
BASQUE V2 EFFECTS IN DIACHRONY*

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ABSTRACT This paper explores the evolution of verb-second (V2) patterns in Basque *wh*-interrogatives from the Archaic period (14–16th c.) to later periods. While in Modern Basque a systematic “residual” V2 system in *wh*-interrogatives is observed, in Archaic Basque the patterns appear to be mixed: synthetic verbs display systematic V2 order, whereas analytic verbs allow intervening material between the *wh*-phrase and the verbal complex. We put forth a multifactorial analysis of Archaic Basque interrogatives, assuming that in analytic constructions independent syntactic and morphophonological properties of auxiliaries interact with the syntax of V2 in such a way that they ‘hide’ its effects on word order. The change from Archaic to Modern Basque involves a simple change in the properties of T, independently of the syntax of V2.

1 LANGUAGE VARIATION AND CHANGE IN V2 ORDERS

The notion of verb-second (V2) covers a set of phenomena with broad cross-linguistic variability. Distinctions have been made between “strict/exact V2” vs. “relaxed/at least V2”, where the latter involves a high number of non-V2 orders (cf. among others [Jouitteau 2010](#), [Holmberg 2015](#), [Lohnstein & Tsiknakis 2020](#), [Poletto 2013](#), [Wolfe 2019](#), [Wolfe & Woods 2020](#)). Then, what has been dubbed “residual” or “partial” V2 is observed in languages without a proper V2 system, but in which ordering patterns in specific structures –typically interrogatives– mirror the V2 pattern (“V2 effects”), as is the case,

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for instance, in most Romance languages or in English (cf. Rizzi 1996; see also Cruschina, Fábregas & Meklenborg Nilsen 2022 and references therein).

Besides this classification, there is an important range of variation among the word order patterns in languages within each of the three categories, and which is also observed in language change and language acquisition (cf. the contributions in the recent volumes Wolfe & Woods 2020, Lohnstein & Tsiknakis 2020, Cruschina et al. 2022, as well as, among many others, Kaiser 2002, Meisel, Elsig & Rinke 2013, Westergaard 2014, 2021, Sitaridou 2017, Walkden 2017, Samo 2018, Martins 2019, Wolfe 2019, Salvi 2020, Larrivée 2021, Cournane & Klævik-Pettersen 2023). This has been taken to show that a more fine-grained characterization of different subtypes of V2 systems is needed, even among Germanic languages or among Old Romance languages, which are otherwise generally described as more or less homogeneous groups (see Larrivée and Poletto's introduction to the present volume). In parallel, observing the multiplicity of properties with which the loss of V2 is related across Romance languages, Poletto (2019) proposes that there is no unambiguously identifiable triggering factor for this change. In particular, subject inversion or the asymmetry between main and embedded clauses can be identified in some instances as being the cues leading to the loss of V2, but they are not necessarily associated with it. In this case, different grammatical properties will be identified as the destabilizing factors. V2 is therefore “made up by a constellation of different factors” which interact differently in each language (Poletto 2019: 69).

An interesting way in which, despite observed variability, the different subtypes of V2 can be explained unitarily is through approaches that allow both large-scale and small-scale variance in the syntactic contexts that lead to V2. For instance, Westergaard (2009, 2014, 2021) proposes that it emerges from there being minimally different syntactic structures, which are acquired as small-scale cues, or “micro-cues”, across languages (cf. Lightfoot 1999). Micro-cues are developed as part of children's I-language, on the basis of the input they are exposed to and in which these cues are expressed. For example, Germanic languages with V2 order in declaratives will be explained in terms of the cue in (1), and languages in which V2 only occurs in interrogatives with the cue in (2). In languages such as Modern English in which only auxiliaries or the verb *to be* raise to the V2 position in interrogatives, the micro-cue will correspond to the one in (3) (Westergaard 2009: 1030):

- (1) Cue for V2 in declaratives: $_{\text{DeclP}}[\text{XP}_{\text{Decl}^0}\text{V} \dots]$
- (2) Cue for V2 in interrogatives: $_{\text{IntP}}[wh_{\text{Int}^0}\text{V} \dots]$
- (3) Cue for V2 in English interrogatives: $_{\text{IntP}}[wh_{\text{Int}^0}\text{I} \dots]$

In a similar fashion, and adopting the parametric approach in terms of a four-level hierarchy put forth by Biberauer & Roberts (2012), Roberts (2012, 2019) and others, some recent proposals try to render variation in V2 at the meso-, micro- and nanoparametric levels to which different types of V2 are assigned (cf. Roberts 2019, Wolfe 2022). Beyond accounting for cross-linguistic variation, all these approaches aim to capture the patterns observed in language acquisition and language change.

This paper explores micro-variability in the diachrony of the Basque V2 system, in which a change in the ratio of V2 orders in *wh*-interrogatives and the emergence of a systematic ‘residual’ V2 system can be observed in texts from the 16th century on. In the spirit of the aforementioned models, it presents an explanation in which a small-scale syntactic change drives the change in the patterns of V2. The explanation is also multifactorial, in that the way in which V2 is realized in a language depends not only on the properties of the operations that leads to V2 order (i.e., *wh*-movement and T-to-C), but also on other properties of the elements that are involved in this operation.

On the other hand, our analysis contrasts with the small-scale syntactic approaches, in that it shows that variation in the surface position of the verb is in some cases better explained in terms of the interaction between different aspects of the grammar, rather than in terms of differences in the syntax of V2 properly speaking. More precisely, our results show that variation in certain morphosyntactic and morphophonological phenomena not related to the syntax of V2 plays an important role on the superficial word order and “V2 effects”. In particular, we show that (i) variation in terms of whether T-to-C movement is preceded by V-to-T movement or not, and (ii) variation in the properties of T –i.e., whether it requires affixation or not, and when it does, whether this is due to a syntactic or postsyntactic requirement– can significantly affect linear word order.

The structure of the paper is the following. Section 2 introduces the empirical facts on the patterns of V2 orders in *wh*-interrogatives in Archaic Basque, based mainly on the analysis of the first translation of the New Testament into Basque. Section 3 shows the existence in Archaic Basque of a correlation between the way in which the inflected verb is constructed (synthetically vs. analytically) and the prevalence of V2 effects. After giving some background on the syntax of Modern Basque *wh*-interrogatives in Section 4, Section 5 shows that Archaic Basque had a *wh*-movement grammar. Section 6 then develops the core of this paper: it presents an account of the correlation between verb-construction type and V2 effects in Archaic Basque that differs minimally from that of Modern Basque. Section 7 discusses aspects related to language change and the nature of “residual” V2, Section

8 briefly reflects on the possible role of contact with Romance languages on the systematization of V2 in Basque, and Section 9 discusses the results in the light of the ongoing debates on the nature of the V2 property, and on the nature of linguistic variation more generally. Section 10 concludes the paper.

2 V2 EFFECTS IN (ARCHAIC VS. MODERN) BASQUE INTERROGATIVES

Basque is a language with S-O-V-Aux order in discourse-neutral contexts, as illustrated in (4):¹

- (4) *Lanbro-a-k bazterr-ak ezkututzen ditu.* [Modern Basque]
 mist-D.SG-ERG side-D.PL.ABS hide AUX
 The mist hides the landscape.

