of (Rizzi 1997).

- The fronted elements are discourse-old information.

- They appear in the left periphery of the clause.

- Both Vicente (2007) and Bastos (2001) place the fronted *v*P in SpecTopP.

One important assumption is that the fronted *v*P in cases like (1) are moved (*i.e.,* copied) to that position rather than base-generated there.

- The main evidence comes from islands. Long-distance extraction is possible (15), but islands interfere (16).

(15)   Emprestar a   caneta para a   Maria, o   Pedro disse que o   João emprestou.
        lend.INF   the pen   for   the Maria the pedro said that the João lend.PST.3SG

        'As for lending the pend to Mary, Pedro said John did.'   PT (Bastos 2001:12, (31c))

(16)   * Emprestar a   caneta para a   Maria, eu conhenço o   aluno   que emprestou.
       lend.INF the pen   for   the Maria I   know   the student that lend.PST.3SG

       Intended: 'As for lending the pend to Mary, I know the who student did.'
       Lit. 'Lend the pen to Mary, I know the student who did.'   PT (Bastos 2001:13, (33a))

Another fact that lends itself to the movement analysis is the fact that the verb copies must match (Vicente 2009).[9]

- This falls out naturally from the copy theory of movement (Chomsky 1993, 1995). The lower verb gets copied into the higher position, so it has to match (Landau 2006).

3.2 Scandinavian

3.2.1 *Morphological properties*

In these languages, the verb in the topicalized *v*P can appear either in an inflected form or in the infinitive (Platzack 2008):

- In Norwegian and Danish, this is optional (Lødrup 1990, Platzack 2008), though Mikkelsen (2011) notes that fronting the infinitive is preferred in Danish.

(17)   …og kørde/køre   bilen   gjorde han.
       and drive.PST/drive.INF car.DEF *gøre*.PST he
       'and drive the car, he did.'   DA (Platzack 2008:(5a))

(18)   Spille/spilt   golf har   jeg aldri gjort.
       play.INF/play.PTPC golf have I   never *gjøre*.PTPC
       'Play golf, I never have.'   NO (Lødrup 1990)

- The fronted verb <u>must</u> occur in an inflected form in Swedish:

(19)   …och körde/*köra   bilen   gjorde han.
       and   drive.PST/drive.INF car.DEF *göra*.PST he
       'and drive the car, he did.'   SW (Platzack 2008:(5b))

Note that when inflected, this inflection is what the verb would have received had it been *in situ*, and that it matches the inflection on *göra/gøre*.

- This has been suggested as some sort of weird connectivity effect (but see Mikkelsen 2011).

9 For both Spanish and Portuguese (Vicente 2007:82–83), there is subset of speakers for whom the non-topic verb phrase can contain more specified information about the topic, the so-called 'genus-species effect':

(i)   % Comer peixe, eu normalmente como   salmão.
      eat.INF fish   I   usually   eat.PRES.1SG salmon
      'As for eating fish, I usually eat salmon.'   PT

Cable (2004) points out that this construction cannot be derived by movement. Indeed, Vicente (2007) shows that speakers for whom constructions like (i) are grammatical accept apparent island violations that do not cross clause boundaries. However, factoring out this group of speakers, a movement analysis is still required for speakers who do not accept either of these.

3.2.2 Syntactic Properties

As in Spanish in Portuguese, fronted verb phrases appear to be topical elements, representing discourse-old information. Also as in Spanish and Portuguese, the verb phrase can be moved long distance. They are island sensitive, which suggests a movement analysis (but see Appendix B).

(20) Läste   boken   sa John [$_{CP}$ att han gjorde].
      read.PST book.DEF said John [that he *göra*.PST]

      'Read the book, John said that he did.'   sw (Platzack 2008:(6a))

(21) * [$_{vP}$ Lave   mad]$_i$ går   de tit   ud og spiser [$_{CP}$ selvom   han kan t_i]
        make.INF food   go.PRES they often out and eat.PRES   even.though he   can

      Intended: 'They often go out to eat, even though he can cook.'   DA (Houser et al. 2010:(50))

What is harder to establish here is precisely what material gets fronted.

- Platzack (2008) argues that it is in fact VP (or $\sqrt{}$P) that is fronted in Scandinavian.

- Houser et al. (2010) assume the fronted material is in fact a *v*P.

