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FOFC as a PF phenomenon: Evidence from Basque clausal embedding

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The Final-Over-Final Condition (FOFC) accounts for a strong cross-linguistic generalization whereby head-final phrases do not dominate head-initial phrases. This paper evaluates the validity of narrow syntactic *vs*. PF-interface approaches to this condition by studying the FOFC-violating configurations created by clausal complementation in Basque. It uncovers the decisive role played by the phonological realization of the relevant heads. It shows that whether or not these heads have overt exponence is crucial, but that it also matters whether or not they host raised heads. Among the strategies that ensure FOFC-compliance in Basque clausal embedding are (i) displacing the embedded clause (via extraposition or pied-piping) and (ii) deletion of the higher copy (and lower copy spell out) of the offending heads within the embedded clause. The analysis also accounts for the (apparent) optionalities in embedded clause placement and in negative inversion in Basque.

1 Introduction

There is a strong cross-linguistic tendency for head-initial phrases not to be dominated by head-final phrases, attributed to the so-called Final-Over-Final Condition (FOFC) (see among others Holmberg 2000; Biberauer & Sheehan 2012; Ledgeway 2012; Sheehan 2013a; b; 2017; Biberauer et al. 2014a; Erlewine 2017; Hein & Murphy 2020; Clem 2021, and the chapters in Sheehan et al. 2017). By studying Basque clausal complementation, this paper explores the question of whether the FOFC should be modeled in narrow syntax (as in e.g. Biberauer et al. 2014a) or in the PF component (as in e.g. Sheehan 2013a; b).

Basque clausal complementation creates a syntactic configuration that does not comply with the FOFC. This paper shows how the varying word orders found in complementation 'repair' this violation, via (i) extraposition or pied-piping of the entire clause, or (ii) deletion of the higher copy of the offending heads (and lower copy spell out). The inclusion of phenomena relevant to PF in these strategies –such as phonological content or copy deletion– supports the PF approach to the FOFC. More broadly, the results converge with a growing body of research that suggests that PF factors influence more word order-related phenomena than was standardly thought (see among others Zec & Inkelas 1990; Bošković 2001; 2020; Nunes 2004; Richards 2010; Sabbagh 2014; Kandybowicz & Torrence 2015; Mathieu 2016; Anttila 2016; Bennet et al. 2016; Holmberg et al. 2020). The paper also provides an explanation of word order variation in contexts of embedding in Basque, whereby the clause-internal ordering possibilities depend on the position of the embedded clause within the matrix clause (extraposed, pied-piped, or *in situ*).

The structure of the paper is the following. Section 2 briefly introduces the FOFC, as well as some 'compliance strategies' that have been observed across languages, and explores the type of predictions that narrow syntactic *vs.* PF-interface approaches make with respect to the possibility for PF-phenomena to affect the evaluation of the FOFC. Section 3 presents some background on the syntax of Basque clausal embedding and spells out the predictions made by the two types of approaches. Section 4 shows that once we factor in clausal extraposition and clausal pied-piping as compliance strategies, the data corresponds exactly to what we would expect under an PF-interface approach. Sections 5 and 6 then discuss word order alternations that are also observed in embedded clauses, and show that they involve yet another compliance strategy, whereby it is the lower, FOFC-complying members of a head-movement chain that get spelled-out, instead of the higher, FOFC-violating ones. Section 7 concludes the paper.

2 Final-over-Final Condition

The observation initially made by Holmberg (2000) is that there is a tendency for head-initial phrases not to be dominated by head-final phrases.[1] The example in (1) shows that in Finnish,

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[1] As acknowledged in the literature on the FOFC, related observations have been made in earlier works (cf. for instance Greenberg 1963; Williams 1982; Hawkins 1994).

out of the four conceivable orderings between the auxiliary, the verb and the object, only one is unattested; namely, the one where the auxiliary is on the right and dominates a phrase whose head, V, is on the left of its own complement.

(1)   *Finnish* (Holmberg 2017a: 1)

    a. Kyllä   se on ostanut auton.   [Aux [V O]]
        indeed he has bought car

    b. Kyllä   se on   auton ostanut.   [Aux [O V]]
        indeed he has car   bought

    c. Kyllä   se auton ostanut on.   [[O V] Aux]
        indeed he car   bought has

    d. *Kyllä   se ostanut auton on.   [[V O] Aux]
        indeed he bought car   has

This pattern has been shown to be cross-linguistically robust, and to relate to the generative capacity of language, resulting from the FOFC (cf. Holmberg 2000; Biberauer et al. 2009a; b; Biberauer & Sheehan 2012; Sheehan 2013a; 2017; Sheehan et al. 2017; Biberauer et al. 2014a; b; Etxepare & Haddican 2017; Erlewine 2017; Hein & Murphy 2020; Clem 2021). There are different formulations of this condition; (2) is an adaptation of the generalization given in Holmberg (2000: 124), which I will take as a general reference:[2]

(2)   *The Final-over-Final Condition (FOFC)*:
    If a phrase αP is head-initial, then the phrase βP immediately dominating it is head-initial. If αP is head-final, βP can be head-final or head-initial.

The disharmonic configuration in (3d) below –where the head-final αP dominates the head-initial βP– is the configuration that is banned by the FOFC. It corresponds to the ungrammatical Finnish example in (1d).

(3)

    a. Harmonic,   b. Harmonic,   c. Disharmonic,   d. **Disharmonic,**
    Final-over-Final   Initial-over-Initial   Initial-over-Final   **Final-over-Initial**

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[2] Note that Holmberg (2000) does not name the generalization; the designation as the Final-Over-Final Condition (FOFC) was put forth in later work.

The remainder of this section presents two aspects of the research on the FOFC that will be central in this paper. Section 2.1 discusses structures that obviate ungrammaticality in what would otherwise be FOFC-violating configurations. Then, Section 2.2 introduces syntactic *vs.* PF-interface approaches to the FOFC.

2.1 Domains and compliance strategies

The FOFC imposes strict limits on linguistic variability. However, there are two ways in which a certain malleability is made possible: (i) the FOFC appears to apply not over entire clauses, but over impenetrable domains, and (ii) languages appeal to a variety of 'compliance strategies' that escape non-compliant configurations. This section briefly introduces these two notions.

The FOFC applies within specific domains of the clause, and not across them. The examples in (4), from Biberauer et al. (2014a), show how, in OV languages such as German, a head-initial DP or PP may be immediately dominated by a head-final VP. That is, the configuration created by a VP dominating a PP/DP is not subject to FOFC-compliance: they constitute differentiated domains for the evaluation of the FOFC.

(4)   *German* (Biberauer et al. (2014a: 197))
   a.   Johann hat [$_{VP}$ [$_{DP}$ einen Mann] gesehen].
        Johann has   a   man   seen
        Johann has seen a man.

   b.   Johann ist [$_{VP}$ [$_{PP}$ nach Berlin] gefahren].
        Johann is   to   Berlin   gone
        Johann has gone to Berlin.

In contrast, the similar configuration where the VP dominates a (finite) complement clause must comply with the FOFC (cf. Biberauer & Sheehan 2012). In German, the expected –but FOFC-violating– [[C TP] V] order is avoided, and embedded clauses surface to the right of V, giving [V [C TP]] order.[3] This is illustrated in (5):

(5)   *German* (Biberauer et al. (2014a: 198))
   a. *... dass Johann niemals [$_{CP}$ dass er eigentlich ein angenommenes Kind sei]
        that Johann never   that he actually an adopted   child be.SUBJ
        besprochen hat.
        discussed   has

---

[3] The [[C TP] V] order is possible, but assumedly in an A'-position.

b.　… dass Johann niemals besprochen hat [$_{CP}$ dass er eigentlich ein angenommenes
　　that Johann never discussed has that he actually an adopted
Kind sei].
child be.SBVJ
… that Johann has never discussed the fact that he is actually an adopted child.

Biberauer & Sheehan (2012) show that CP-extraposition is a general feature of OV languages with clause-initial complementizers (citing Hawkins 1994; 2004; Cinque 2009; Dryer 2009). They argue that it is a FOFC-compliance strategy, which allows the CP to 'escape' an otherwise FOFC-violating configuration (see also Biberauer et al. 2009a; 2014a; 2017; Sheehan 2013a).[4]

Biberauer et al. (2009a; 2014a) also discuss how in OV languages with initial complementizers which –unlike German– lack CP-extraposition, complement clauses remain in the preverbal position but are systematically nominalized (a generalization attributed to Koptjevskaja-Tamm 1988; 1993). As they point out, this suggests an explanation in terms of domains of application for the FOFC, as seen above. As a matter of fact, nominalized clauses are DPs which constitute a domain distinct from the VP that dominates them, which ensures FOFC-compliance.

Another relevant configuration that avoids FOFC-violations is the one resulting from A'-movement. Biberauer (2017: 245) points out the following contrast in Colloquial German, between what would be the 'neutral' FOFC-violating V-O-Aux order in (6a) and the same order derived via VP-fronting (7) (from Haider 2012: 80):[5]

(6)　　a. *… dass er nicht mehr [$_{VP}$ gesprochen mit ihr] hat.
　　　　that he not more spoken with her has

　　　b. … dass er nicht mehr [$_{VP}$ gesprochen hat mit ihr].
　　　　that he no more spoken has with her
　　　… that he didn't talk to her anymore.

(7)　　[$_{CP}$ [$_{VP}$ Gesprochen mit ihr] hat-C [$_{TP}$ er nicht mehr t_{VP}]].
　　　　spoken with her has he not more
　　As for speaking with her, he no longer did that.

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[4] Biberauer et al. (2014a) indicate that Sheehan (2008) was the first to point out the significance of this observation with respect to the FOFC.

[5] Biberauer et al. (2014a) discuss similar VP-fronting data from Latin and Sardinian.

The observation is thus that, regardless of the resulting order, A'-movement results in complying configurations.

Summarizing, the strong effects of the FOFC are somehow hidden by (i) the fact that it applies within particular domains of the clause and not across the board, and (ii) by 'compliance strategies' such as extraposition and A'-movement, i.e., configurations that provide a kind of repair or escape with respect to the FOFC-violating ones. Different accounts have been developed for these facts in the literature. They are closely dependent on the general analysis that is given for the FOFC, and not directly relevant for us here. For our purpose, it is sufficient to consider them as valid descriptive generalizations, for the discussion in Section 4 will show that they are at play in Basque clausal complementation, too.

2.2 FOFC in the architecture of the grammar: Predictions

The FOFC has been modeled in different ways (see Holmberg (2017b) on different approaches in the light of the issue of word order). One prominent account is the one put forth by Biberauer et al. (2014a), which pursues a core syntactic approach, where FOFC-violating structures simply cannot be built in the syntax. In turn, Sheehan (2013a; b) develops a PF-interface approach, where FOFC-compliance rather results from the way in which the linearization algorithm works (see also Erlewine 2017; Richards 2016; Sheehan 2017; Etxepare & Haddican 2017; Holmberg 2017c; b).[6]

The syntactic and PF-interface approaches make different predictions in certain regards, and in particular with respect to the possibility for the PF component to play a role in the computation of the FOFC. If narrow syntax just cannot build non-FOFC-complying structures as in Biberauer et al.'s (2014a) analysis –or more generally, if FOFC-compliance is ensured in the syntax–, it implies that only FOFC-complying structures will be sent to PF. Therefore, we would expect phonological or postsyntactic phenomena never to affect FOFC-compliance.