This word order is standardly accounted for in terms of the final-headed nature of, in particular, VP/*v*P and TP (cf. Goenaga 1984, Ortiz de Urbina 1989, 1999, Artiagoitia 2002, 2008, Elordieta 2001, 2013, Duguine 2022a).

However, this word order is altered in some constructions, such as in *wh*-questions, focus constructions, and sentential negation. In particular, *wh*-questions display obligatory adjacency between the *wh*-phrase and the finite verb.² The pairs of examples in (5) and (6) illustrate this requirement (here, and throughout the article, the *wh*-constituent is underlined and the finite verb is in bold).

- (5) a. Zer **ezkututzen du** lanbroak?
 what.ABS hide AUX mist.ERG
 What does the mist hide?
 b. *Zer lanbroak **ezkututzen du**?
 what.ABS mist.ERG hide AUX
 What does the mist hide?
- (6) a. Zerk **ezkututzen ditu** bazterrak?
 what.ERG hide AUX sides.ABS
 What hides the landscape?
 b. *Zerk bazterrak **ezkututzen ditu**?
 what.ERG sides.ABS hide AUX
 What hides the landscape?

1 The glossing in this paper adheres to the Leipzig Glossing Rules. Regarding the texts from which our examples are extracted, we will use the following abbreviations: Etx: Etxepare (1545), Laz: Lazarraga (1567-1602), Leiz: Leizarraga's New Testament (1571), Leiz-Cat: Leizarraga's Catechism (1571), RS: *Refranes y Sentencias* (1596), Cal-NT: the French 1562-1563 Calvinist editions of the New Testament, Cal-Cat: the French and Latin editions of John Calvin's *Catechism of the Church of Geneva*. See the section References.

2 See Section 3.2 on a relevant exception to this generalization, which involves causal *wh*-phrases, and Section 5 on a variety that has developed *wh-in-situ*, thus allowing non-adjacency.

The (a) examples display adjacency between the *wh*-phrase and the verb: the first is immediately followed by the latter (here formed by a lexical verb and an auxiliary). The third element of the sentence, the subject *lanbroak* ‘the mist’ in (5a) and the direct object *bazterrak* ‘the sides (landscape)’ in (6a) will necessarily surface in the periphery. This implies that the resulting word order might differ from the neutral SOV (as it does in both (5a) and (6a)). In the (b) examples, a constituent element surfaces in a position sandwiched between the *wh*-phrase and the verb. The result is ungrammatical, even if the resulting order corresponds to the neutral SOV word order, as in (6b).

These adjacency effects have been classified in the typology of ‘residual’ V2 effects. Following among others [Ortiz de Urbina \(1989, 1999\)](#), and [Irurtzun \(2007, 2016\)](#), we will assume that they result from the combination of two movements: movement of the *wh*-phrase to the specifier position of a projection in the CP domain on the one hand (Spec,FocP; in a ‘split’ left-periphery; cf. [Rizzi 1996](#)), and movement of the verb to the corresponding head, on the other hand (‘T-to-C’ movement to Foc).³

The systematicity of these V2 effects appears to be a relatively recent feature of the language. It has been noted that *wh*-interrogatives in 16th century Basque (henceforth Archaic Basque, following the periodization proposed in [Lakarra 1997](#)) did not always display adjacency between *wh*-phrases and verbs ([Ortiz de Urbina 1989](#), [Lakarra 1996](#), [Euskaltzaindia 1999](#), [Etxepare & Ortiz de Urbina 2003](#), [Aldai 2011](#), [Duguine & Irurtzun 2014](#), [Duguine & Kaiser 2024](#)).⁴ The following examples from 16th century texts show that any type of material –i.e., arguments or adjuncts, DPs or adverbs– can intervene between the *wh*-phrase and the verb. Furthermore, as illustrated in the sentence in (8), there can be more than one intervening constituent:

- (7) *Ceyn guiçonec andriari emayten du oguena* (Etx III.46)
 which man.ERG woman.DAT give AUX blame.ABS
 What man will blame the woman?
- (8) *Prophetac-ere hil içan dituc: nor hic eure buruä eguiten duc?*
 prophets-too die have AUX who you.ERG your head.ABS make AUX
 (Leiz Jh 8:53)
 Prophets have died, too: whom do you make yourself out to be?

³ Alternative analyses have been proposed for foci, which do not assume leftward movement, as in [Elordieta \(2001\)](#) or [Arregi \(2002\)](#). See [Irurtzun \(2007\)](#) for a discussion and evaluation of both types of approaches.

⁴ Virtually all the earliest texts available today are posterior to 1530, within the later Archaic Basque period (1400-1600). Some texts from the first decades of the 17th century are also classified within this period. Archaic Basque is followed by Old and Classic Basque (1600-1745), First and Second Modern Basque (1745-1876 and 1876-1968) and Standard Unified Basque (1968-present). See [Lakarra \(1997\)](#) and [Gorrotxategi, Igartua & Lakarra \(2018\)](#).

- (9) *Sommarioqui cer horrec erran nahi du?* (Leiz Cat 5)
 summarily what.ABS that.ERG say want AUX
Lit. Summarily what does it want to say?
- (10) *Cer adoratione mota hemen condenacen da?* (Leiz Cat 23)
 what worship type here condemn AUX
 What type of worship is condemned here?
- (11) *Nola andraen bildur cara* (Laz A9)
 how women.of fear are
 How (come) are you afraid of women

With the goal of being able to quantify the prevalence of this type of non-adjacent constructions in Archaic Basque, we established a corpus of all matrix *wh*-interrogatives occurring in a 16th c. New Testament (Gospels-Acts), namely in Joannes Leizarraga's *Iesus Christ gure iaunaren Testamentu berria*, published in 1571.⁵

A short comment is in order on the choice of the sources for our study. The number of texts from the Archaic period and available today is relatively small, and it is also constituted for the most part by fairly short texts (cf. Lakarra & Mounole 2018). These do not always include *wh*-interrogatives. Furthermore, some of them are songs, poems, or proverbs, where rhythm, rhyme, or other stylistic considerations could be affecting word order. Leizarraga's translation of the New Testament into Basque is by far the longest. Together with some shorter texts which Leizarraga appended to it (such as the catechism from which examples (9) and (10) are taken), this text constitutes 80% or more of the Archaic Basque corpus available today (Lakarra & Mounole 2018: 371). It contains a large number of interrogatives, and it is written in prose, which makes it an interesting source for the study of the syntax of Archaic Basque *wh*-interrogatives.^{6,7}

⁵ The translation was to a certain extent a collective work, where other experts or examiners helped Leizarraga. But for the sake of readability, we will henceforth refer to the translation as being *Leizarraga's*.

⁶ The other 'long' text from the Archaic period, Betolaza's *Doctrina Christiana* (1596) does not contain *wh*-interrogatives. The examples in (7) and (11) are extracted from songs/poems, and (9) and (10) from Leizarraga's translation of (a version of) John Calvin's *Catéchisme de l'Église de Genève*.