Platzack provides some evidence that sentence adverbs do not front under VP topicalization:

(22) a.   Vi sjunger   ofta i kyrkan.
            we sing.PRES often in church.DEF

      b.   Sjunger gör   vi ofta i kyrkan.
            sing.PRES *göra*.PRES we often in church.DEF

      c. * Sjunger ofta gör   vi i kyrkan.
            sing.PRES often *göra*.PRES we in church.DEF

            'We often sing in church.'   *Swedish* (Platzack 2008:(25a–c))

However, Landau (2006) notes that sentence adverbs in Hebrew cannot front either.

(23) (*lo) (*tamid) le'horid et   ha-maym, Gil lo   tamid morid.
      (not) (always) to-flush ACC the-water Gil not always flushes

      'As for flushing the toilet, Gil doesn't always flush.'   *Hebrew* (Landau 2006:38, (25))

Landau (2006:46–50) goes on, though, to argue that the fronted material must contain at least a *v*P.

- Verbal roots in Hebrew, as in other Semitic languages, are consonantal. These consonants can be arranged in different patterns.

- The different patterns are associated with different *v*°s (following Arad 2003).

- The fronted patterns show up these patterns.[10]

This might be telling us that the adverb test might not be reliable in fronting situations.

- So, let's hold off for now on whether it is *v*P or VP that fronts.

Interim Summary

These are some of the relevant properties for the languages we are looking at.[11]

	Mvn't for Infl.	Infl in VPF	Copy/Default
Spanish	Yes	No	Copy
Portuguese	Yes	No	Copy
Danish	No	Yes/No	Default
Norwegian	No	Yes/No	Default
Swedish	No	Yes	Default

As the table shows, languages whose verbs can carry inflection in the fronted verb phrase do not need verb movement for inflection. These languages independently need a strategy other than raising to put morphology on verbs. Moreover, these are the languages with default verbs.

4 Verbal morphology and fronted VPs

In this section I want to sketch one way of accounting for the differences between Romance and Scandinavian.

- This approach will rely on differences in the way each languages assigns morphology to the verb.

4.1 Spanish and Portuguese

The analysis of Spanish and Portuguese is fairly well-established. If we assume that verb movement happens in Spanish and Portuguese in order for the verb to pick up morphology from functional heads, following Vicente (2007), then we have an explanation as to why only infinitives and passive participle forms of the verb appear in fronted material.

- If the fronted material does not contain the affix, then it will not appear in the topicalized material.

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10 This argument from morphology is very similar in form to Vicente's (2007) above.

11 English, however, doesn't fit nicely into this box. It has no raising, but most speakers do not accept inflected verbs in the fronted verb phrase.

- The exception is infinitival morphology. Following Bastos (2001) and Vicente (2007), the infinitive can be considered the least specified form of a verb.

- Following these authors, I assume, given the tenants of Distributive Morphology (Halle and Marantz 1993) that this morphology is inserted when no other verbal morphology is available.

(24)   Lavar o carro, o João lavou.
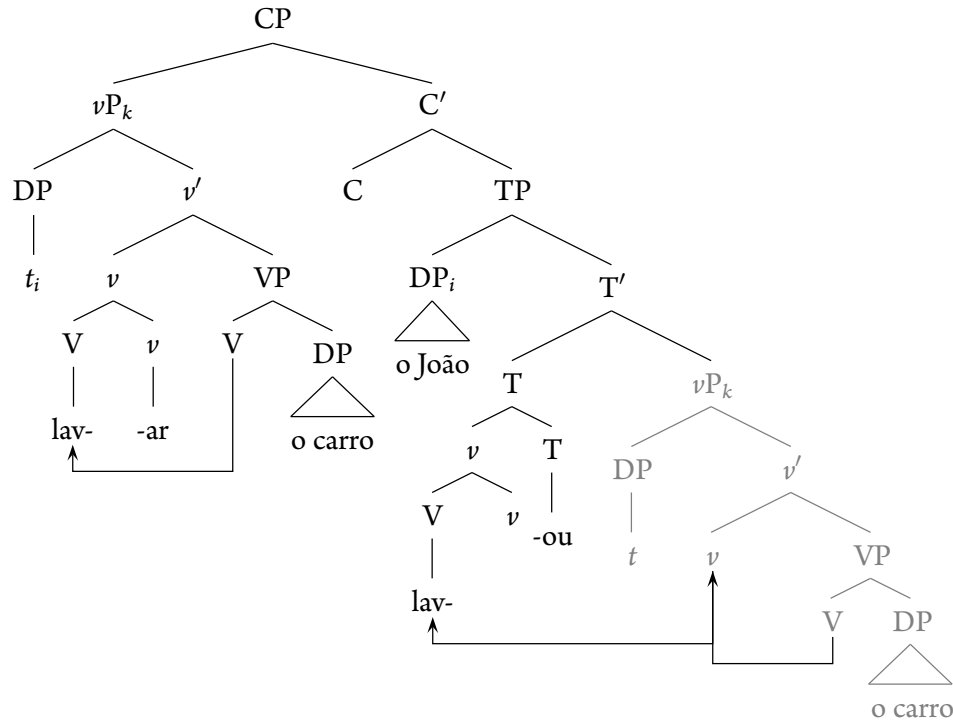
4.2 Swedish