In turn, PF-based approaches open the possibility for such effects. In Sheehan's (2013a, 2013b) analysis, anything that happens at PF before linearization can have an effect on its output. For instance, extraposition is characterized as the product of linearization: in certain structures, constituents (or their sub-constituents) that have undergone movement cannot be linearized in their higher position, and it is the lower copy of the movement chain which will be pronounced, giving the illusion of rightward movement (see in particular Sheehan 2013a; 2017). Take for instance Sheehan's (2017) account of the *Head Final Filter* (Williams 1982), whereby the

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[6] Other approaches to the FOFC propose that it derives from factors related to processing (cf. Hawkins 2004; Cecchetto 2013; Philip 2013).

complements of prenominal adjectives cannot surface in the position between the adjective and the modified noun:

(8)   a. a difficult book
       b. *a difficult [for anyone to read] book
       c. a difficult book [for anyone to read]

Sheehan argues that 'repair' effects such as CP-extraposition in (8c) result in fact from deleting the higher copy of the complement involved in the movement chain of the AdjP (cf. S. Kayne 1994), and pronouncing the lower one, as represented in (9):

(9)   [$_{NP}$ [$_{AdjP}$ difficult [$_{CP}$ ~~for anyone to read~~]] book [$_{AdjP}$ ~~difficult~~ [$_{CP}$ for anyone to read]]]

Etxepare & Haddican (2017) give a similar account of certain contrasts in Basque modal constructions, where A'-movement, followed by the deletion of the lower, FOFC-violating copy, may bleed the FOFC.

Next section shows how the grammar of Basque clausal embedding provides an rich ground for testing these predictions.

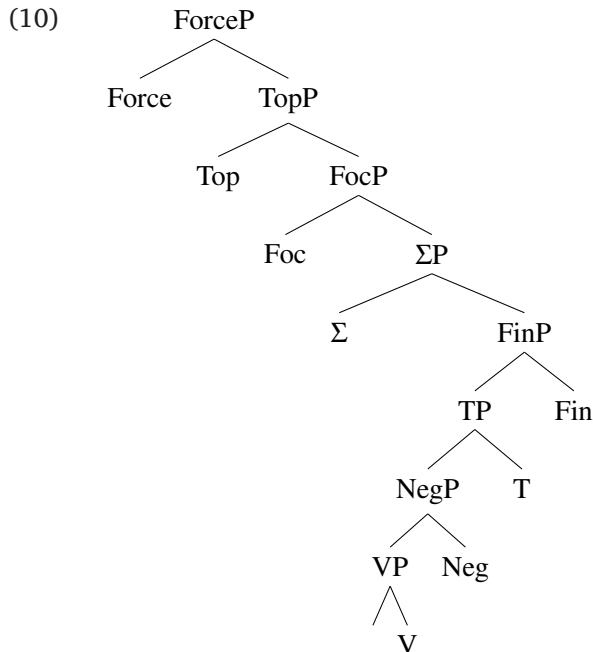# 3 Overt *vs.* null heads in disharmonic configurations in Basque

In Basque clausal complementation, a head-final VP dominates a clause with head-initial left peripheral phrases, creating a potentially FOFC-violating configuration. But the heads in head-initial phrases of the embedded clause will have overt exponents only under certain circumstances. Such alternations between overt *vs.* null heads thus provide an ideal testing ground for evaluating the syntactic *vs.* PF approaches to FOFC, since only under the second could there be differences depending on whether or not a FOFC-violating head is overt or not.

This section introduces the different aspects of the above idea, first by giving an overview of the (disharmonic) structure of the Basque clause (Section 3.1), and then by going through the relevant predictions made by the two approaches to the FOFC (Section 3.2).

3.1 Basque clause structure

The classical analysis of Basque clause structure is one which is disharmonic but FOFC-compliant (cf. also Elordieta 2013; Biberauer et al. 2014a). The Basque clause has indeed head-final orders in FinP and below (TP, vP, VP, etc.), and head-initial orders above FinP (ΣP, FocP, TopP, etc.). (10) shows the relevant clause-structure that I will be assuming in this paper (built on work

by, among others, Goenaga 1984; Laka 1990; Ortiz de Urbina 1989b; 1999; Artiagoitia 1995; Elordieta 2001; Haddican 2004; Irurtzun 2007). This section explains its most relevant aspects.[7,8]

(10)

```
                    ForceP
                   /      \
              Force       TopP
                         /    \
                      Top      FocP
                              /    \
                          Foc       ΣP
                                   /   \
                                  Σ     FinP
                                       /    \
                                     TP      Fin
                                    /   \
                                 NegP    T
                                /    \
                              VP     Neg
                              /\
                             V
```

3.1.1 The head-final domain: FinP and below

Basque is an S-O-V-Aux language, a word order standardly accounted for in terms of the final-headed nature of VP, TP, etc. (cf. among others Goenaga 1984; Ortiz de Urbina 1989b; 1999; Artiagoitia 2002; 2008; Elordieta 2001; 2013). In clausal complements of verbs, *-en* is used in indirect interrogatives and *-ela* in declaratives, as illustrated in (11a) and (11b), respectively:[9]

(11) a. Galdetu dute [ea Mikeli   nork emango   dio-**n**   bihar   liburua $t_{V+T+Fin}$].
          ask   aux Q Mikel.TO who give.PROSP AUX-COMP tomorrow book
          They asked who will give the book to Mikel tomorrow.

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[7] For expository convenience, I will use a representation with specifier-head-complement order of final-headed phrases. See however the antisymmetric approaches to Basque word order in Ormazabal et al. (1994); Elordieta (1997); Haddican (2004; 2008); Etxepare & Haddican (2017), as well as the discussion of some of their shortcomings in Elordieta (2008; 2013) and Vicente (2008). Alternatively, other works adopt a harmonically right-headed clause-structure (cf. Arregi 2002; Arregi & Nevins 2012). I refer the reader to the literature cited below in this section for further evidence in favor of the disharmonic structure assumed here. What this paper will ultimately show is that certain left-peripheral PF-phenomena feed the evaluation of the FOFC. The results must therefore be taken into account independently of the adopted model.

[8] For the sake of simplicity, I will abstract away from heads that are not immediately relevant to the discussion, such as the *v*, Aspect or Applicative heads.

[9] The suffix *-en* also surfaces on subjunctives. Other complementizers include declarative *bait-*, negative *-enik*, factive *-ena* (see Artiagoitia 2003b).

b. Esan dute [Mikeli Anak emango dio-**la** bihar liburua $t_{\text{V}+\text{T}+\text{Fin}}$].
say aux Mikel.TO Ana give.PROSP AUX-COMP tomorrow book
They said that Ana will give the book to Mikel tomorrow.

In line with Ortiz de Urbina (1999) and Artiagoitia & Elordieta (2016), I assume that complementizers -*en* and -*ela* –which attach to the right of embedded finite verbs or auxiliaries– are hosted on Fin. Ortiz de Urbina (1999) provides evidence for the hypothesis that -*en* encodes Finiteness rather than Force. First, he points out that the complementizer surfaces on finite verbs only, which shows that it is connected with the finite *vs*. non-finite nature of the embedded inflection. Second, the hypothesis also explains why the complementizer surfaces on Foc together with the finite verb in *wh*-interrogatives, i.e., the latter undergoes head-to-head movement through Fin when targetting the higher Foc (V-to-T-to-Fin-to-Foc which results in WH-V-XP orders as in (11a); see Section 3.1.2). And third, it also explains why -*en* can co-occur with illocutionary force markers which encode Force, like the interrogative particle *ea* in example (11a) (see Ortiz de Urbina 1999; Monforte 2020 and Irurtzun 2022).

Ortiz de Urbina's (1999) analysis can easily be extended to complementizer -*ela*.[10] (i) Its use is also limited to finite clauses, (ii) it also accompanies verb-movement in V2-type constructions, as can be seen in (11b), and (iii) it is also compatible with heads encoding Force, such as *ezen*, as illustrated in (12) (see also Ortiz de Urbina 1999 on *nola*):

(12) Jonek esan du [ezen liburua ekarri du-ela].
Jon say AUX Q book bring AUX-COMP
Jon said that he brought the book.

An additional piece of evidence comes from Vergara's (2018) work on Basque-Spanish code-switching, which shows that an overt Spanish complementizer *que* (encoding Force) is required in addition to -*ela* when a Basque finite declarative clause is embedded under a Spanish matrix clause.[11] This is illustrated in (13) (from Vergara 2018), with Spanish in italics and Basque in bold:

(13) *Pedro cree que* **Jon etorri d-ela**.
Pedro think COMP Jon come AUX-C
Pedro thinks that Jon came.

Summarizing this section: all the lower projections of the clause (FinP and below) are harmonically right-headed.

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[10] Monforte (2019; 2020) argues that the interrogative particle -*a*, used in Eastern varieties, is yet another exponent of Finiteness.

[11] In Vergara's (2018) analysis, -*en* and -*ela* can nonetheless encode both Finiteness and Force.

3.1.2 The head-final domain: the left periphery

Turning to the projections above FinP, Basque is a discourse-configurational language, in the sense of É. Kiss (1995), and operations related to interrogatives, focus, topicalization but also negation affect word order. The relevant heads are Foc, Topic, and Σ. The Focus and Topic heads are null (cf. Ortiz de Urbina 1989b; 1999; Elordieta 2001; Irurtzun 2007), and following Haddican (2004; 2008), I will assume that Σ, the head of the projection that hosts negation (cf. Laka 1990) is null as well. These heads are however the target of movement of lower heads such as V, T and/or Neg. What follows explains these assumptions.

ΣP can induce changes in word order with respect to plain affirmative S-O-V-Aux sentences. As illustrated in (14), in the context of negation, the auxiliary surfaces to the left of the clause, immediately following the negative marker *ez*, resulting in an 'inversion' in the relative order of the auxiliary and the verb:

(14) a. Ez   du   emakumeak leihoa   ireki.
          NEG AUX woman   window open
          The woman didn't open the window.

     b. *Ez   emakumeak leihoa   ireki du.
          NEG woman   window open AUX

     c. *Emakumeak leihoa   ireki ez   du.
          woman   window open NEG AUX

Following Laka (1990), I assume that the negative marker and the auxiliary surface on Σ, the head of a projection dominating the inflectional heads and dominated by FocP (cf. also Elordieta 2001).[12] However, I will distance myself from Laka's (1990) analysis in assuming with Haddican (2004); Elordieta (2013); Etxepare & Haddican (2017) and Elordieta & Haddican (2018) that the negative marker raises to this projection from a lower position located between VP and TP (named NegP in (10)). Thus, in negative clauses, *ez* raises to Σ via head-movement, together with the inflected auxiliary.[13,14]

As argued by Haddican (2004), the movement analysis of negation explains why, even though negation surfaces unusually high in Basque, elements to its right scope over it. This is the case for instance of evidential particles. As pointed out by Haddican (2004: 99), the infelicity of the continuation in (15)–where the only possible reading is the one where the person in question is said not to have been born anywhere– suggests that the evidential outscopes negation:

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[12] In Haddican (2004; 2008) and Elordieta & Haddican (2018), *ez* is instead assumed to be phrasal.