⁷ A potentially consequential problem with our choice of Leizarraga's New Testament as a testimony of Archaic Basque syntax is that it is a translation (from French). In translation, the surface form of the source text influences that of the target text, which will tend to be based on the same representation or structure (unless the target language cannot produce such an equivalent representation/structure; cf. Seleskovitch 1976, Tirkkonen-Condit 2005). As has been pointed out in the literature, this can raise the question of the extent to which one can trust Leizarraga's New Testament to actually reflect the grammar of Archaic Basque (considering furthermore that the goal of the Bible is to pass on the "Word of God"). Translation

We annotated and analyzed the whole corpus of matrix *wh*-interrogatives in Leizarraga’s New Testament, and our results confirm the observation: 27,8% of the questions involve non-adjacency between the *wh*-phrase and the verb (n= 396).⁸

We then analyzed the very same interrogatives in a contemporary translation of the New Testament into Modern Basque (*Elizen Arteko Biblia*, 2008 (EAB)). In the latter, only one sentence (i.e., 0,3% of the questions) exhibits non-adjacency:⁹

- (12) *Nola* zuk, judu izanik, eskatzen didazu edatekoa niri,
 how you.ERG Jewish being ask AUX drink.for.D me.DAT
samariar naizen honi? (EAB John 4:9)
 Samaritan be.1SG.C this.DAT
 How can you, being a Jew, ask me for a drink since I am a Samaritan?

Consequently, we can state that non-adjacency between *wh*-phrase and finite verb is something that characterizes Archaic Basque in opposition to Modern Basque.¹⁰ The comparison between the two translations thus provides clear evidence for a change in the grammar of Basque *wh*-interrogatives

effects have indeed been observed in a.o. the morphosyntax (Lakarra & Mounole 2018; see also Ruiz Arzallus 1991, Salaberri Muñoa 2014, Arcocha-Scarcia & Lakarra 2019). However, this doesn’t necessarily imply that Leizarraga produced strings that would be fully “literal”, word-by-word translations, ungrammatical in Basque. Non-adjacent *wh*-interrogatives are not a quirky feature of Leizarraga’s translations: they are observed in texts from other authors (as seen in (7)-(11) above), and have survived –marginally– in later periods (cf. Lakarra 1996, Duguine & Kaiser 2024). More generally, the influence from the source text in Leizarraga’s translations does not seem to lead to be as literal as to produce ungrammatical structures. Lakarra & Mounole (2018), who explore the distribution of the aorist form in Leizarraga’s texts (where they are more prevalent than in other Archaic Basque texts) conclude that even if translation effects seem to explain the relatively high number of such forms in Leizarraga’s texts, the influence from the source texts can be understood as merely enhancing a use that was grammatical and available (though declining) at the time. We can explain in the same way the overproduction of overt pronominal arguments in the very same position as in the French source text, pointed out by Lakarra & Mounole (2018): even if in the relevant context most speakers would probably leave them unrealized, the result is still grammatical (though redundant) when they are overtly realized. See also Duguine & Kaiser (2024), where the translation effects on non-adjacency in Leizarraga’s New Testament are quantified.

⁸ Aldai (2011), who pioneered the quantitative approach to word order in Archaic Basque questions, studied part of the New Testament (the Gospels of Matthew and John), and reported an even higher percentage than we do, with 36,5% interrogatives showing no *wh*-V adjacency.

⁹ As we will see below, causal interrogatives are the only ones that allow non-adjacency in Modern Basque.

¹⁰ There is a significant relationship between the text –i.e., Leizarraga’s translation *vs.* the EAB– and adjacency in *wh*-interrogatives $\chi^2(1) = 76.92$, $p < .001$ (χ -squared test with Yates’ correction). This seems to represent the fact that, based on the odds ratio, the odds of non-adjacency were 91.78 (15.83, 3617.30) times higher in Leizarraga’s Bible than in the EAB.

after the Archaic period.

3 CORRELATION WITH VERB TYPE: A GENERALIZATION

This paper addresses the question of how the observed absence of a generalized V2 order in Archaic Basque *wh*-interrogatives can be explained, with the aim of proposing an analysis that fits with what we know about the grammar of Modern Basque *wh*-interrogatives.

It could seem at first that unlike Modern Basque, Archaic Basque displays a kind of “optional V2” in *wh*-interrogatives or, better said, optional T-to-C movement. However, there are some regularities in the alternation between the presence vs. absence of V2 effects that suggest a principled explanation. This section indeed shows that the possibility for non-adjacency correlates with the type of verbal construction (synthetic vs. analytic) used in the sentence. Section 3.1 introduces the first relevant observation made by Aldai (2011) in this regard and the generalization we propose on the correlation between V2 effects and verbal construction. Section 3.2 then checks the generalization in Leizarraga’s New Testament, and finally Section 3.3 discusses the alternative approach put forth by Aldai (2011).

3.1 Inflectional construction and adjacency

Aldai’s (2011) study constitutes an important attempt at quantifying and describing the absence of adjacency effects in Archaic Basque. Aldai (2011: 1120) observes that there is a “very clear correlation between the number of words of the verb complex and the type of *wh*-question”. He presents his results in the following table, based on the analysis of a subset of Leizarraga’s Bible (Gospels of Matthew and John):

	1-word verb	2-word verb	3+word verb	Totals
Adjacent verb: #Wh-Verb-X	45 (90%)	25 (44,6%)	4 (22,2%)	74
Non-adjacent verb: #Wh-X-Verb-(X)	5 (10%)	31 (55,4%)	14 (77,8%)	50
Totals	50 (100%)	56 (100%)	18 (100%)	124

Table 1 Wh-Verb adjacency w.r.t verb-length of the Gospels of Matthew & John (Aldai 2011: 1120)

The results indeed show that verb complexes with two or more words

have a much lower tendency to surface adjacent to the *wh*-phrase.

We propose to reformulate Aldai’s observation in terms of type of verbal constructions rather than in terms of number of verbal words. More precisely, what matters is whether inflection surfaces on the verb or on an auxiliary. As pointed out by Aldai himself, 1-word verbs in his typology correspond to what are referred to as *synthetically conjugated verbs* in traditional grammars, and 2-word verbs to *analytically conjugated verbs* (see [Hualde & Ortiz de Urbina 2003](#), [Euskaltzaindiko Gramatika Batzordea 2021](#)). Synthetic constructions involve a lexical verb inflected for tense and agreement. It is derived via V-raising to T, in a way that ensures morphological integrity (cf. [Laka 1993](#), [Arregi & Nevins 2012](#), [Berro 2015](#)). In turn, analytic constructions are compounds, with a lexical verb (very often with a suffix attached to the radical, which correlates with perfective, imperfective or prospective aspect), followed by the inflected auxiliary, which realizes agreement, tense, and mood.