The above analysis will not work for Swedish.

- In Swedish, fully inflected forms must appear in the fronted material. The material is always in whatever form it would have been had it remained *in situ*.

- Since it is presumably only a *v*P or VP that is fronted and not TP, the tense specification on T° will not be in the fronted material unless it gets on the verb by some other means.
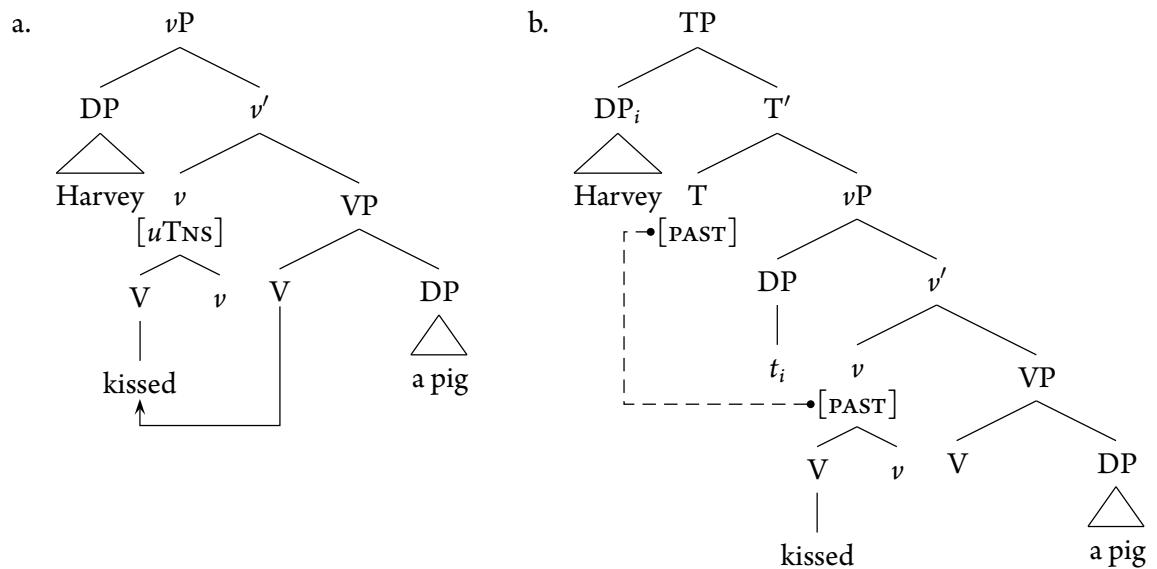
However, we have seen that Scandinavian doesn't use movement to assign morphology to verbs.

- As I noted previously, Swedish independently needs a way to assign verbal morphology to verbs that doesn't involve movement.

- This is necessary because there would be no explanation for why they get tense morphology in embedded clauses where they do not move to T°.

Consequently, I will propose that Swedish values morphological tense features in the syntax, following the system for verbal morphology set up by Adger (2003).

- Under this system, $v°$ enters the derivation with an unvalued tense feature (25a).

- When vP merges with T° or an auxiliary, they into an agree relation that values a Tense feature on the verb (25b).