[13] Ortiz de Urbina (1988; 1994) and G. Elordieta (1997) develop similar analyses, where *ez* is first-merged below TP/InflP and raises to a higher head-initial phrase together with the auxiliary.

[14] The emphatic affirmative marker *ba-* has the same syntax as the negative marker (Oyharçabal 1984; Laka 1990). For simplifying the discussion, in this paper I will exclusively focus on negation.

(15) Ez   omen zen Oiartzunen jaio,   # baina ez   omen zen kanpoan jaio   ere.
      NEG EVID AUX Oiartzun.in be.born   but   NEG EVID AUX outside.in be.born also
      They say she wasn't born in Oiartzun, # but they say she wasn't born outside
      (Oiartzun) either.

Therefore, if evidential particles are merged in a ModalP projection in the vicinity of T (as argued by Elordieta 2001; Haddican 2004; Etxepare 2010; 2016), *ez* being generated below it and moving to a higher position explains the word order and interpretive facts.

The movements taking place in negative clauses are represented in (16b):

(16) a. Ez   du   emakumeak leihoa   ireki. (= (14a))
          NEG AUX woman   window open
          The woman didn't open the window.

      b.
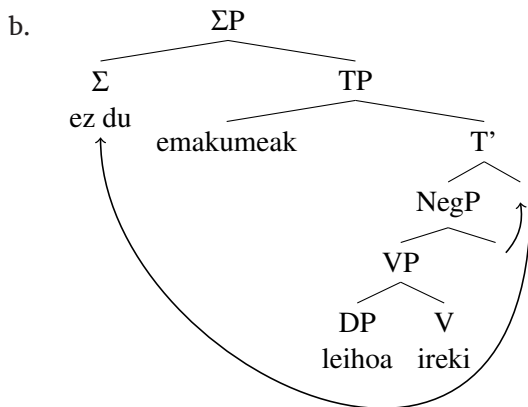
This analysis implies that the negative marker is first merged to the right of the lexical verb. It thus predicts that clauses that do not project ΣP will display V-Neg order. This is precisely what seems to be happening in certain particular instances of non-finite coordinated clauses, such as the one in (17):

(17) Mundu guztia esperoan eduki eta [bera   agertu   ez].   [Etxepare 2003: 537]
      world all   wait.in   keep and they.SG show.up NEG
      Everybody was waiting and they(sg) didn't show up.

What suggests that the bracketed constituent in (17) might not project ΣP is its general deficient structure: it lacks an auxiliary, and thus arguably a TP projection. It is also deficient in that for instance verbs with a prospective suffix produce a deviant output (18):

(18) *Mundu guztia esperoan eduki eta [bera   agertu-ko   ez].
       world all   wait.in   keep and they.SG show.up-PROSP NEG
       Lit. Everybody waiting and they(sg) won't show up.

Concerning the projections above ΣP, adopting Rizzi's (1997, et seq.) split-CP system with a richly articulated left periphery, and in line with Ortiz de Urbina (1999) and Irurtzun (2007; 2016), I assume that *wh*-phrases and foci undergo A'-movement to the left-peripheral specifier position of Foc(us)P dominating ΣP.[15] This is followed by 'T-to-C movement', where the lexical verb and the auxiliary raise to the Foc head. Following standard assumptions, I postulate that FocP is head-initial, which explains the V2-like obligatory adjacency between *wh*-phrases (or foci) and the verb (cf. Ortiz de Urbina 1989b; 1999; Elordieta 2001; Irurtzun 2007; 2016). (19) and (20) illustrate this point for *wh*-interrogatives and foci, respectively:[16]

(19) a. Nork ireki du   leihoa?
          who open AUX window
          Who opened the window?

      b. *Nork leihoa   ireki du?
          who window open AUX
          Who opened the window?

(20) a. EMAKUMEAK ireki du   leihoa.
          woman   open AUX window
          THE WOMAN opened the window.

      b. *EMAKUMEAK leihoa   ireki du.
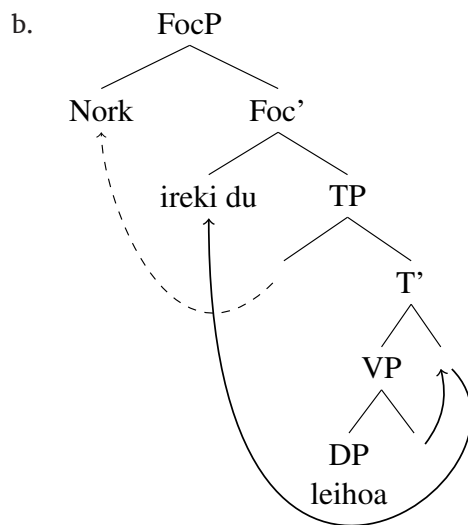   woman   window open AUX
          THE WOMAN opened the window.

The movements taking place in focal and *wh*-interrogative structures are represented in (21b):[17]

(21) a. Nork ireki du   leihoa?   (=(19a))
          who open AUX window
          Who opened the window?

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b.   FocP

Nork   Foc'

ireki du   TP

T'

VP

DP
leihoa

Just above Foc is the Topic projection. Topicalized constituents move to its specifier, and nothing surfaces in its head position (cf. Ortiz de Urbina 1999; Elordieta 2001).[18] Certain DPs constitute improper topics. This is the case for instance of strictly non-presuppositional indefinite pronouns, such as free-choice or existential indefinites reinforced with the additive particle *ere* 'too/even' (Etxeberria & Irurtzun 2015), like *zerbait ere* 'something or other'. The left of a *wh*-phrase is thus unambiguously the topic position, since that area can only host presuppositional expressions, as illustrated in (22):

(22)   a.   Leihoa   nork ireki du?
               window who open AUX
               Who opened the window?

        b.   *Zerbait   ere   nork ireki du?
              something ADDP who open AUX
              Who opened something or other?

Finally, following Ortiz de Urbina (1999); Artiagoitia & Elordieta (2016); Elordieta & Haddican(2018); Monforte (2019) among others, I postulate a Force projection, which satisfies the subcategorization requirements of the matrix predicate, and which can host clause-typing markers. There are no mandatory overt Force heads. Nonetheless, Ortiz de Urbina (1999) identifies the (optional) interrogative particle *ea* as an illocutionary force marker, the overt exponent of a Force head (see also Monforte (2019) and Irurtzun (2022) on other illocutionary markers). This marker is illustrated in example (23) (see also (11a)):

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[18] Ortiz de Urbina (1999) distinguishes two Topic positions, above and below ForceP. This distinction is not relevant for our purposes here.

(23)　Anak galdetu du　[_ForceP_ (ea) [_FinP_ Miren etorriko　　d-en]].
　　　　Ana　ask　　AUX　　Q　　　Miren come.PROSP AUX-C
　　　　Ana asked whether Miren will come.

In a nutshell: whereas Basque declaratives have S-O-V-Aux order, negative and *wh*-interrogative clauses display leftward movement of heads such as V, Neg and/or T (henceforth "V heads"), resulting in orders that have sometimes been assimilated to 'residual V2 effects' (cf. Ortiz de Urbina 1989b; 1994). Topicalization in turn triggers movement of constituents but no leftward movement of V heads. Finally, Force optionally hosts an overt exponent.

3.2 A testing ground for the FOFC

Similar to the German-like OV languages discussed in the literature (see Section 2), Basque clausal embedding creates a potentially FOFC-violating configuration, where a head-final VP selects a head-initial CP/ForceP:

(24)

VP
├── ForceP
│   ├── Force
│   └── TopP
│   ├── Top
│   └── FocP
│   ├── Foc
│   └── ΣP
│   ├── Σ
│   └── ...
└── V
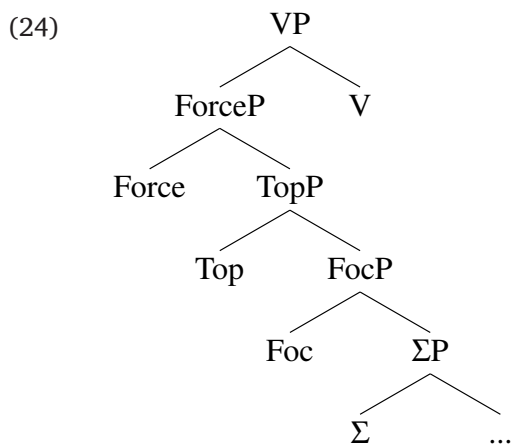
What distinguishes the Basque case is that the heads in the head-initial area of the FOFC-violating configuration are potentially phonologically empty. Force only optionally hosts an overt interrogative particle (e.g. *ea*), Top has no overt exponent, and Foc and Σ trigger movement of V heads in contexts of negation or *wh*-interrogatives only (and they are arguably absent otherwise).

　　This offers a nice testing ground to contrast and evaluate the narrow syntactic *vs*. PF-centric approaches to the FOFC, for only the latter leave room for the phonological properties of heads to feed the evaluation of the FOFC. From the perspective of the syntactic approach, assuming that embedded clauses are all headed by a Force head –overt or null–, clausal complementation in Basque systematically results in a disharmonic FOFC-violating structure. Therefore, it predicts a systematic appeal to compliance strategies such as extraposition or A'-movement –like in the

German examples in Section 2.1–, irrespective of whether or not there is an overt exponent such as *ea* on Force.[19]

In turn, under a PF-interface approach, where the phonological properties of a derivation could in principle affect the FOFC, we could expect to observe asymmetries in clauses with an overt *vs.* null Force head. Only the first would appeal to compliance strategies. Then, clauses with *vs.* without topicalization should not display any differences, given that the Top head is always null. And finally, both approaches make the same prediction with respect to *wh*-interrogative and negative clauses: these should systematically undergo 'repair', for head-movement to Foc and Σ creates a FOFC-violating configuration in which overt heads (V, T, Neg, Fin) end up surfacing in head-initial phrases dominated by a head-final VP.

Next section shows how, even if they are 'hidden' by repair strategies, FOFC-effects are observed in Basque clausal complementation, and that, crucially, they closely correlate with overtness, as predicted under the PF-interface approach (and unexpected under the narrow syntactic approach).[20]

4 FOFC-effects: Displaced *vs. in situ* clausal complements

The effects of the FOFC are almost invisible in Basque clausal complementation.[21] This section shows how they are 'hidden' by a number of independent factors, and at the same time it builds a case in favor of a PF-centered approach to the FOFC.

The suffixal complementizers *-ela* and *-en* are used in declarative and interrogative clauses respectively, as illustrated in (25) (they are Fin heads; see Section 3.1):

(25)   a.   Mirenek [etorri d-ela] esan du.
             Miren   come AUX-C say AUX
             Miren said that they came.