In Modern Basque, all verbs can be conjugated analytically. However, only a small closed subset of them can also be inflected synthetically (cf. [Euskaltzaindia 1987](#)). Archaic Basque had a larger number of verbs with synthetic conjugation (cf. [Mounole 2014\[2018\]](#)). The two types of constructions are illustrated below, with the verb *etor* ‘to come’, which allows both conjugations in Modern Basque (with simplified glossing):

- (13) a. *Ana da-tor.* [Synthetic/1-word verb]
 Ana.ABS 3SG.PRES-come
 Ana comes.
 b. *Ana etor-tzen da.* [Analytic/2-word verb]
 Ana.ABS COME-IMPF 3SG.PRES.AUX
 Ana comes.

Finally, Aldai’s 3-word verbs are verbal complexes with additional “non-finite forms or an extra particle” (2011: 1104). Aldai does not give a detailed explanation or illustration of these patterns, but we can speculate that he is referring to a collection of constructions, such as the so-called periphrastic constructions which involve biclausal structures with embedded non-finite clauses, restructuring-like constructions, or analytic constructions with a modal particle surfacing between the verb and the auxiliary (cf. [Hualde & Ortiz de Urbina 1987](#), [Artiagoitia 2003](#), [Laka 2006](#), [Etxepare & Uribe-Etxebarria 2008](#), [Etxepare 2010](#), [Monforte 2019, 2020](#)).

We believe that rather than the number of verbal elements, what matters in Aldai’s observation is the type of verbal construction, and more precisely whether the verb is construed synthetically or analytically. We thus propose to reformulate the observation in terms of construction-types:

(14) *Generalization on word order in Archaic Basque:*

Wh-interrogatives allow material to intervene between the *wh*-phrase and the finite verb if the latter is analytically construed but not if it is synthetically construed.

The examples in (15) and (16), like the ones in (7)-(10) above, involve analytically conjugated verbs, which do not surface to the immediate right of the *wh*-phrase:

- (15) *Norequin bada comparaturen ditut generatione hunetaco guiçonac?*
 who.with then compare.FUT AUX.1PL generation this.from men
 To whom then shall I compare the men of this generation?
 (Leiz Lk 7:31)

- (16) *cembatez çuec choriéc baino guehiago balio duçue?*
 how.much.of you(PL) birds than more worth AUX.2PL
 Lit. Of how much more do you have value than the birds?
 (Leiz Lk 12:24)

In turn, examples (17)-(19) contain synthetically conjugated verbs. These feature a strong tendency to be right-adjacent to the *wh*-phrase:

- (17) *Cer dohacu guri?* (Leiz Mt 27:4)
 what 3SG.ABS.GO.1PL.ERG WE.DAT
 What is that to us? (Lit. What goes to us?)
- (18) *Nola diostaçu horlaco hiça?* (Etx X.31)
 how 3SG.ABS.say.1SG.DAT.2SG.ERG such word
 How could you tell me such a thing?
- (19) *Ecen cer probetchu du guiçonac baldin mundu gucia*
 because what profit 3SG.ABS.have.3SG.ERG man if world all
irabaz badeça, eta bere arima gal badeça? (Leiz Mt 16:26)
 win if.AUX and POSS soul loose C.AUX
 For what profit does a man have if he gains the whole world and forfeits his soul?

Next section explores the empirical validity of the generalization in (14).

3.2 Checking the generalization in the 16th c. New Testament

We checked the generalization in (14) in the whole of Leizarraga's Bible translation. The results are given in Table 2.

	Adjacent	Non-adjacent	Total
Synthetic	89% (130)	11% (16)	146
Analytic	62,3% (157)	37,7% (95)	252

Table 2 Verb-conjugation type and adjacency in Leizarraga's (1571) New Testament *wh*-interrogatives.

Unlike *wh*-interrogatives with analytic verbs, most of the constructions with synthetic verbs display adjacency, that is, V2 effects (89%).¹¹

Interestingly, if we consider the remaining 16 cases that involve non-adjacency with synthetic verbs, it appears that 15 of them involve a causal *wh*-phrase, corresponding to *why* or *how come*, like in (20) and (21):

- (20) *Cergatic horrelaco gaucez diharducaque çuen bihotzetan.*
 why such things.of 3SG.ABS.discuss.2PL.ERG your hearts.in
 (Leiz Mk 2:8)

Why are you reasoning about these things in your hearts?

- (21) *Nolatan bada guc dançuzquigu batbedera iayo ičan*
 how.come thus we.ERG 3PL.ABS.hear.1PL.ERG each born be
garen lengoage propriaz minçatzen ? (Leiz Acts 2:8)
 1PL.AUX.C language proper.INSTR talking

How come do we hear them speaking in the proper language we were each born with?

Crucially, causal interrogatives also constitute the only possible exception to the otherwise very strict V2 requirement presented above in Modern Basque. *Wh*-phrases such as *zergatik* or *nolatan* 'why, how come' can show the standard V2 pattern, but they can sometimes be separated from the verb by intervening material, as in (22b) (Michelena 1981, Ortiz de Urbina 1989, Uriagereka 1999, Etxepare & Ortiz de Urbina 2003, Irurtzun 2021):

- (22) a. *Zergatik hil zuen zaldunak herensugea?* [Modern Basque]
 why kill AUX knight.ERG dragon.ABS
 Why did the knight kill the dragon?
 b. *Zergatik zaldunak herensugea hil zuen?*
 why knight.ERG dragon.ABS kill AUX
 Why did the knight kill the dragon?

11 Non-adjacency was significantly associated with the type of verb-conjugation ($\chi^2(1) = 32.86$, $p < .05$), which appears to reflect the fact that, based on the odds ratio, the odds of non-adjacency were 4.90 (2.70, 9.37) times higher with analytic verbs than with synthetic verbs.

This peculiar behavior is not limited to Basque: causal interrogatives display a special behavior in many languages. In particular, cross-linguistically *why*-phrases tend not to be adjacent to the verb, and/or not to display the characteristic properties of *wh*-movement, and to surface higher than other *wh*-phrases (possibly in a distinct projection, as proposed by Rizzi 2001; see also Irurtzun 2021, as well as the papers in Soare 2021).

The 15 cases of non-adjacency between causal *wh*-phrases and the synthetic verb such as (20) and (21) in Leizarraga's text can therefore be integrated in this general pattern of exceptions to V2 effects. That is, whatever explains the behavior of causal interrogatives in Modern Basque (or other languages) will also explain the same behavior in Archaic Basque.

Once non-adjacency in causal interrogatives is attributed to their general idiosyncratic behavior, we are left with a single actual exception to the generalization in (14). It is given in (23):

- (23) *Noizdrano* *gure arimá* *daducac* *dudatan?*
 when.to.until our soul 3SG.ABS.have.2SG.ERG doubt.in
 (Leiz Jh 10:24)
 Until when do you have our soul in doubt?

This question involves an intervening DP *gure arima* 'our soul', which is the direct object of the synthetically constructed transitive verb *eduki* 'to have'. It is constructed on the complex *wh*-phrase *noizdrano* 'until when', and thus does not fall under the above observation on causal interrogatives.¹² *Noizdrano* is also used iteratively in two other interrogatives, also with intervening material, but this time with analytically constructed verbs:

- (24) *O nazione sinheste gabea,* *noizdrano* *finean* *çuequin* *içanen*
 o nation faith without.D when.to.until finally you.with be.FUT
naiz? *noizdrano* *finean* *supportaturen* *çaituztet?*
 1SG.AUX when.to.until finally support.FUT 2PL.ABS.AUX.1SG.ERG
 (Leiz Mk 9:19)
 O faithless generation, until when am I finally to be with you? Until
 when am I finally to bear with you?