(25)   Harvey kissed a pig.

a.
```
            vP
          /    \
        DP      v′
       /△\     /  \
   Harvey  v      VP
        [uTNS]   /  \
         / \    V    DP
        V   v   |    /△\
        |    kissed  a pig
      kissed↑_____|
```

b.
```
            TP
          /    \
       DPᵢ      T′
      /△\      /   \
  Harvey T        vP
       ┌→[PAST]  /  \
       ¦       DP    v′
       ¦       |    /  \
       ¦      tᵢ   v     VP
       ¦         [PAST] /  \
       └────────→      V    DP
                      /△\   /△\
                     V   v  V   DP
                     |    kissed  a pig
                   kissed
```
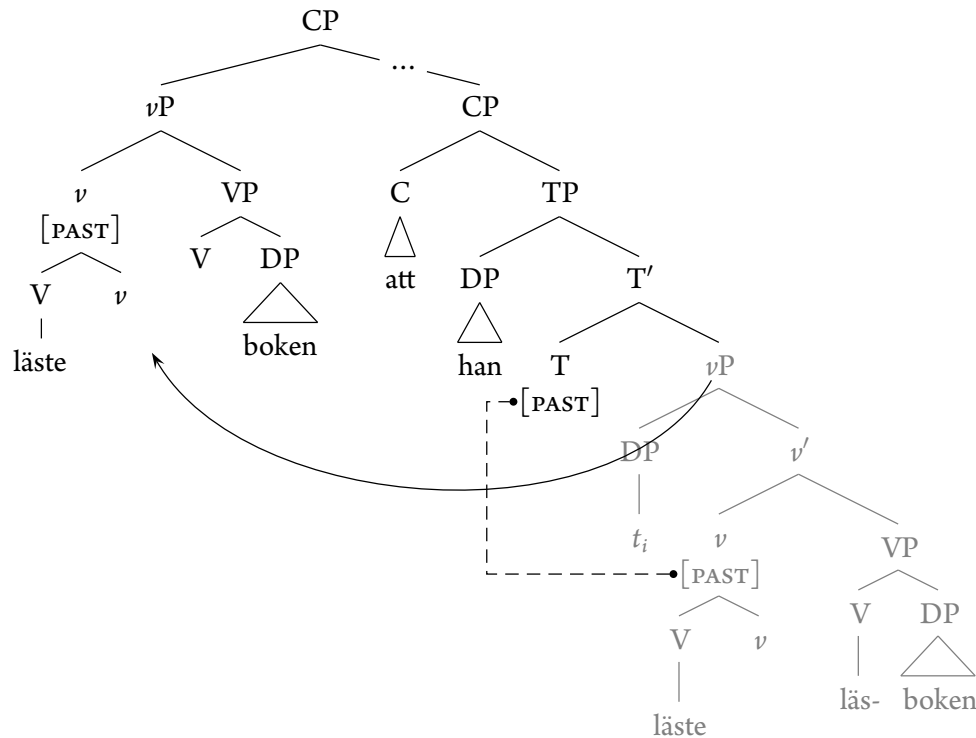
This explains why the fronted material is fully inflected:

- This valuation occurs at merger, in the syntax, before vP is fronted.

- So when vP is fronted, it should carry this valuation with it.[12]

This is schematized here (ignoring, for now, the problem of the default verbs). I assume that there is some short movement from V° to v°.

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12 Interestingly and problematically, this doesn't actually work for English VP Topicalization. See Embick and Noyer 1999:275.

(26)   Läste boken sa Jon att han gjörde.

CP
...
vP
CP
v [PAST]
VP
C
TP
V
DP
att
DP
T'
V   v
boken
han   T
vP
läste
[PAST]
DP
v'
t_i v
VP
[PAST]
V   DP
V   v
läs-   boken
läste

4.3 How to capture optionality?

The above analysis captures the Swedish data, since fronting inflected material is obligatory. Danish and Norwegian, however, allow the option of fronting an infinitive.

- One possibility is that these languages can optionally target VP for movement instead of vP. Since vP is valued for tense, and not VP, this could potentially account for the difference.

- The trouble with this is that it doesn't block the short V°-to-v° movement that I assume above.

5   The syntax of doubling

The idea behind verb doubling is that a verb moves out of VP before the VP moves away (Bastos 2001, Vicente 2007). The verb must then get pronounced in two different places for morphological or syntactic reasons.

There are three basic ingredients:

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   i. The copy theory of movement

  ii. Verb movement movement

 iii. VP topicalization (as movement)

We have already seen how the latter two of these functions in both Scandinavian and Romance.

- In this section I will explain how copy theory interacts with these to derive doubling in Spanish and Portuguese.

- Given how this works, we expect to find doubling in Scandinavian, but it does not happen.

5.1 Copy theory and doubling

The copy theory of movement (Chomsky 1993, 1995) gives us a neat way of dealing with more than one appearance of the same element.