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[19] Alternatively, one could argue that the absence of an overt Force head implies the absence of a Force projection altogether (though see Section 6.4 on the viability of approaches based on e.g. truncation). In this case, appeal to repair strategies only in the presence of an overt Force head would be expected. But then, we would expect topicalization to make a difference: embedded clauses with a topicalized constituent –and thus a (null) Top head– should systematically appeal to compliance strategies, while clauses without topicalization should not. As shown below, this prediction is not borne out, since topicalization is not a factor associated with FOFC-effects. (Note that under the syntactic approach, one could not appeal to the hypothesis that TopP is right-headed either, since this would give a FOFC-violating configuration where a right-headed TopP dominates a left-headed FocP or ΣP.)

[20] As pointed out by an anonymous reviewer, the idea that the Top/Foc/ Σ heads could create a FOFC-violating configuration with a higher VP contravenes the definitions of the FOFC such as the one in (2), which refer to the relevant dominance relations as being 'immediate' (since their relation is mediated by (at least) the intervening ForceP). See the discussion in footnote 28.

[21] I will exclusively focus on finite clauses, leaving aside non-finite complementation. The latter nonetheless is most probably relevant, for it displays word order alternations which might be connected to compliance strategies (cf. for instance Ortiz de Urbina 1989a; Artiagoitia 2003a; b; Etxepare 2003; Etxepare & Ortiz de Urbina 2003).

  b. Mirenek [etorri d-en] galdetu du.
    Miren come AUX-C ask AUX
    Miren asked whether they came.

These examples show that complement clauses can surface preverbally, in what looks like a violation of the FOFC, where a head-final VP would be dominating a head-initial ForceP (see (24)). What is more, embedded clauses with an overt Force head *ea* or with head-movement to Σ or Foc are also allowed in the preverbal area, as illustrated in (26):

(26) a. Mirenek [ea etorri d-en] galdetu du.
    Miren Q come AUX-C ask AUX
    Miren asked whether they came.

  b. Mirenek [ez d-ela etorri] esan du.
    Miren NEG AUX-C come say AUX
    Miren said that they didn't come.

  c. Mirenek [nor etorri d-ela] esan du?
    Miren who come AUX-C say AUX
    Who did Miren say that came?

That is, both syntactic and PF-interface approaches to FOFC seem to make incorrect predictions. However, other facts show that a finer analysis is necessary. First of all, clausal complements can surface postverbally, too, as illustrated in (27) (cf. Euskaltzaindia 1999; Ormazabal et al. 1994; Eguzkitza 2003; Artiagoitia 2003a; Elordieta 2008):

(27) Mirenek esan du [etorri d-ela].
   Miren say AUX come AUX-C
   Miren said that they came.

This contrasts with the behavior of object DPs, which cannot surface postverbally in neutral contexts (de Rijk 1969):[22]

(28) a. Mirenek hau esan du.
    Miren this say AUX
    Miren said this.

  b. *Mirenek esan du hau.
   Miren say AUX this
    Miren said this.

The contrast between (27) and (28b) echoes with the case of German-like languages seen in Section 2.1, and suggests that CP-extraposition is available in Basque too. This in turn suggests

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[22] See Ortiz de Urbina (2002) on clause-final *wh*-phrases and foci (see also Uribe-Etxebarria 2002).

that CP-extraposition is potentially a FOFC-compliance strategy, used to 'escape' non-compliant configurations.[23]

Returning now to preverbal clauses: Basque famously allows clausal pied-piping (cf. Ortiz de Urbina 1989b; 1993; Arregi 2003; Heck 2008; Irurtzun 2016). Clausal pied-piping involves clauses that embed a focal or *wh*-phrase in a long-distance A'-dependency. Instead of this element undergoing A'-movement to the higher SpecFocP, it is the whole clause that is fronted, followed by movement of matrix [V + Aux] to Foc. Crucially, this is actually the standard analysis for examples such as (26c), repeated in (29) (with additional topicalization of the matrix subject *Miren*):

(29) a. Mirenek [nor etorri d-ela] esan du?   (= (26c))
          Miren   who come AUX-C say   AUX
          Who did Miren say that came?

      b.
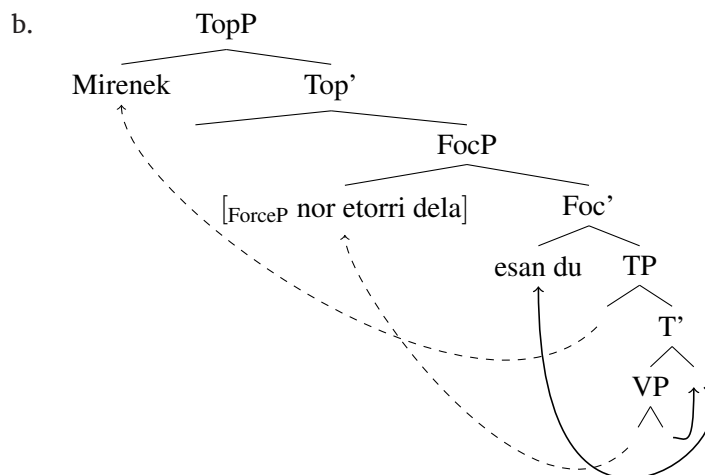
That is, even if it is left-adjacent to the matrix verb, the complement clause in (26c) does not surface in complement position. It has undergone A'-movement. We saw however that A'-movement escapes the FOFC (Section 2.1); consequently (29) (= (26c)) involves a FOFC-complying configuration.

Crucially, in the same line of analysis, it is possible that the preverbal clauses in (26c) and (26b) embed a focused constituent (or that they are focused as a whole), and –like the complement in (26c)–have pied-piped to the matrix SpecFocP, followed by movement of [V + Aux] to Foc.[24] Again, given that A'-movement escapes the FOFC, they would be in FOFC-complying configurations, which would explain why the sentences are grammatical.

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[23] I will remain agnostic as to whether extraposition in Basque is a syntactic or post-syntactic phenomenon. The PF-approach to the FOFC developed below is in principle compatible with both hypotheses.

[24] See also Artiagoitia (2003b: 652), who points out that focused clauses tend to be preverbal rather than postverbal (i.e., extraposed), as well as Zabala (2000) and Vicente (2008)).

In sum, the preverbal position of clausal complements in Basque is structurally ambiguous: it can be either the (*in situ*) complement of V, or the preverbal focus position. Therefore no relevant conclusion can be drawn concerning the FOFC from examples such as (25) or (26).

There is nonetheless a very specific context that can be used to ensure that no pied-piping (or extraposition) is taking place. This is the so-called 'quasi-focus' construction, which involves sentential negation (see Lafitte 1944[1962]; Oyharçabal 1985; de Rijk 1996; Herburger 2000; Etxepare 2003; Ortiz de Urbina 2003; Etxepare & Uribe-Etxebarria 2008). Quasi-focus is the domain of negative clauses which is sandwiched between the [Neg + Aux] cluster and the lexical verb, where constituents can have a focus-like interpretation. In example (30), the object DP *leihoa* 'window' surfaces in this quasi-focus domain.

(30) Mirenek ez   du   leihoa itxi.
      Miren   NEG AUX window close
      Miren didn't close the window.

What is relevant for us is that this is a position where the constituents remain *in situ*: given that in contexts of negation the lexical verb remains in V and [Neg + Aux] surface on Σ (see (16)), the domain between them includes the specifiers and modifiers of the projections below ΣP (Ortiz de Urbina 2003). Since FocP is higher than ΣP, a pied-piped clause would surface on the left of negation. Therefore, a clause in the quasi-focus domain will be unambiguously in the *in situ*, complement-of-V position.[25]

This is consequently also a position in which a head-initial phrase will create a FOFC-violating configuration with respect to the dominating VP (as in (24)). Thus it allows us to test the predictions made above: if the FOFC is evaluated in the syntax, no finite embedded clause will be able to surface in this position, whereas if it is evaluated at PF, overtness of heads could be a decisive factor, embedded clauses being allowed in that position provided they have null heads on their left-peripheral phrases.

The following examples show that declarative *-ela* and interrogative *-en* clauses can indeed surface in that position, as expected under PF-interface approaches only:

(31) a. Mirenek ez   du   [Ana etorri d-ela] esan.   [*In situ* declarative clause]
          Miren   NEG AUX Ana   come AUX-C say
          Miren did not say that Ana came.

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[25] Etxepare & Uribe-Etxebarria (2008) put forth an analysis where the (quasi-)focal constituent moves to a 'low' FocP projection on the periphery of the VP, and where scrambling of other constituents can also take place. Irrespective of the analysis we adopt, what is important is that no initial-headed phrase is involved; this is thus arguably a domain of the clause which creates a disharmonic, "final VP over initial ForceP" configuration.

b. Mirenek ez   du [Ana etorri d-en] galdetu.   [*In situ* indirect interrogative]
   Miren   NEG AUX Ana   come AUX-C ask
   Miren didn't ask whether Ana came.

Furthermore, overtness of heads affects the grammaticality of the sentence. The following examples show that when left-peripheral heads are overtly involved, either by simply being overt (as with the *ea* Force head in (32a)) or by hosting lower heads (as with [Neg + Aux] in the negative clause in (32b) or [V + Aux] in the embedded *wh*-interrogative as in (32c)), then the sentences involving *in situ* complement clauses are ungrammatical or degraded.[26]

(32)   a. ??Mirenek ez   du   [ea Ana etorri d-en] galdetu.   [*In situ ea* clause]
          Miren   NEG AUX Q   Ana come AUX-C ask
          Miren didn't ask whether Ana came.

       b. *Mirenek ez   du   [Ana ez   d-en   etorri] galdetu.   [*In situ* negative clause]
          Miren   NEG AUX Ana   NEG AUX-C come   ask
          Miren didn't ask whether Ana didn't come.

       c. *Mirenek ez   du   [noiz etorri d-en   Ana] galdetu.   [*In situ wh*-clause]
          Miren   NEG AUX when come AUX-C Ana   ask
          Miren didn't ask when Ana came.

This shows that if the sentences in (31) are grammatical, it is due to there not being any overt heads on their left-periphery.

At this stage, the PF-centric approach we sketched above makes a further prediction: the same clauses with overt heads should be grammatical in extraposed postverbal position or in pied-piped preverbal position. This is again the case, as shown in (33) and (34), respectively:[27]

(33)   a. Mirenek ez   du   galdetu [ea Ana etorri d-en].   [Extraposed *ea* clause]
          Miren   NEG AUX ask   Q   Ana come AUX-C
          Miren didn't ask whether Ana came.

       b. Mirenek ez   du   galdetu [Ana ez   d-en   etorri]. [Extraposed negative clause]
          Miren   NEG AUX ask   Ana   NEG AUX-C come
          Miren didn't ask whether Ana didn't come.

---

[26] In (32c), the postverbal subject signals unambiguously that the *wh*-phrase and the verb surface on the left periphery.

[27] The sentences in (34) could constitute answers to a question like "What didn't Mary ask?", with the whole embedded clause being focused.

    c.   Mirenek ez   du   galdetu [noiz etorri d-en   Ana].   [Extraposed *wh*-clause]
        Miren   NEG AUX ask   when come AUX-C Ana
        Miren didn't ask when Ana came.