¹² *Noizdrano* is composed of *noiz* 'when', the locative component *da* and the terminative postposition *-(ra)ino* 'up to' (see De Rijk 1992 and Lakarra, Manterola & Segurolo 2019).

At this point, we can only speculate that *noizdrano* in (23) is to be classified together with *wh*-phrases such as *cergatic* ‘why’, among those that allow non-adjacency.¹³ Leizarraga actually uses an important variety of *wh*-phrases in causal or reason questions: *cergatic* ‘why’ and *nolatan* ‘how come’, as well as *nola* ‘how’, *ceren* ‘why, for what motive’, *certaco* ‘what for’, but more remarkably, there are also two instances in which *cer* ‘what’ is used to translate French *pourquoy* ‘why’. What is more, in one of the latter, *cer* is not adjacent to the synthetic verb (there is also one such example with *nola*):

- (25) ... *cer* *goiticoéz* *arthatsu* *çarete*? (Leiz Lk 12:26)
 what remains.of watchful 2PL.ABS.be
 ...why are you watchful of the remaining ones?

We could thus entertain the possibility that the syntax-semantics of the *wh*-interrogative in (23) is one that can lead to non-V2, like that of causal interrogatives. What suggests that this line of analysis could be on the right track is that in its context in the Bible, the question (23) is pragmatically loaded. It is asked to Jesus by *the Jews*, who want him to openly claim that he is the Christ/Messiah (cf. Carson 1991). It could in fact be uttered as “why/how come do you keep our souls in doubt”. In this sense, it is also interesting to bring to the discussion the only other exception to (14) that we found in Leizarraga’s translations outside the New Testament –namely in the *Catechism*–, in which the *wh*-phrase *nondik* ‘from where’ is not adjacent to the synthetic verb:¹⁴

13 It cannot be explained as a translation effect: the Calvinist texts that are believed to have been used by Leizarraga as a primary source, written in French and published around 1562-1563 (Salaberri Muñoa 2007, 2014, Lakarra & Mounole 2018), feature *wh*-V adjacency and subject-verb inversion in this verse (from Cunitz, Baum & Reuss (eds.)’s (1897) edition, which compiles different editions of Calvin’s New Testament, including the 1562 and 1563 ones):

- (i) *Iusqu’à quand tiens tu nostre ame en doubte?* (Cal-NT John 10:24)
 until.to when keep you our soul in doubt
 Until when do you keep our souls in doubt?

14 Outside of Leizarraga’s writings, there is another outlier to our generalization, (??) below, where the adjunct *gudura* ‘to war’ surfaces unambiguously between the *wh*-phrase and the synthetic verb (as pointed out by Lakarra 1996: 256, fn. 21):

- (i) *Zitel zirola, noc gudura aroa?* (RS 21)
 faint shoemaker who war.to 2SG.ABS.take.3SG.ERG
 Faint shoemaker, who takes you to war?

This example is from an anonymous compilation of proverbs and sayings published in 1596 (*Refranes y Sentencias* (RS); Lakarra 1996). It contains two other *wh*-questions, both with synthetic verbs in V2 order:

- (26) *Nondic hori daquiquegu?* (Leiz Cat 2)
 where.from that 3SG.ABS.know.FUT.1PL.ERG
 From where shall we know this?

Leizarraga seems to have translated the catechism using both the French (1542) and the Latin versions (1545) of Calvin's *Catechism of the Church of Geneva* (see [Salaberri Muñoa 2014](#)). The following are the French and Latin interrogatives corresponding to (26):¹⁵

- (27) a. *Comment congnoissons-nous cela?* (Cal-Cat 2)
 how know.3PL-we that
 How do we know that?
- b. *Unde autem nobis id constabit.* (Cal-Cat 2)
 whence but us that establish.3SG.FUT
 But from where shall we know that.

Basque *nondic* and Latin *unde* 'whence, from where' are the equivalent for French *comment* 'how'. *How*-interrogatives, crucially, have been shown to express causal questions in many languages, in which cases *how* patterns with *why* and *how* come, and takes wider scope than manner or instrumental *how* (cf. [Tsai 2008](#); see also the examples from Modern Standard Spanish and Aragonese in (59) and (60) in Section 8). *Nondic* in (26) could be similar, in that it would pattern with *cergetic* 'why' and thus would be exempted from necessarily surfacing adjacent to the (synthetic) verb.

Coming back to our general discussion: if we take into account the behavior of causal *wh*-interrogatives, the generalization in (14) accounts for more than 99% of the synthetically constructed interrogatives in Leizarraga's New Testament. And regarding the exception in (23) (as well as (26)), there are

- (ii) *Azo bardindu nax, nox dot urtea?* (RS 300)
 yesterday equal 1SG.ABS.AUX when 3SG.ABS.have.1SG.ERG year.D
 Lit. Yesterday I equaled myself, when do I have the year?
- (iii) *Celangoa da Butroe oroc daquie.* (RS 92)
 how.REL.D is Butroe all.ERG 3SG.ABS.know.3PL.ERG
 Lit. How Butron is, everybody knows.

The language variety in this work is different from that of Leizarraga's, and is taken to reflect an early stage of Archaic Basque –around 1400– ([Lakarra 1996](#), [Lakarra & Mounole 2018](#)). It could thus reflect a different grammar for *wh*-interrogatives or V2 than Leizarraga's New Testament. We also have to keep in mind that this is a proverb, and that word order could be affected for stylistic reasons, for instance due to the formation of assonances. Unfortunately the lack of further data prevents us from being able to go further in this inquiry.

¹⁵ [Salaberri Muñoa \(2014\)](#) points out that Calvin's catechisms had various re-editions in the years following their first publication, with apparently only minor changes, and that it is not known which precise editions were used by Leizarraga. (27a) and (27b) are extracted from the 1863 edition of Calvin's *Catechism of the Church of Geneva* in French and Latin by [Cunitz et al.](#)

some indications that suggest that they could be integrated under the same general explanation.

Turning now to the analytically constructed *wh*-interrogatives, the results in Table 2 show that more than a third display non-V2 (37,7%). Non-V2 is observed with causal *wh*-phrases, but with other types of *wh*-phrases as well, as illustrated in the following examples (see also (7)-(11)):

- (28) *Cergatic comparationez minço atzaye?* (Leiz Mt 13:10)
 why example.INSTR speak 2SG.ERG.AUX.3PL.DAT
 Why do you talk to them in parables?
- (29) *Erraguc, noiz gauça hauc iñanen dirade?*
 3SG.ABS.say.1PL.DAT.2SG.ERG when thing these be.FUT 3SG.ABS.AUX
 (Leiz Mt 24:3)
 Tell us, when will these things be?
- (30) *Cer bidean iharduquiten cenduten elkarren*
 what road.D.in discuss 2PL.ERG.3SG.ABS.AUX each.other.of
artean? (Leiz Mk 9:33)
 interval.D.in
 What were you discussing between each other on the way?