- Since movement is really copying of a lower element in a chain, multiple movements that contain the same element will create multiple syntactic instances of that element.

- Each of these separate instances has the potential to be pronounced.

Thus, the supposition is that there are two movements implicit in verb copying:

1. Movement of the verb out of the VP/vP to T° or to Asp° accounts for the lower copy of the verb. Assuming we already expect V°-to-T° movement, this is a place where we otherwise expect the verb to be pronounced.

2. Topicalization of the VP/vP creates a copy of the material inside the vP in SpecCP. This includes (a copy of) the verb. Thus movement of the vP makes a copy of the verb in the higher position.

   - The notion here is that there is some requirement that the topic be spelled out (Landau 2006).

(27)   Lavar o carro, o João lavou.
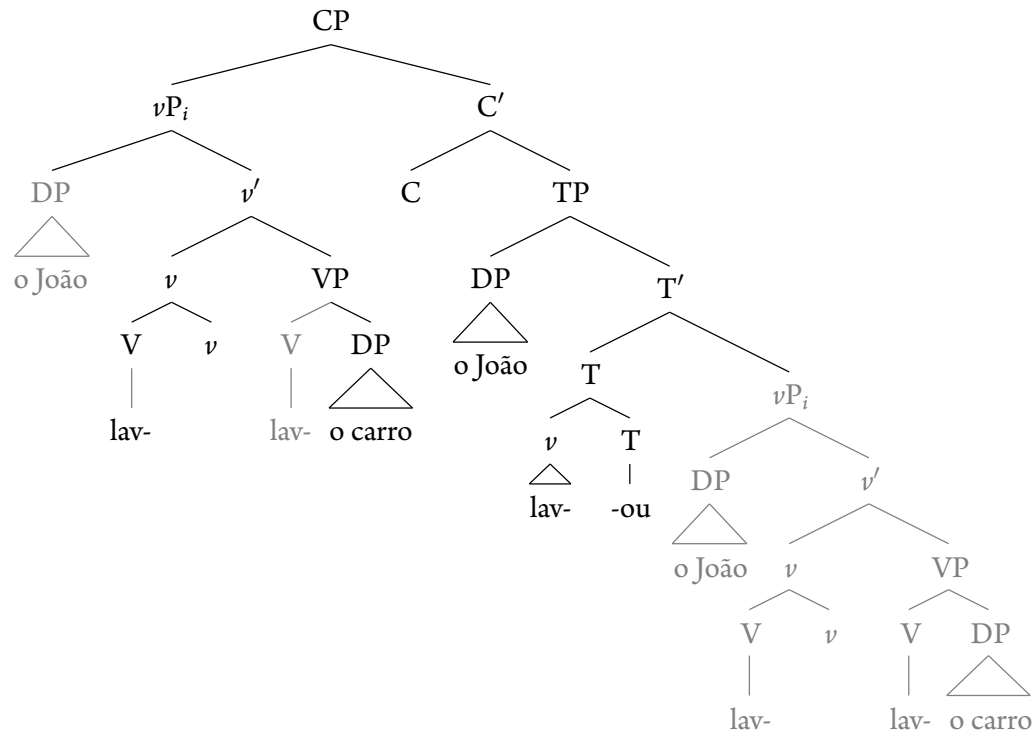
As I have already discussed, the forms of the verb do not match.

- Bastos (2001:118–126) and Vicente (2007:109–110), assuming a late insertion model of morphology (Halle and Marantz 1993), argue that infinitival morphology on the higher copy is inserted post-syntactically in the morphology, on the assumption that this is the most underspecified form of the verb.

- See also Landau 2006 on Hebrew, where the morphological facts are analogous. See Cable 2004 on Yiddish for some cool but less analogous data.

5.2   No doubling in Scandinavian

As noted in the introduction, Scandinavian does not permit verb doubling, even in matrix clauses. Instead, a default verb appears.

(28)   * …og [vaskede bilen] vaskede Jasper.
        and   wash.PST car.DEF wash.PST Jasper

       Intended: '…and wash the car he did.'   *Danish* (based on Houser et al. 2006:(4″))

(29)   …og [vaskede bilen] gjorde   han.
        and   wash.PST car.DEF *gøre*.PST he

       '…and wash the car he did.'   *Danish* (Houser et al. 2006:(4′))

This is unexpected, given the theory of verb doubling discussed above.

- There is verb movement in Scandinavian matrix clauses.