(34)   a.   [Ea Ana etorri d-en] ez   du   galdetu Mirenek.   [Pied-piped *ea* clause]
        Q   Ana come AUX-C NEG AUX ask   Miren
        Miren didn't ask whether Ana came.

    b.   [Ana ez   d-en   etorri] ez   du   galdetu Mirenek.   [Pied-piped negative clause]
        Ana NEG AUX-C come NEG AUX ask   Miren
        Miren didn't ask whether Ana didn't come.

    c.   [Noiz etorri d-en Ana] ez   du   galdetu Mirenek.   [Pied-piped *wh*-clause]
        when come AUX-C Ana NEG AUX ask   Miren
        Miren didn't ask when Ana came.

To close this argumentation, we can check a final prediction of the PF-approach: left-peripheral operations with no overt head or overt head-raising should not affect the evaluation of the FOFC whatsoever. Topicalization, which involves raising to the specifier of a null Top head is precisely like that: it does not lead to ungrammaticality in *in situ*, quasi-focus clauses. This is illustrated in the minimal pair in (35), where inverting the order between the subject and the object in the (b) sentence –which signals that the object has raised above the subject to TopP– does not lead to ungrammaticality:

(35)   a.   Mirenek ez   du   [Anak leihoa   itxi   du-ela] esan. [*In situ* declarative clause]
        Miren   NEG AUX Ana   window close AUX-C say
        Miren did not say that Ana closed the window.

    b.   Mirenek ez   du   [leihoa Anak itxi   du-ela] esan.
        Miren   NEG AUX window Ana close AUX-C say
        Lit. Miren did not say that the window, Ana closed.

Summarizing, this section has identified extraposition and pied-piping as compliance strategies that are at play in Basque clausal complementation. Thus like in other cases identified in the literature, displacing the head-initial phrase dominated by a head-final phrase from a final-over-initial configuration ensures FOFC-compliance. I have argued that 'hidden' pied-piping explains why preverbal clausal complements do not trigger FOFC-effects, by showing that clauses that are unambiguously not pied-piped –in *in situ* (quasi-focus) contexts– do show FOFC-effects. I have also shown that these effects only arise with clauses in which the head-initial domain of the clause (ForceP, FocP or ΣP) hosts some overt exponent. Such contrasts between structurally identical sentences are unexpected under the syntactic approach to the FOFC. In turn, under a PF-interface approach, these complex patterns are expected, if not

predicted: it is the presence of *overt* heads in the head-initial domain of the clause that results in FOFC-violation.[28]

The next two sections explore certain poorly understood ordering facts of clausal embedding in Basque, which will strengthen and develop the analysis put forth here.

5 Another compliance strategy: V-final order

It is a known feature of Basque that there are word order differences between root and embedded clauses, especially in the context of negation (cf. Altube 1929; Azkue 1923–25[1969]; de Rijk 1969; 1972; Goenaga 1980; Ortiz de Urbina 1989b; Laka 1990; 1991; Euskaltzaindia 1999; Etxepare 2003; Oyharçabal 2003; Artiagoitia 2003a; Artiagoitia & Elordieta 2016; Elordieta & Haddican 2018; Salaberri 2018).

This section discusses these patterns of word order alternations in clausal complements. It argues that they result from FOFC-compliance strategies which involve (i) negative clauses having the negative marker surface between the verb and the auxiliary (Section 5.1), and (ii) *wh*-interrogatives having the verb in clause-final position and all non-*wh* material topicalized (Section 5.2). Both cases are then brought together, as a 'V-final order' requirement on *in situ* clauses, where V/Aux/Neg/Fin heads surface on the right edge of the clause (Section 5.3).[29]

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[28] As pointed out by an anonymous reviewer, considering that embedded TopP/FocP/ΣP could create FOFC-violating configurations with a higher VP contravenes the definitions of the FOFC such as the one in (2), which refer to the relevant dominance relations as being 'immediate'. Indeed, there is always an intervening ForceP, arguably, but also potentially a TopP, etc. Our results thus imply that the definition of the FOFC must be changed, by suppressing the reference to immediateness. Note nonetheless that immediateness is not necessarily relevant for the earlier works on the FOFC either. These do not take into consideration the possibility for overtness to be a factor and hence they systematically have local relationships between phrases. That is, if there is an intervening phrase βP between two phrases αP and γP that violate the FOFC, βP will also be in a FOFC-violating configuration with either αP or γP, as illustrated in (i):

(i)

αP — βP, α; βP — γP, β; γP — γ, δP

αP — βP, α; βP — β, γP; γP — γ, δP
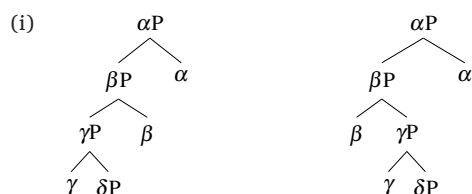
[29] V-final orders are observed in a wide array of clausal embedding constructions in Basque (cf. Euskaltzaindia 1999; Artiagoitia 2003a; Elordieta & Haddican 2016, and references therein); they are even a strict requirement in e.g. relative clauses (Oyharçabal 2003). Exploring these cases goes beyond the scope of this paper.

5.1 Word order in negative clauses

In the previous section, the negative sentences all displayed a root-like order where the negative marker –together with the auxiliary– surfaces on the left, rendering the 'inverted' [Neg + Aux(-C)...V] order. But is has long been noted that another order is possible in embedded clauses, where the lexical verb and the auxiliary are not inverted, and the negative marker surfaces sandwiched between them: [V + Neg + Aux-C] (henceforth 'non-inverted order'; see the references above). This order is out in root contexts (see (14c) above). The two orders are illustrated in (36a) and (36b), respectively:[30]

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[30] Some authors consider declarative *-ela* clauses (unlike interrogative *-en* clauses) with non-inverted [V + Neg + Aux-C] orders to be deviant, even though they acknowledge their use (cf. Artiagoitia 2003b; Artiagoitia & Elordieta 2016; Elordieta & Haddican 2018). However, the Academy of the Basque Language and other authors take these orders to be grammatical (cf. Euskaltzaindia 1999; Etxepare 2003). Moreover, they are widely attested in contemporary written and oral usage, and importantly, speakers have very clear intuitions regarding the contexts in which they are allowed. The bracketed embedded clauses in the following sentences found on the *Contemporary Reference Prose* corpus of the University of the Basque Country UPV/EHU illustrate the use of this ordering in fiction, essays, translations, and newspapers (https://www.ehu.eus/euskara-orria/euskara/ereduzkoa/):

(i) From an essay (*Euskararen etxea*, Pello Salaburu (2002: 59)):
[Deusik ere aldatu ez d-ela] pentsatzen duten horien   gogoa freskatzeko   balio dezake
Nothing ADDP change NEG AUX-C think   AUX.C those.GEN mind refresh.NMLZ.to use AUX.POT
horrek
that
That can be used to refresh the mind of those who think that nothing has changed.

(ii) From a translated essay (*Loroaren teorema*, Denis Guedj / Jon Muñoz (2006: 136)):
[Gauza bat existitzen ez d-ela] esateko,   existitzerik   ez dauka-la frogatzea da era
thing   one exist   NEG AUX-C say.NMLZ.to exist.NMLZ.PART NEG has-C   prove.NMLZ is mode
bakarra.
single.D
In order to say that something does not exist, the only way is to prove that it cannot exist.

(iii) From a novel (*Lagun izoztua*, Joseba Sarrionandia (2001: 327)):
[Atertzen ez du-ela] ohartzean,   elkarren   beldur susmoak   sentituko dituzue.
clear.up NEG AUX-C realize.NMLZ.in each.other.GEN fear   suspicions feel.PROSP AUX
When you realize that the weather does not clear up, you will feel afraid of each other.

(iv) From a newspaper (*Berria*. 2004-01-31):
[Erraza izango   ez d-ela] jakin badaki,   hau izango   baitu   laugarren Munduko
easy   be.PROSP NEG AUX-C know know.3SG this be.PROSP because.AUX fourth   world.of
Txapelketa.
championship
They do know that it will not be easy, since this will be their fourth World Championship.

Note finally that the examples given in the literature to illustrate this claim sometimes involve extraposed *-ela* clauses, where, as I argue below, non-inversion is ungrammatical for independent reasons (see (39)).

(36)   a.   Mirenek [ez d-ela   etorri] esan du.   [Inverted]
              Miren   NEG AUX-C come say AUX
              Miren said that she didn't come.

        b.   Mirenek [etorri ez   d-ela] esan du.   [Non-inverted]
              Miren   come NEG AUX-C say AUX

I will argue that the non-inverted order reveals yet another FOFC-compliance strategy. The idea is that this surface order 'repairs' the violation that is otherwise induced by standard structures with negation. In sum, while pied-piping makes (36a) FOFC-compliant, it is the absence of negative inversion that makes (36b) FOFC-compliant. This hypothesis makes a clear prediction: negated clauses with non-inverted order should be allowed in quasi-focus position, where clauses with inverted, root-like order are otherwise out, as was illustrated in (32b), repeated below in (37).

(37)   *Mirenek ez   du [Ana ez   d-en   etorri] galdetu. (=(32b)) [Inversion + Quasi-focus]
          Miren   NEG AUX Ana   NEG AUX-C come   ask
          Miren didn't ask whether Ana didn't come.

The example in (38) shows that a non-inverted order indeed makes the sentence grammatical:

(38)   Mirenek ez   du [Ana etorri ez   d-en] galdetu.   [Non-inversion + Quasi-focus]
          Miren   NEG AUX Ana come NEG AUX-C ask
          Miren didn't ask whether Ana didn't come.

This hypothesis, especially if we take non-inversion to be a last resort strategy, can also explain why this order is not found in root clauses: in the absence of clausal embedding, there is no FOFC-violation to be circumvented. Similarly, if this is on the right track, then we could expect clausal complements that independently satisfy the FOFC via extrapostion or pied-piping not to display non-inverted orders either. Again, that is the tendency we observe:[31]

(39)   *Mirenek esan du   [Ana etorri ez   d-ela].   [Non-inversion + Extraposition]
          Miren   say AUX Ana come NEG AUX-C
          Miren said that Ana didn't come.

---

[31] The judgements are less clear with focus-induced pied-piping, where for some speakers negative inversion is not as bad. This is illustrated in (i), which differs minimally from (40). It looks like for these speakers A'-movement with focus does not necessarily ensure FOFC-compliance. I leave this issue on the interaction between type of A'-movement and the FOFC for future research.

   (i) */?[ANA etorriko   ez d-ela] esan du Mirenek.   [Non-inversion + Pied-piping]
        Ana   come.PROSP NEG AUX-C say   AUX Miren
         Miren said that ANA won't come.

(40)   */?? [Nor etorri ez   d-ela] esan du   Mirenek?   [Non-inversion + Pied-piping]
          Who come NEG AUX-C say   AUX Miren
          Lit. That who didn't come did Miren say?

Summarizing, in cases of violation of the FOFC by [Neg + Aux-C] surfacing in the head-initial domain of the clause, Basque uses another FOFC-compliance strategy besides extraposition and pied-piping, which consists in the negative marker surfacing between the verb and the auxiliary.

We can be even more precise in the description of the position of the relevant heads since, as shown by the example in (41), no other constituent –such as the adverb *gaur* 'today'– can surface to the right of the [V + Neg + Aux-C] cluster in non-inverted structures.[32] That is, the heads must be clause-final:

(41)   *Mirenek ez   du   [Ana etorri ez   d-en   gaur] galdetu.   [Non-inverted]
          Miren   NEG AUX Ana come NEG AUX-C today ask
          Miren didn't ask whether Ana didn't come today.