That the type of *wh*-phrase does not affect the possibility or necessity for adjacent orders is shown by the fact that different types of *wh*-phrases also surface adjacent to the verb, as can be seen in the following examples:

- (31) *Cergatic fatigatzen duçue emazte haur?* (Leiz Mt 26:10)
 why bother 3SG.ABS.AUX.2PL.ERG woman this
 Why are you bothering this woman?
- (32) *Eta guc cer eguinen dugu?* (Leiz Lk 3:14)
 and us.ERG what do.FUT 3SG.ABS.AUX.1PL.ERG
 And what are we going to do?
- (33) *Non nahi duc appain diaçágun*
 where want 3SG.ABS.AUX.2SG.ERG prepare 3SG.ABS.AUX.2SG.DAT.3PL.ERG.C
iatera Bazcoa? (Leiz Mt 26:17)
 eat.to Passover
 Where do you want us to prepare for you to eat the Passover?

In sum, all in all, the data from Leizarraga’s New Testament validates our generalization in (14): Archaic Basque allows violations of the adjacency between the *wh*-phrase and the finite verb, but under a strict condition (besides cases in which the former is a causal *wh*-phrase): the verb must be analytically constructed.

3.3 Aldai’s (2011) analysis: discussion

Aldai (2011), who first pointed out the correlation between verb type and adjacency (see above), formulated it in terms of “verb-length”, i.e., number of elements in the verbal complex: the higher this number, the higher the probability for the verb to be non-adjacent to a *wh*-phrase in an interrogative.

Aldai (2011) proposes to explain this correlation in terms of Hawkins’ (2004) principle of *Minimize Domains*. Hawkins develops the idea that grammars are shaped by optimality principles of efficiency which stem from performance preferences. Among these, the Minimize Domains principle rules the form of domains in which dependency relations are processed, favoring shorter distances. In the case of *wh*-interrogatives, the processing demand will be to minimize the domain in which the filler-gap dependency, characterized as the relation between the *wh*-phrase and the verb, is established, by favoring adjacency. This accounts for the basic tendency for adjacency in *wh*-interrogatives. But besides the length of the dependency path, other syntactic and semantic properties may exert pressure and affect word order, by creating opposing motivations for ordering. In particular, in certain cases there might be an independent motivation for the *wh*-phrase and the verb not to be adjacent. For instance, Aldai (2011: 1104) proposes, verbs that are longer than their arguments create particularly inadequate processing domains when they precede them in OV languages. This would explain why *wh*-interrogatives with ‘long’ verbs would not necessarily have *wh*-verb adjacency: they favour the verb’s argument(s) to appear on the left of the latter, and thus to intervene between the *wh*-phrase and the verb.

It is not our endeavour here to discuss the general model in which Aldai’s analysis is developed. However, we would like to point out some specific problems that justify the need for the alternative explanation that we put forth in this paper (see also section 9.1). First, Aldai’s analysis does not make clear-cut predictions, but rather ‘statistical predictions’. It is therefore difficult to evaluate, in particular with limited corpora. A second point concerns the fact that the conception of verb-length is based on word-count, a problematic notion. For instance, comparing arguments’ length and verb-length implies comparing constituents with non-constituents, which is not justified in Aldai’s paper. As an illustration: what are characterized as 3+-word verbs

sometimes involve a matrix verb plus an embedded nonfinite verb (or, in fact, an embedded nonfinite clause). It is not clear how a group of verbs from different clauses could be characterized as a single verb.

In addition, our purpose is to explain the change from Archaic to Modern Basque, and Aldai's analysis does not give an obvious way for this, or for accounting for the patterns of Modern Basque: it is unclear why the pressure to put arguments before long verbs for efficiency in domain-recognition would no longer hold in Modern Basque. In the following sections, we precisely develop an analysis of Archaic Basque that makes it possible to explain the evolution from Archaic to Modern Basque.

4 THE SYNTAX OF MODERN BASQUE *wh*-INTERROGATIVES

The V2 effects of Modern (Standard) Basque *wh*-interrogatives –introduced in Section 2– are standardly analysed as resulting from the *wh*-phrase and the finite verb moving to the left periphery of the clause. Adopting Rizzi's (1997, et seq.) split-CP system with a richly articulated left periphery, and in line with Ortiz de Urbina (1989, 1999) and Irurtzun (2007, 2016), we assume that *wh*-phrases (but also foci) undergo A'-movement to the left-peripheral specifier position of Foc(us)P dominating TP.¹⁶ This is followed by 'T-to-C movement', where both the lexical verb and the auxiliary raise to the Foc head¹⁷. Following standard assumptions, we 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 1989, 1999, Elordieta 2001, Irurtzun 2007, 2016).¹⁸

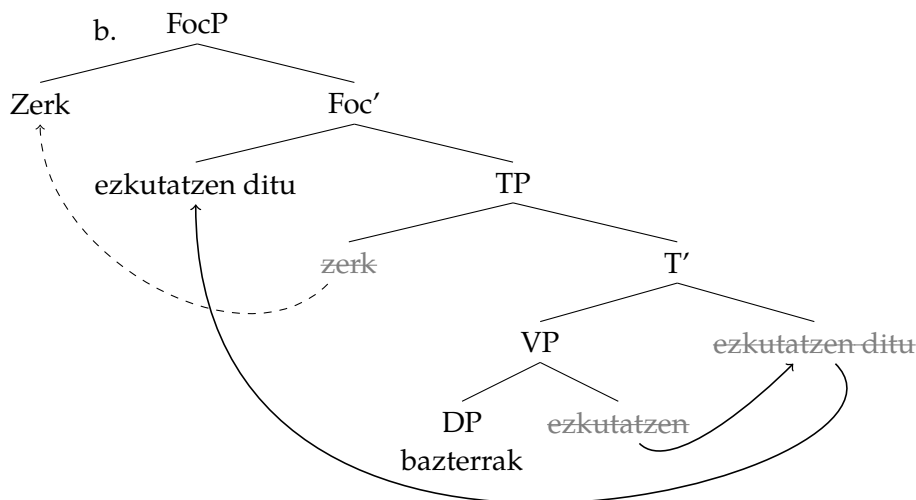
These movements are represented in (34b):

- (34) a. *Zerk ezkutatzen ditu bazterrak?* (= (6a))
 what.ERG hide AUX sides.ABS
 What hides the landscape?

16 This is the most prominent analysis in Basque syntax nowadays. Alternative analyses have been proposed, where focus does not involve leftward movement, as in Elordieta (2001) or Arregi (2002). See Irurtzun (2007) for a discussion and evaluation of both approaches.

17 We will be abstracting away from projections such as vP or AspP which are not directly relevant to the discussion, and using a simplified syntactic structure.

18 Basque allows multiple topicalization to a position above FocP, which explains the possibility for different types of XPs to surface on the left of the *wh*-phrase.