- The *v*P topicalizes.

Given this, we expect Scandinavian to behave just like Spanish and Portuguese.

- Topicalization of matrix verb phrases in Scandinavian should result in verb doubling, since the verb should independently move to C°.

The question is why this difference should exist.

- The answer to this, I suspect, is wrapped up with what is going on with the default verbs in Scandinavian.

- I turn to those now.

5.3   Properties of Scandinavian default verbs

The default verbs are:

1. Danish *gøre*

2. Norwegian *gjøre*

3. Swedish *göra*

- All three mean 'do'.

In matrix clauses, default verbs show up in second position when no other auxiliaries appear. The fronted *v*P occupies first position.

(30) $\overbrace{\text{Läser boken}}^{1}$ $\overbrace{\text{gör}}^{2}$ han nu.
read.PRES book.DEF *göra*.PRES he   now

'He is reading the book right now.'   sw (Källgren and Prince 1989:(2a))

In subordinate clauses, like (20) and (31), they appear to the right of VP adverbs, indicating that it has not moved to T°.

(31)   Spille   golf tror   jeg at   jeg aldri   gjør
play.INF golf think I   that I   never *gjøre*.PRES

'Play golf, I think I never do.'   NO[13] (Lødrup 1990)

- This is significant because it tells us that they start low in the structure. They do not automatically appear in T°, like English *do*-support.

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13 I could not, unfortunately, find a clear case of this in Danish or Swedish, but to the best of my knowledge it is true there too.

More mysteriously, they optionally co-occur with modals and some auxiliaries (Houser et al. 2010).

- When they do, they show up low again (see also (18)).

(32)　　Og [dominere　　valgkampen]　　　　har　　　det allerede <u>gjort</u>.
　　　　and dominate.INF election.campaign.DEF have.PRES it　already　*gøre*.PART
　　　　'And it has already dominated the election campaign.'　　　DA (Houser et al. 2010:(21a))

Most importantly, they do not appear in normal declarative sentences.

- Only when there is VPT or some sort of VP anaphora (like ellipsis; see Appendix A).

- Not even with emphatic stress, like English *do* (Platzack 2008).

(33)　　* Han gör　　　läser/läsa　　　　　boken　　nu.
　　　　he　*göra*.PRES read.PRES/read.INF book.DEF now
　　　　Intended 'He is reading the book right now.'　　　SW (Källgren and Prince 1989:(3a))

The low appearance leads Platzack (2008) to the conclusion that *göra* and *gøre* are support verbs inserted in little $v°$.

- He claims it is in $v°$ because of its low appearance below auxiliaries.

- It's a support verb due to its limited distribution.[14]

Houser et al. (2010) point out that if *gøre* is a $v°$, it doesn't behave much like one.

- There is only ever one form, no matter the argument structure of the clause (*cp.* the range of light verbs in Persian (Toosarvandani 2006)).

- It also doesn't occur under either the perfect auxiliary *være* or the passive *blive*. When other auxes or modals appear, all other things being equal, *gøre* can appear again.

- That is, it looks like some auxiliaries can l-select *gøre*, but others cannot.

Houser et al. (2010) conclude that *gøre* is in fact an auxiliary, occurring under aspectual heads and above vP, but with a limited distribution (they call it 'defective').

- Default verbs follow the rules of V2.

  - They appear low in the structure in embedded clauses.
  - They move to T° in Matrix clauses when nothing blocks them.

- They are plausibly auxiliaries.

  - They don't seem to be $v°$, as Platzack claims

14　Remember from above that he tries to claim that the fronted verb phrases are VPs. Default verbs appear in $v°$ when no verb is otherwise available to support the features on $v°$.

6 Toward understanding default verbs

One of the nice things that falls out from the auxiliary analysis that Houser et al. (2010) propose is that we get an understanding of why there is no doubling in these languages.

- *Gøre* and *göra* occur higher than V°/*v*° but below Asp°.

- The highest verbal element must raise to T°, so these will block main verbs from making it out of the fronted phrase.

The main question around them is they should appear at all.

- Spanish and Portuguese get by just fine without them.

I want to return to verb movement – or really, the lack thereof – as a possible source for an explanation.

6.1 Non-movement in subordinate clauses

In subordinate clauses, there is no V°-to-T° movement in Scandinavian, and as we saw above this applies to default verbs too.

- If there were no default verb, tense morphology would be assigned to the verb as normal.