The FOFC-compliance strategy identified here thus consists in the [V + Neg + Aux-C] string surfacing on the right edge of the embedded clause.

5.2 Word order in wh-interrogative clauses

Another context in which word order facts can be different in root *vs.* embedded clauses is that of *wh*-movement (see also Uribe-Etxebarria 2003). Example (32c) (repeated here as (42)) showed that as such, the latter cannot surface in quasi-focus position:

(42)   *Mirenek ez   du   [noiz etorri d-en   Ana] galdetu.   [Quasi-focus]
          Miren   NEG AUX when come AUX-C Ana   ask
          Miren didn't ask when Ana came.

However, with a minimal change, this becomes possible:

(43)   Mirenek ez   du   [Ana noiz etorri d-en] galdetu.
          Miren   NEG AUX Ana when come AUX-C ask
          Miren didn't ask when Ana came.

The difference, on the surface, lies in the position of the subject *Ana*: whether it surfaces to the right of the verb, or whether it is topicalized and surfaces clause-initially. That such constituents undergo topicalization is shown by the fact that they cannot be strictly non-presuppositional:

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[32] The strict V-final requirement on non-inverted negative clauses has been observed in other types of embedding: see footnote 29.

(44) *Mirenek ez du [zerbait ere noiz gertatuko d-en] galdetu.
     Miren   NEG AUX something ADDP when happen   AUX-C ask
     Miren didn't ask when something or other will happen.

All constituents besides the *wh*-phrase must undergo topicalization in this configuration:

(45) a. *Mirenek ez   du [Ana noiz etorri d-en   etxe-ra] galdetu.
         Miren   NEG AUX Ana when come AUX-C house-to ask
         Miren didn't ask when Ana came home.

      b. Mirenek ez   du [Ana etxe-ra   noiz   etorri d-en] galdetu.
          Miren   NEG AUX Ana house-to when come AUX-C ask
          Miren didn't ask when Ana came home.

In the ungrammatical (45a) the subject undergoes topicalization, but the adjunct *etxera* 'home' does not. Topicalization of the latter, as in (45b), is necessary for the sentence to be grammatical.

   Topicalization is thus mandatory in *in situ wh*-interrogatives (see also Uribe-Etxebarria (2003) on systematic topicalization in embedded interrogatives). But one can also see how all the grammatical sentences above have the [V + Aux-C] cluster on the right edge of the embedded clause. The 'V-final' order is thus a second, interrelated, property of embedded *wh*-interrogatives.

   Now, I would like to propose that the mandatory V-final order in embedded *wh*-interrogatives should be understood as resulting from a FOFC-compliance strategy, just like in embedded negative clauses: something that repairs the final-over-final disharmonic configuration created by clausal embedding. Under that view, we can consider that V-final orders are not mandatory in root *wh*-interrogatives because there is no need to make use of such a strategy. And the same pattern can be expected of clauses where FOFC-compliance is ensured by other means, like extraposition and pied-piping. The examples in (46) show that that is indeed the case:[33]

(46) a. Mirenek galdetu du   [noiz etorri d-en   Ana].   [Extraposition]
          Miren   ask   AUX when come AUX-C Ana
          Miren asked when Ana came.

      b. (?) [Noiz etorri d-en   Ana] galdetu du   Mirenek.   [Pied-piping]
              when come AUX-C Ana ask   AUX Miren
          Miren asked when Ana came.

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[33] Many speakers prefer pied-piped clauses to involve topicalization, as in (i) (cf. Uribe-Etxebarria 2003):

(i) [Ana noiz etorri d-en] galdetu du   Mirenek.   [Pied-piping + Topicalization]
     Ana when come AUX-C ask   AUX Miren
     Miren asked when Ana came.

Why topicalization is so preeminent in clausal embedding (in the absence of a FOFC-violating configuration, too) is an open question.

The above examples show that postverbal material is allowed (and topicalization is not obligatory) precisely in clausal complements that are extraposed (46a) or pied-piped (46b).[34]

5.3 Conclusion: V-final order as a compliance strategy

This section observed that clause-internal word order changes take place in complement clauses which are *in situ* and are not repaired by extraposition or pied-piping. It has proposed that these changes are to be related to yet another compliance strategy.

Negative clauses display clause-final non-inverted [V + Neg + Aux-C] orders, and *wh*-interrogatives display V-final order and are subject to obligatory topicalization. Both cases involve the heads V/Neg/T/Fin surfacing on the right edge of the clause. As a first step towards understanding the mechanism behind these compliance strategies, I thus conclude that both cases can be subsumed under a single generalization, whereby what I will henceforth call the 'V-heads' surface on the right, in V-final order (where 'V' is a covert term for all the relevant heads; cf. Section 3.1):[35]

(47)   *Generalization on word order alternations in Basque clausal embedding:*
        V-final order in *in-situ* complement clauses is a FOFC-compliance strategy.

As a final comment, I would like to point out that the results of this section also show that word order alternations are not 'free' in clausal complements, as one could conclude from previous descriptions of Basque. There are in fact three positions in which the embedded clauses can surface (pied-piped position, extraposed position, or *in situ)*, and the internal word order possibilities co-vary with them.

6 Clause-final V as *in-situ* V

Section 4 has argued that Basque clausal embedding is ruled by FOFC-evaluation at PF. More precisely, head-initial left-peripheral projections dominated by a head-final VP trigger FOFC-violation only when they host *overt* heads. Then, Section 5 has argued that clause-final V is a FOFC-compliance strategy. The present section brings these two claims together, by putting forth an analysis of V-final orders which is integrated in the PF-approach to the FOFC.

Recall first that the relevant structures –negative clauses and *wh*-interrogatives clauses– both involve movement of heads from the head-final domain of the clause to the head-initial domain: movement of Neg + Aux to Σ and movement of V + Aux to Foc, respectively. Now, the V-final order of embedded clauses mirrors the V-final order of the neutral declarative root clauses of

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[34] (46b) could be an answer to the question 'What did Miren ask?', with focus on the embedded clause.

[35] The label "V-head" is given for practical reasons; it does not imply that the relevant heads have e.g. V features or verbal properties.

this SOV language, where the relevant heads remain in their FinP-internal position. I propose that V-final patterns in embedded clauses indeed result from the relevant heads surfacing FinP-internally in their base position (i.e. *in situ)*, rather than in the left-peripheral domain of the clause. Sections 6.1 and 6.2 provide arguments for this analysis for negative and *wh*-clauses respectively, and Section 6.3 develops an explanation based on lower copy-deletion, compatible with the PF-approach to FOFC advocated for in this paper.

6.1 Negative clauses

If the *in-situ* analysis of heads in V-final configurations is on the right track, it means that in negated embedded clauses, none of the V-heads surfaces on Σ, as represented in (48b):[36]

(48) a. Mirenek ez du [Anak leihoa itxi ez du-ela] esan.
          Miren NEG AUX Ana   window close NEG AUX-C say
          Miren didn't say that Ana didn't close the window.

b.
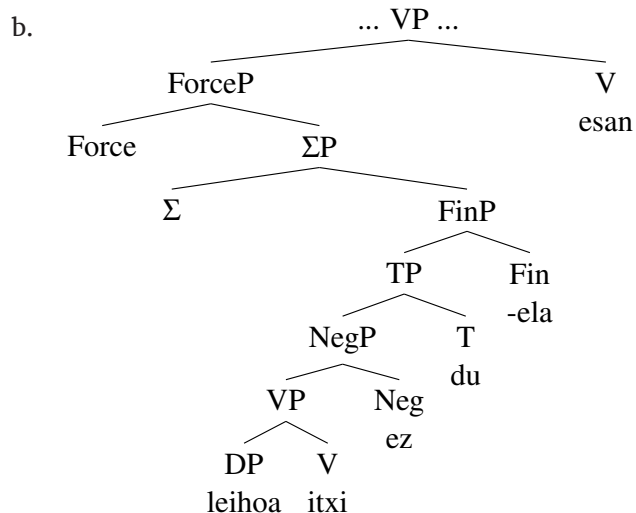
Beyond the word order facts, this analysis explains why these heads behave as a cluster, allowing no phrasal constituent to intervene (as illustrated in (49a)), which contrasts with what is observed for instance in negative root clauses with inverted [Neg + Aux…V] order – where phrasal structures such as DPs or full clauses can surface between [Neg + Aux] and V (see (49b)):

(49) a. Mirenek ez du [Anak (leihoa) itxi (*leihoa) ez (*leihoa) du-ela] esan.
          Miren NEG AUX Ana   window close window NEG window AUX-C say
          Miren didn't say that Ana didn't close the window.

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[36] I will remain agnostic as to whether head-to-head movement still takes place within the FinP.

    b. Mirenek ez   du   leihoa   itxi.
        Miren   NEG AUX window close
        Miren didn't close the window.

Evidence also comes from the relative position these heads occupy with respect to adverbs of manner in negative contexts. The latter are VP-level adverbs that immediately precede the lexical verb (cf. Euskaltzaindia 1985; Elordieta 2001; 2003; Vicente 2008). The example in (50) illustrates this with the adverb *azkar* 'quickly, fast':

(50)   Ana azkar etorri da.
        Ana fast   came   AUX
        Ana came fast.

The adverb surfaces to the left of the lexical verb in contexts of negation, too. But this time it is preceded by [Neg + Aux], as illustrated in (51). This is the quasi-focus position; the adverb is therefore in its base-generated position here.

(51)   Ana ez   da   azkar etorri.
        Ana NEG AUX fast   come
        Ana didn't come fast.

Adverbs of manner do not easily undergo focus- or topic-movement to the left of the negative marker (52), which indicates that they preferably remain in their base position as modifiers of VP (see Elordieta 2001: 195):

(52)   *Azkar ez   da   Ana etorri.
        fast   NEG AUX Ana come
        Ana didn't come fast.

Now, within non-inverted negative clauses, adverbs of manner surface to the immediate left of [V + Neg + Aux-C], as illustrated in (53):

(53)   Mirenek ez   du   [Ana azkar etorri ez   d-ela] esan.
        Miren   NEG AUX Ana   fast   come NEG AUX-C say
        Miren did not say that Ana didn't come fast.

The adverb in (53) could not be in a position above ΣP; otherwise we would expect the sentence to be as deviant as (52). It is thus in its base-position, adjoined to VP. Therefore, the negative marker and auxiliary to its right are not on Σ. That is, they surface in their base-position: in a final-headed phrase internal to FinP.

    An additional argument can be made based on the behavior of negative polarity items (NPI, cf. Laka 1990; Uribe-Etxebarria 1994; Etxeberria et al. 2021). Etxepare (2003: 545-6) points

out that while only a single NPI can surface to the left of negation in root contexts (54), this restriction is lifted in embedded clauses with V-final orders (55):[37]

(54) a. Ez du inork ezer egin.   [Etxepare (2003: 545)]
      NEG AUX anybody anything do
      Nobody did anything.

     b. Inork ez du ezer egin.
       anybody NEG AUX anything do

     c. ??Inork ezer ez du egin.
       anybody anything NEG AUX do

(55) Jonek [inork ezer egin ez du-ela] esan du. [Adapted from Etxepare (2003: 546)]
    Jon   anybody anything do   NEG AUX-C say   AUX
    Jon said that nobody did anything.