As pointed out in Section 3.2, the exception to the adjacency requirement between the *wh*-phrase and the finite verb concerns *why*-interrogatives, or more generally causal *wh*-interrogatives (illustrated in (22b)). According to Irurtzun (2021), a possible explanation for the absence of V2 effects in Basque *why*-interrogatives is the base-generation of the causal *wh*-phrase high in the left periphery and the absence of T-to-C movement (cf. Rizzi 2001).

In contexts of clausal embedding, *wh*-phrases can undergo long-distance movement across clausal boundaries. In such cases, verb-movement –and thus V2 effects– are observed in all the clauses that the *wh*-phrase crosses:

- (35) *Zerk esan duzu [_ ezkututzen ditu-ela bazterrak]?*
 what.ERG say AUX.2SG.ERG hide AUX-C sides.ABS
 What did you say hides the landscape?

An important assumption in the above analysis is that T-to-C movement is preceded by V-to-T movement, as in (34b) (as originally proposed by Ortiz de Urbina 1989, 1994, Elordieta 1997). This is what will account for why, in analytic constructions, the V2 position is occupied by the lexical verb together with the auxiliary, giving [Wh V Aux ... XP] order. That is, movement of the verb takes place with verbs that inflect synthetically –as seen in Section 3.1–, but it also takes place in analytic constructions. More specifically, following Ortiz de Urbina (1994) and Elordieta (1997), we will assume that the auxiliary is a bound element, which requires the incorporation of the structurally closest category, here the verb.¹⁹ Elordieta

¹⁹ See also Michelena (1957: 177, fn.32), who already pointed out the convergence with Wackernagel effects.

(1997) formalizes it in terms of an [Affix] feature on T, which triggers raising of the head that it immediately dominates.²⁰

- (36) a. *eman iezaizkiozu* "give them to him/her/it" > *emaizkiozu*
 b. *ikus dezagun* "let us see (him/her/it)" > *ikustagun*

We thus assume that in Modern Basque, both V and T move to Foc in *wh*-interrogatives involving either synthetic or analytic constructions.

5 ARCHAIC BASQUE HAS A *WH*-MOVEMENT GRAMMAR

In the light of this *wh*-movement analysis of Modern Basque, the question is how the patterns observed in Archaic Basque can be explained, and how the extension and systematization of V2 effects in *wh*-interrogatives after the Archaic period can be accounted for.

An obvious hypothesis could be that Archaic Basque was a *wh-in-situ* language. The absence of *wh*-movement and T-to-C movement would thus explain why intervening material can be found between the *wh*-phrase and the finite verb. This corresponds precisely to the analysis that Duguine & Irurtzun (2014) make of a non-standard interrogative strategy that they identify among the younger speakers of Labourdin Basque. In contrast to Standard Basque, Youth Labourdin allows non-adjacency in sentences like (6b) (repeated in (37)) that are ungrammatical in Standard Basque:

- (37) ok/**Zerk bazterrak ezkutatzen ditu?*
 what.ERG sides.ABS hide AUX
 What hides the landscape?

Duguine & Irurtzun (2014) show that these interrogatives display the hallmark properties of *wh-in-situ* structures. For instance, non-V2 orders that do not correspond to the neutral S-IO-DO-V order are not allowed:

- (38) **Zer Jonek jan du?*
 what Jon.ERG eat AUX
 What did Jon eat?

However, as also pointed out by Duguine & Irurtzun, a *wh-in-situ* analysis is not viable for Archaic Basque, since precisely, non-neutral orders like (38)

²⁰ Beyond the word order change that it triggers in interrogatives, Elordieta (1997: Chapter 2) gives further evidence for the syntactic nature of V-to-T with analytic verbs. He shows that in Lekeitio Basque certain phenomena of vowel assimilation and consonant-deletion take place in the very specific and limited cases of V+Aux combinations, which means that they form a phonological domain that is defined by morphosyntactic considerations and not purely morphophonological ones.

As pointed out by a reviewer, the encliticized forms of imperative verbs can also be taken to bear testimony to the verb and auxiliary forming a single morphophonological word.

are observed. This is illustrated for instance in the examples in (39)-(40), where the ergative subject is sandwiched between the object *wh*-phrase and the verb, giving OSV order, as well as in (41), where the intervening element is the PP *bidean* ‘on the road’.²¹

- (39) *Sommarioqui cer horrec erran nahi du?* (Leiz-Cat)
 summarily what that.ERG say want AUX
Lit. Summarily what does it want to say?

- (40) *Prophetac-ere hil ičan dituc: nor hic eure buruä eguiten duc?*
 prophets-even die have AUX who you.ERG your head do AUX
 (Leiz Jh 8:53)
 Even the prophets died: who are you making of yourself?

- (41) *Cer bidean iharduquiten cenduten elkarren*
 what road.D.in discuss 2PL.ERG.3SG.ABS.AUX each.other.of
artean? (Leiz Mk 9:33)
 between
 What were you discussing between each other on the way?

The data are however straightforwardly explained by positing that the *wh*-phrase moves to the left periphery of the clause.

A second piece of evidence in favor of this movement analysis comes from examples like the following:

- (42) *Cer nahi duçue [_ daguiçuedan]?* (Leiz Mt 20:32)
 what want AUX.3PL 3SG.ABS.make.2PL.DAT.1SG.ERG.C
 What do you want me to do for(/to) you?

Here the *wh*-phrase surfaces on the left, where the matrix verb separates it from the embedded verb, of which it is the direct object. This ordering can receive a straightforward explanation if we take it to result from “long-distance” *wh*-movement to the left periphery of the matrix clause, just as it does in Modern Basque (see (35)).

We thus postulate movement of the *wh*-phrase to SpecFocP in Archaic Basque, like in Modern Basque.

²¹ The syntax of (39) is most probably more complex than the way we represent it suggests. In modern Basque at least, modal verbs like *nahi* ‘want’ or *behar* ‘need’ in such constructions are verbs derived from an underlying predicative structure whose subject is a nonfinite verbal phrase (here *erran* ‘say’) (Etxepare & Uribe-Etxebarria 2012, 2009).

The adverb *sommarioqui* ‘summarily, in short’ in the same example (as well as the constituents preceding the *wh*-phrase in example (32)) will be analysed as being topicalized, a strategy already available in Archaic Basque and in Leizarraga’s texts (cf. Aldai 2011).

6 T-TO-C MOVEMENT IN ARCHAIC BASQUE

If Archaic Basque interrogatives involve *wh*-movement even in those cases that lack V2 effects, this suggests that the generalization in (14) –repeated in (43)– is to be accounted for in terms of the presence vs. absence of the verb on Foc.

(43) *Generalization on word order in Archaic Basque:*

Wh-interrogatives allow material to intervene between the *wh*-phrase and the finite verb if the latter is analytically construed but not if it is synthetically construed.

This section argues that the differences in V2 effects in Archaic Basque are result from the different surface realizations of the verb, but that the syntax is the same in all cases. More precisely, we propose that T-to-C movement (i.e., movement of the inflected verb/auxiliary to Foc) takes place in both analytic and synthetic constructions, but that in analytic constructions, the finite verb ends up not surfacing on Foc/C, for independent reasons.