- However, topicalizing the verb without the default verb is ungrammatical.

(34) Läste   boken   sa John att han *(gjorde).
      read.PST book.DEF said John that he *göra*.PST
      'Read the book, John said that he did.'

My current (admittedly vague) hypothesis is that this has to do with the proper licensing of empty categories.

- The default verb must be there in order to license the trace of *v*P movement.

- This is not an issue in Spanish and Portuguese, because there is always a copy of the verb adjacent to the trace.

- However, in subordinate clauses, Scandinavian does not have any over material adjacent to the trace, and so a default verb is necessary to license that position.

6.2 Problems with this approach

There is a big question, though, as to how this gets extended to matrix clauses:

- If this is correct, raised verb should be able to license the trace just as in Spanish and Portuguese.

- Is some sort of generalization at work here?

- It has recently come to my attention that Aelbrecht (2010) has tried to unite licensing conditions on ellipsis with verb phrase topicalization. The default verbs in Scandinavian are implicit in ellipsis, too. Could default verbs in Scandinavian be a special kind of licensing head?

Another question is how to understand how tense appears on both the default verb and in the fronted verb phrase.

- Perhaps some sort of feature-sharing mechanism like the one implemented by Platzack (2008) would work.

Finally, what precludes default verbs from appearing when a verb is available?

- This might be related to the answer to the first question.

7 Conclusion

The differences between VP fronting in Scandinavian on the one hand and Spanish and Portuguese on the other are fairly straightforward, but accounting for them proves difficult.

- Given the discussion in §3, it seems reasonable to conclude that these differences should be localized to how morphology is assigned to verbs in each set of languages.

- Differences in fronted verbs should fall out from whether the languages have raising for morphology or some Affix-Hopping-like mechanism.

- The link between verb doubling and verb raising is fairly well established, but this may be interrupted by language-specific facts about verb raising.

A On vpe

It is worth noting that, theoretically speaking, verb doubling falls under the aegis of verb stranding, where a verb appears without any VP-internal material. Verb stranding can result from many processes; for instance, in addition to VP-fronting, verb stranding comes about as a result of verb phrase ellipsis (vpe) in Portuguese:

(35) A   Ana não <u>leva</u>   o   computador para as aulas,   porque os amigos
      the Ana not bring.PRES.3SG the computer   to   the classes, because the friends

      também não <u>levam</u>.
      too   not   bring.PRES.3PL

      'Ana does not bring her computer to the classes because her friends do not either.'   PT
      (Cyrino and Matos 2002:120, (9))

Again, the assumption here is that there is V°-movement out of VP. The difference here is that the VP in which the verb originates deletes instead of moving to a higher position (Goldberg 2005).

To the extent that Swedish and Danish have VPE, we see the same pattern that we saw in (2) above: the verb *göra/gøre* comes in, rather than verb doubling (see Mikkelsen 2006).

(36) Mona vaskede   ikke bilen   men Jasper <u>gjorde</u>.
      Mona wash.PST not car.DEF, but Jasper *gøre*.PST

      'Mona didn't wash the car but Jasper did.'   DA (Houser et al. 2006:(5′))

(37) * Mona vaskede   ikke bilen   men Jasper <u>vaskede</u>.
      Mona wash.PST not car.DEF, but Jasper wash.PST

      Intended: 'Mona didn't wash the car but Jasper did.'   DA (Houser et al. 2006:(5″))

I am going to leave the VPE data aside, however, since I do not know of any work that investigates the phenomenon in Scandinavian in detail. In particular, I worry that the phenomenon may be pronominal in nature, rather than a true deletion phenomenon (see Hankamer and Sag 1976).

B   VP-topicalization in Danish as base generation

Houser et al. (2010) and Mikkelsen (2011) adopt the idea that VP topicalization in Danish is in fact base-generation with null operator movement.

- This is, essentially, VP left dislocation with a null pronoun.

- Under this analysis, the fact that there is no verb doubling falls out for free. Since the *v*P is never in a low position, the verb can never raise out of it.

- Operator movement accounts for the islandhood effects (21).

- *Gøre* introduces pronominal *v*Ps. Must be present to support the morphology on the verb if no other

    - This means that we must assume ellipsis and *det*-anaphora to be pronominal in Danish.[15]

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15 Houser et al. (2007) have argued previously that *det*-anaphora in Danish is in fact surface-anaphoric rather than pronominal in nature. Thus, they abandon their previous position. They provide no independent evidence for or against a pronominal analysis of ellipsis, except that they note that they must abandon the UTAH (Baker 1988).