The examples in (54) show that NPIs can remain in their argument position to the right of [Neg + Aux] (54a), and that no more than one can move to the left-periphery, to the left of [Neg + Aux] on Σ (54b)–(54c). In non-inverted embedded clauses such as (55), they can all be grouped together to the left of the V-heads. This contrast is expected under the *in-situ* analysis of non-inverted negation. That is, since as argued here, in (55) the V-heads surface in their *in situ* position and nothing surfaces on Σ, the left-peripheral phrases (topics and foci) as well as the arguments that remain in their base-position will surface indistinguishably on the left of V. Under this analysis, one can thus describe root and embedded clauses as falling under the very same generalization, namely that only one NPI can surface above ΣP.

6.2 Interrogative clauses

The *in situ* structure of V-final orders in interrogative clauses is less transparent than in negative clauses, because of a structural ambiguity: the V-heads could either be on Foc or in their base-position. Section 5.2 showed that in embedded interrogatives in quasi-focus position, any remnant constituent undergoes obligatory topicalization. Thus, a string such as the one in (56a) could be analysed either as in Hypothesis 1 or Hypothesis 2 below:

(56) a. Mirenek ez du [leihoa nork itxi du-en] galdetu.
    Miren   NEG AUX window who close AUX-C ask
    Miren didn't ask who closed the window.

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[37] See also Laka (1990: 47) who makes a similar point regarding relative clauses.

b. *Hypothesis 1.*
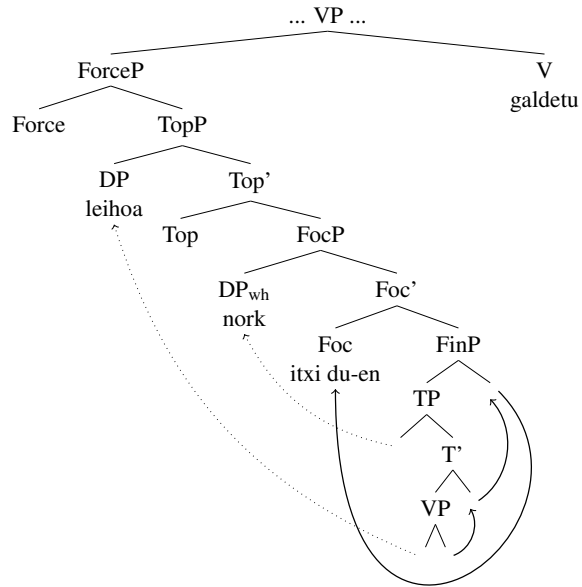
c. *Hypothesis 2.*
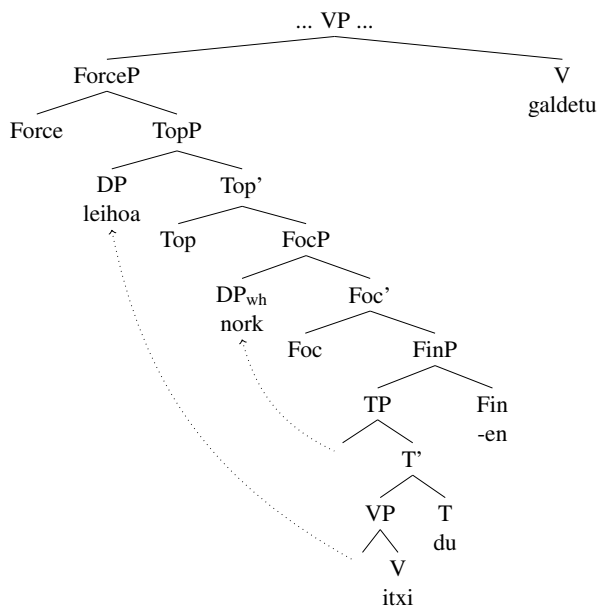
The evidence in favor of Hypothesis 2 comes from a specific construction for foci and *wh*-interrogatives, namely the 'reinforced' construction used in Eastern varieties of Basque. While standard *wh*-constructions involve movement of [V + Aux] to Foc as described in Section 3.1 in reinforced constructions only the inflected auxiliary moves, leaving the lexical verb behind (cf. Lafitte 1944[1962]; Duguine & Irurtzun 2010; Etxepare 2016)):

(57) a. Nork itxi   du   leihoa?   [Standard *wh*-interrogative]
          who close AUX window
          Who closed the window?

      b. Nork du   leihoa   itxi?   [Reinforced *wh*-interrogative]
          who AUX window close
          Who closed the window?

With this inversion between the verb and the auxiliary, reinforced interrogatives signal unambiguously that the auxiliary surfaces on Foc. They can therefore help us check Hypothesis 2. Now, the example in (58b) shows that this construction cannot be embedded in quasi-focus contexts:

(58) a. Anak ez   du   [leihoa nork itxi   du-en] galdetu.   [Standard]
          Ana NEG AUX window who close AUX-C ask
          Ana didn't ask who closed the window.

      b. *Anak ez   du   [leihoa nork du-en itxi]   galdetu.   [Reinforced]
          Ana NEG AUX window who AUX-C close ask
          Ana didn't ask who closed the window.

The above contrast is exactly what can be expected if the V-heads must surface in their own *in situ* position within these *in situ* embedded clauses: (58b) is ungrammatical because the auxiliary surfaces on Foc (thus generating a non-compliant configuration), whereas (58a) is grammatical because neither V or Aux surface on Foc.

A further prediction is that the reinforced construction should be possible in extraposed indirect interrogatives. As illustrated in (59), this is borne out:[38]

(59) Anak ez   du   galdetu [nork du-en itxi   leihoa].
      Ana NEG AUX ask   who AUX-C close window
      Ana didn't ask who closed the window.

Next section puts forth an analysis of *in situ* V-heads based on lower copy pronunciation: the V-heads in clause-final position constitute the lower tail of a movement chain in which the higher copy is not pronounced so as to ensure PF-convergence.

6.3 Lower copy spell-out for FOFC-compliance

If the V-heads surface *in situ*, does this imply that they do not undergo movement to Σ/Foc in embedded clauses? In other words, is the syntax of V-final clauses different from the others'? Nothing in our data, beyond the contrast in word order, suggests that such an analysis is necessary. The explanation I would like to put forth is that even though head-movement does take place,

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[38] These results bring more nuance to Duguine & Irurtzun's (2010) description of reinforced constructions whereby even though they are generally not allowed in embedded contexts, some variation is observed across speakers.

the heads get ultimately pronounced in the lower position. I thus propose an analysis in terms of copy-deletion (cf. Chomsky (1995) a.o.), where in embedded clauses the V-heads raise to Σ and/or Foc in contexts of negation and/or *wh*-interrogatives, but instead of the higher copy, it is the lower copy of movement which gets pronounced (and the higher one is deleted).

Under the assumption that pronouncing the lower member of a movement chain is legitimate in cases in which pronouncing the higher one would lead to a PF violation, a rich literature has shown that lower copy spell-out (or lower copy pronunciation) is at play in cases of A'-movement, A-movement, or head movement across languages (cf. among others Bobaljik 1994; 2002; Bošković 2001; 2011; Nunes 2004; Corver & eds.; Kandybowicz 2008; Villa-Garcia 2019). This can be illustrated with a case-study from Bošković (2001), which deals with a particular cases of head-movement in Romanian, which involves syllabic contraction in contexts of clitic-climbing. Romanian clitics undergo contraction when they surface to the left of an auxiliary starting with a vowel. The examples in (60) feature the first person dative clitic just before the finite auxiliary *au*: the contrast between the two sentences shows that in such contexts the clitic must undergo clitic weakening:

(60)   a. *Îmi   au   ales   articolul.   [Romanian; Bošković (2001)]
            me.DAT have chosen article.the
            They have chosen my article.

       b. Mi-au   ales   articolul.
            me.DAT-have chosen article.the

Contraction does not take place when the clitic is adjacent to a main verb which starts with a vowel:

(61)   Îmi   au   articolul   pe masă.
        me.DAT have article.the on table
        They have my article on the table.

But not all clitics show this behavior. Thus, the feminine singular accusative clitic *o* just cannot occur on the left of auxiliaries starting with a vowel (62a), and it surfaces as an enclitic (62b), even though it can otherwise surface to the left of e.g. main verbs (63):

(62)   a. *O   am   vazut.
            her have seen
            I have seen her.

       b. Am   vazut-o.
            have seen-her
   I have seen her.

(63)   O   am.
        her have
        I have her.

Bošković (2001) puts forth the following straightforward account in terms of higher copy deletion: assuming that (i) the feminine singular accusative clitic *o* cannot take part in the syllabic reduction process when used proclitically, and that (ii) all pronominal clitics –*o* included– undergo clitic climbing in auxiliary + participle constructions, he proposes that pronouncing the lower copy of *o* when it undergoes clitic climbing in an auxiliary + participle construction is the only way to derive a legitimate PF output.

My claim is that in Basque a similar mechanism explains the word order alternations observed within clausal complements. The idea is that movement of V-heads to Σ or Foc takes place in all the cases studied above. However, in those cases that would create a FOFC-violating output, the higher copies of this movement chain are deleted and the lower ones pronounced, producing a PF-convergent output.[39]
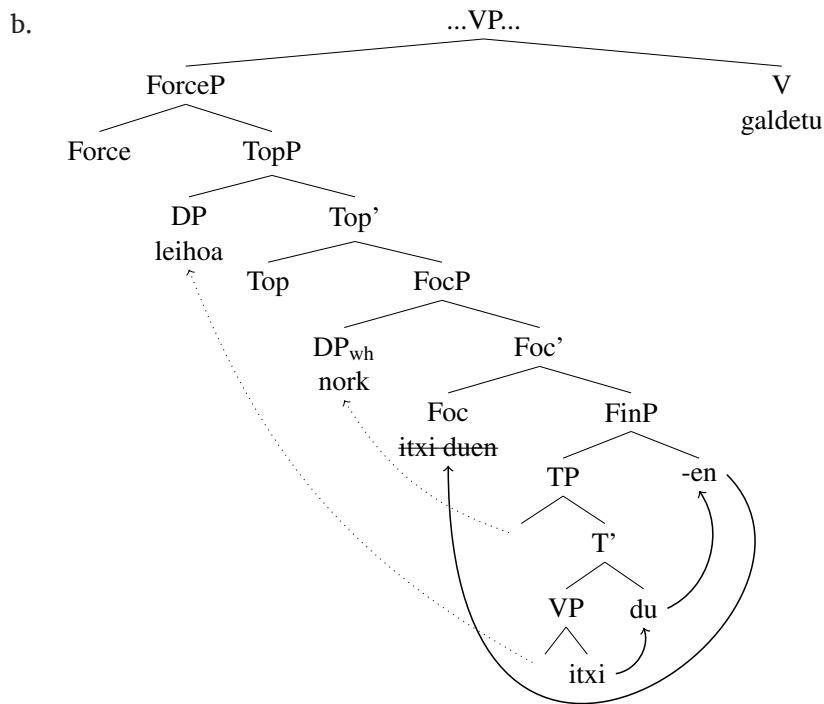
The derivation of the non-inverted negative clause in (48a) and the V-final *wh*-interrogative in (56a) (repeated in (64a) and (65a) respectively) will thus be as follows:

(64) a. Mirenek ez du [Anak leihoa itxi ez du-ela] esan.
         Miren   NEG AUX Ana   window close NEG AUX-C say
         Miren didn't say that Ana didn't close the window.

   b.
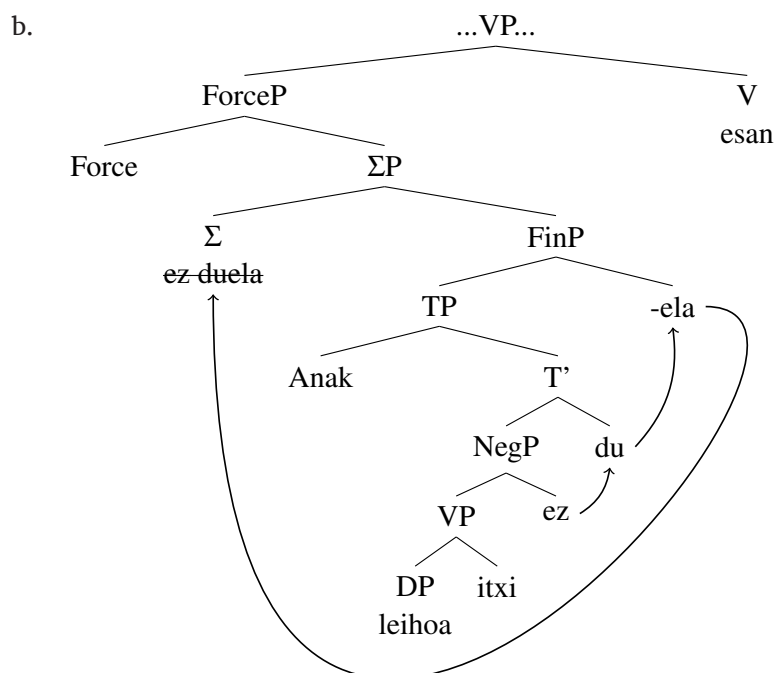
(65) a. Mirenek ez du [leihoa nork itxi   du-en] galdetu.
         Miren   NEG AUX window who close AUX-C ask
         Miren didn't ask who closed the window.

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[39] See also Arregi & Pietraszko's (2021) analysis of head-movement in which 'moved' heads can be pronounced either in their higher position or a lower one (cf. lowering).

b.   ...VP...

ForceP — V galdetu

Force   TopP

DP leihoa   Top'

Top   FocP

DP$_{wh}$ nork   Foc'

Foc ~~itxi duen~~   FinP

TP   -en

T'

VP   du

itxi

In sum, lower copy pronunciation offers a straightforward explanation for the V-final requirement on clausal complements. Leftward head movement takes place, but generates a FOFC-violating configuration. Deleting the higher copies of the movement chain instead of the lower ones ensures convergence. Furthermore, this explanation is aligned with the analyses made in e.g. Sheehan (2013b; 2017) and Etxepare & Haddican (2017), where lower copy pronunciation as a repair strategy that ensures FOFC-compliance explains a variety of word order facts (see Section 2.2).

6.4 Main Clause Phenomena and alternative analyses

It is a standard observation that cross-linguistically, certain types of embedded clauses do not allow operations that are otherwise possible in root contexts in particular (cf. Hooper & Thompson 1973; Green 1973). Syntactic explanations of such contrasts typically appeal to differences between clause-types: differences in structural size, and/or intervention effects specific to clauses with operator-movement (cf. a.o. Haegeman 2006 and Haegeman & Ürögdi 2010 on the two approaches).

Precisely, in line with this type of approaches, Elordieta & Haddican (2018) develop an analysis of word order alternations in Basque clausal embedding which covers part of the data studied here.[40] They argue for instance that in embedded interrogatives introduced by

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[40] Even though, unlike in the present paper, it does not take into account the varied positions in which embedded clauses surface with respect to the matrix clause, Elordieta & Haddican's (2018) work covers a large typology of clauses and it also aims at accounting for the contrasts in the verb-first restriction observed across this typology. Exploring these two empirical domains goes beyond the scope of this paper. Duguine (to appear) nonetheless discusses the V-final ordering across different types of clausal embedding in Basque, showing how in relativized or adjunct clauses, overtness of heads, but also their *affixation* properties affect the word order possibilities, and thus, arguably, FOFC-compliance.

complementizer *-en* (*yes/no* interrogatives in their work), (i) the left periphery is *truncated* and (ii) an interrogative operator undergoes movement. It is then the interaction between these two phenomena that gives as a result for instance what we have called negative clauses with 'non-inverted order'. Such analyses are categorical: each clause type is expected to behave in a given, regular manner. But what the empirical exploration of clausal embedding in Sections 4 and 5 has shown is that in fact, the word order facts vary in accordance with the syntactic environment of the embedded clause: inversion is allowed in extraposed clauses, pied-piped clauses, but not in *in situ* clauses, regardless of the complementizer or the clause-type. These patterns cannot be explained in a truncation-based approach, where the internal structure of the clause directly correlates with its type and thus cannot be subject to variation.[41]

Note furthermore that the approach put forth here relies on a universal generalization: it is based on the FOFC, i.e., on an undoubtedly typologically strong generalization, which results from the way hierarchical structures are built in the grammar (cf. Roberts 2017). The asymmetries and word order alternations are explained without having to postulate structural differences. This is I believe a, important advantage of the present proposal.

7 Conclusion

Basque clausal complementation creates a potentially FOFC-violating configuration with a head-final VP dominating a head-initial ForceP. But the special feature of Basque in this regard is that the head-initial phrases in this configuration do not necessarily host overt exponents, which opens the possibility to test the relevance of overtness for the FOFC. And indeed, this paper has shown that overtness matters for the evaluation of the FOFC. It matters whether Force has an overt exponent or not, but it also matters whether lower head-initial phrases (TopP, FocP and ΣP) host overt heads or not. Among the strategies that allow to escape configurations where overt heads on Force, Foc and/or Σ would be dominated by VP are (i) extraposition or pied-piping of the clause and (ii) lower copy spell out of the offending heads, resulting in strict V-final orders in embedded clauses.

The analysis implies that at the base of these strategies is the fact that FOFC-violations follow from the relevant heads being *phonologically overt*. If they are null or deleted, compliance ensues. Consequently, the FOFC is a PF phenomenon, sensitive to whether heads have a phonological content, as well as to the specific positions in which heads are realized. This result converges with a growing body of research that suggests that PF factors influence more word order-related phenomena –typically associated to syntax proper– than was standardly thought (see among others

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[41] A reviewer suggests that an alternative account could be considered in which just those clauses that are allowed *in situ* and show non-inverted orders are truncated, and maybe lack the relevant left-headed functional projections (Force, Top, Foc, Σ, etc). Such an analysis could be considered, which would not necessarily be related to Main Clause Phenomena. However, as the reviewer themself points out, it would predict e.g *wh*-movement or topicalization not to take place in these contexts, contrary to fact (the data in Section 5.2 shows that constituents to the left of *wh*-phrases are necessarily topics, showing furthermore that *wh*-phrases surface in SpecFocP).

Zec & Inkelas 1990; Bošković 2001; 2020; Nunes 2004; Richards 2010; Sabbagh 2014; Kandybowicz & Torrence 2015; Mathieu 2016; Anttila 2016; Bennet et al. 2016; Holmberg et al. 2020).

The results also imply that mere phonological (c)overtness must be integrated in the analyses of the FOFC. Naturally, the studies of the FOFC have in general explored word orders facts with *overt* heads (as this makes their behavior directly observable), and therefore they do not uncover the potential effects of phonological nullness. It thus remains to be seen what the broader implications are for the earlier literature, i.e., whether all the FOFC-effects that have been described in the literature can be reinterpreted this way and whether more independent evidence can be added that bears witness to the post-syntactic nature of the FOFC. But the analysis also makes more general predictions, and we would expect overt/null alternations of heads in other languages to display the same type of contrasts in grammaticality and/or in appeals to compliance strategies as in Basque, when they occur in non-compliant configurations.[42]

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[42] In this respect, Biberauer et al. (2014a) present Hindi data as evidence in favor of a narrow syntactic approach to the FOFC (and against one in which overtness could matter). Hindi is an OV language with clause-initial complementizers and clause-extraposition, which Biberauer et al. take to indicate that preverbal clauses are not FOFC-compliant. Citing Josef Bayer (p.c.) they point out that null complementizers are allowed in this language, but yet they do not facilitate preverbal CPs, as shown in (i):

(i) *Hindi* (Davison 2007: 177; cited in Biberauer et al. 2014a: 186)
 a. usee   (yah) maluum hai [ki vee aa   rahee haiN].
     3SG.DAT this   known   is   that 3PL come PROG are
     He/She knows that they are coming.

 b. *usee   [(ki) vee aa   rahee haiN] maluum hai.
     3SG.DAT that 3PL come PROG are   known   is
     He/She knows that they are coming.

Note first that Subbārāo (2012: 223) points out that in Hindi-Urdu, preverbal clauses are in fact possible precisely if the complementizer is omitted (though they seem to surface higher than the complement position). But even if they were not, it should be noted that the results drawn by Biberauer et al. (2014a) only hold under the assumption that complementizer deletion, or the null/overt alternation is free. But the research on null complementizers has shown that their distribution is restricted. We can think for instance of null complementizers in English, which are not allowed in extraposition, pseudoclefting, right node raising, gapping, topicalization contexts, or subject clauses (cf. Bošković 1997; Bošković & Lasnik 2003):

(ii) It is believed [(that) he likes linguistics].

(iii) a. It seemed at that time [*(that) David had left].
  b. What the students believe is [*(that) they will pass the exam].
  c. They suspected and we believed [*(that) Peter would visit the hospital].
  d. Mary believed Peter finished school and Bill [*(that) Peter got a job].
  e. [*(That) John likes Mary] Jane didn't believe.
  f. [*(That) he liked linguistics] was widely believed.

In other words, null complementizers are possibly ineligible in Hindi preverbal clauses for independent reasons. Summarizing, the Hindi data and generalizations are intriguing but also controversial, and deserve a fuller exploration than can be given here.

Finally, concerning the syntax of Basque, by exploring in detail the relation between the different positions in which embedded clauses can surface in the matrix clause and their internal syntactic and PF-properties, this paper has shown that word order alternations are not free, and that they do not correlate with the opposition between root *vs.* embedded clauses either. They result from different strategies that can be appealed to in a configuration that potentially violates the FOFC. Pied-piping and extraposition allow a complement clause to escape the FOFC, as do non-inverted/V-final orders within *in situ* embedded clauses. What could look like Main Clause phenomena must in fact be attributed to the FOFC.

Abbreviations

The abbreviations follow the Leipzig Glossing Rules, except: ADDP = additive particle; POT = potential; PART = partitive; PROSP = prospective aspect.

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