(38)   Køre   bilen   gjorde   han.
        drive.INF car.DEF *gøre*.PST he

        'Drive the car he did.'
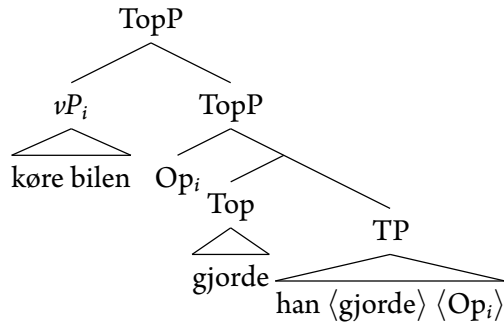
However, there is no positive evidence to support this claim in Danish.

Houser et al. (2010) base their argument for the null pronoun by analogy to Dutch, following Zwart (1997).

- The argument does not clearly carry over to Danish.

  – Zwart (1997) argues that VP-fronting in Dutch must be left dislocation with a null pronoun.

  – This is based on the observation that fronting nearly every other phrase in the language requires an overt pronoun.

  – But VP-fronting doesn't have any pronoun associated with it. Positing a null pronoun avoids an apparent exception.

  – The trouble is that the same is not true for Danish. Lots of things front into first position in Danish without a pronoun. Thus, the argument from Dutch does not carry over straightforwardly.

Mikkelsen (2011) makes a Danish-internal appeal to a construction she refers to as VP left dislocation (VPLD) (also briefly mentioned in Houser et al. 2010; see also Källgren and Prince 1989 for Swedish):

(39)   a.   [Overtale   banken] det tror jeg nu ikke de   kan.
              persuade.INF bank.DEF DET think I   now not they can.PRES

              'I don't think they can persuade the bank.'   DA (Mikkelsen 2011:(5b))

        b.   Läser   böker, det gör   han.
              read.PRES books, *det göra*.PRES he

              'Read books, that he does.'   SW (Källgren and Prince 1989:(6))

Mikkelsen (2011) argues that VPT in Danish should be treated exactly like VPLD on the basis that they share a number of the same properties.

- The only difference is that in VPLD you pronounce *det*, but in VPT the moved pronoun is silent.

    – Both VPLD and VPT behave the same with regard to tense marking in the fronted *v*P.

    – They also behave similarly with regard to Condition B, reconstruction effects, and islands.

It doesn't follow from this, however, that VPT and VPLD have the same analysis. Given just these facts, one could still claim that the *v*P in VPLD undergoes movement.

- Mikkelsen's (2011) only argument against this is that VPLD violates V2, the requirement that only one element precede a finite verb in a matrix clause (see §2.2).

- As can be seen in (39a), both the *v*P *overtale banken* and the pronominal element *det* precede the verb *tror*, leading to an apparently exceptional V3 pattern.

- She argues that the *v*P is base-generated adjoined to CP, thus leaving SpecCP open to be a landing site for the moved pronoun.

First of all, this is not a great argument.

- If you can just adjoin things to CP/TopP at will, then you might expect to see a greater number of violations of the V2 pattern.

- Why should we get to use adjunction to violate an otherwise robust generalization in just this instance?

This is not the only way of accounting for this data, however.

- Ott (In Press) develops a theory of left dislocation that depends on topicalization and then subsequent deletion.

- Under this view, left dislocation is really the result of two juxtaposed clauses where most of the first has been deleted under identity with the second.

- In this case, fronting of the *v*P in the first clause and fronting of *det* in the second creates two identical TPs. The first deletes under identity, leaving only the topicalized element, as under Merchant's (2004) analysis of fragment answers.

(40)   [Läser böker]$_i$ ~~gör han t_i.~~ Det$_k$ gör han t_k.

This analysis accounts for the apparent V3 pattern without having to make otherwise exceptional claims about left-dislocation structures.[16]

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16 Of course, one must in turn accept that a sentence like those in (39) are actually two utterances, and that ellipsis can apply backward across utterances.

- Under this approach, VPLD is fed by topicalization, which is why they share so many properties.

- Thus Mikkelsen's (2011) theoretical argument that the V3 pattern cannot be explained with a movement analysis does not get off the ground.

What's missing here is empirical evidence which can decide between an approach like Ott's and one like Mikkelsen's.

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