The central ingredient of the analysis is that unlike in Modern Basque, V-to-T movement does not take place in Archaic Basque analytic constructions. In Section 4 we adopted Elordieta's (1997) formal [Affix] feature on T for Modern Basque, which triggers movement of the verb to T both in analytic and synthetic constructions, thus resulting in V + T surfacing adjacent to the *wh*-phrase in interrogatives. We will claim that T in Archaic Basque does not have an [Affix] feature, and thus that the verb does not raise to T in analytic constructions. As a consequence, in *wh*-interrogatives, the auxiliary raises to Foc on its own, without the verb. The second ingredient of the analysis involves the other side of the coin: even though T does not have an [Affix] feature, it is nonetheless subject to a host-requirement, this time for PF convergence. The idea is that after T-to-C movement, T, 'isolated' on Foc, does not satisfy this requirement, and the solution is to pronounce its lower copy, which is right-adjacent to a potential host, i.e., the lexical verb. This results in surface orders in which the verb and auxiliary will not necessarily be adjacent to the *wh*-phrase.

What follows explains the proposal. First, Section 6.1 introduces the workings of *lower copy pronunciation*. Then, Section 6.2 presents step-by-step the details of the analysis. Finally, Section 6.3 provides more evidence in favor of the analysis.

6.1 Copy-deletion and word order

The copy-theory of movement (cf. Chomsky 1995, Bobaljik 1995, Nunes 2004), by positing that syntactic movement creates two identical copies of the moved element in different positions, paves the way for explaining some word order alternations in terms of copy deletion vs. pronunciation. In particular, it can be posited that deletion of the lower copy of a movement chain is not systematic at PF, and that independent PF conditions can play a role in identifying which copy will be deleted and which one will be pronounced. A consequential amount of work has been devoted to exploring cases in which pronouncing the lower copy appears to be legitimate in cases in which pronouncing the higher one would lead to a PF violation (a claim attributed to Franks 1998). Lower copy spell-out (or lower copy pronunciation) has thus been shown to be at play in instances of A'-movement, A-movement, or head movement across languages, explaining different cases of word order variability (cf. Bobaljik 1994, 2002, Bošković 2001, 2011, Nunes 2004, Bošković & Nunes 2007, Kandybowicz 2008, Villa-García 2019).

This approach can be illustrated with Bošković's (2002) analysis of multiple *wh*-fronting in Romanian. In this language, all *wh*-phrases in a multiple *wh*-interrogative undergo fronting, except when they are homophonous:

- (44) a. *Cine ce precede?* [Romanian]
 who what precedes
 Who precedes what?
 b. **Cine precede ce?*
 who precedes what
- (45) a. **Ce ce precede?*
 what what precedes
 What precedes what?
 b. *Ce precede ce?*
 what precedes what

Bošković (2002) shows that this paradigm can be explained without appealing to an *ad hoc* account that would posit different syntaxes for (44a) and (45a), involving movement of multiple *wh*-phrases in the former but movement of a single *wh*-phrase in the latter. Bošković's (2002) analysis is the following. He proposes that Romanian has a low-level PF constraint that rules out consecutive homophonous *wh*-phrases. This explains the ungrammaticality of (45a). Then, under the assumption that pronunciation of the lower copy of a movement chain is legitimate if it allows to avoid a PF violation, the idea will be that in contexts of multiple *wh*-movement involving homomorphous *wh*-phrases, copy-deletion targets the higher copy of the 'offending'

wh-phrase, thereby avoiding a violation of the PF constraint and ensuring a legitimate PF output. The syntactic structure of (45a) and the operation of deletion taking place in it are represented in (46):

(46) [ce ee_i precede ce_i]

Next section shows how lower copy pronunciation can account for the word order differences between interrogatives with analytic vs. synthetic verbs in Archaic Basque.

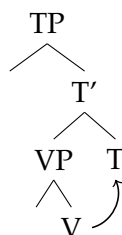
6.2 Deletion of higher copies of auxiliaries in Archaic Basque

We propose that the crucial trait of Archaic Basque interrogatives is that, unlike in Modern Basque, T surfacing right-attached to the verb does not derive from the syntax. That is, T does not have Elordieta's (1997) [Affix] feature. Rather, it is a bound element subject to a morphophonological requirement of being hosted by the overt element on its left. In derivations in which T has undergone movement and ends up not having a suitable host, pronunciation of the lower copy of the movement chain will 'salvage' the derivation at PF, giving the impression of non-displacement.

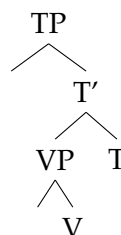
The grammar of T in Archaic Basque is thus as follows. First, T is devoid of the [Affix] feature put forth by Elordieta (1997). In the absence of this feature, V does not raise to T in analytic constructions (it does, of course, in synthetic constructions, to satisfy V's own requirements; see Section 3.1); the main verb remains on V and the inflected auxiliary sits on T:

(47) The syntax of synthetic vs. analytic constructions in Archaic Basque:

a. *Synthetic constructions.*



b. *Analytic constructions.*

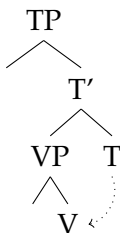


The second component of the analysis is the existence of a morphophonological requirement on T in Archaic Basque, whereby it is required to have a host for PF-convergence (a sort of 'Stray Affix Filter').²² As can be seen

²² As one of the reviewers points out, a philological argument in favor of the hypothesis that the auxiliary is a bound element is the fact that in numerous texts, the lexical verb and the auxiliary are written as one word.

in (47), T satisfies this requirement in the output from syntax in synthetic constructions, but not in analytic constructions. We thus propose that in the latter the auxiliary lowers to V, the same way English T-to-V Lowering takes place, as a structurally-defined postsyntactic operation that takes place under structural adjacency (cf. Embick & Noyer 2001):²³

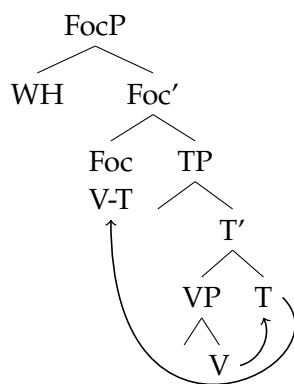
(48) Postsyntactic T-lowering in analytic constructions in Archaic Basque:



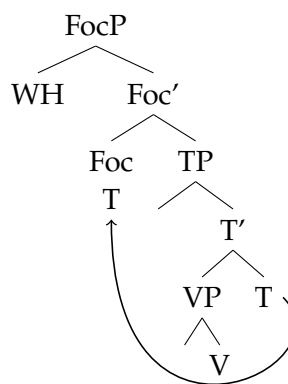
This has an important consequence for the syntax of *wh*-interrogatives, since T-to-C movement follows V-to-T but precedes postsyntactic T-lowering. The derivation will indeed vary depending on the type of verbal construction: while in synthetic constructions the whole V+T complex will raise to Foc, only T will do so in analytic constructions, as represented in (49a) and (49b) respectively:

(49) The syntax of Archaic Basque *wh*-interrogatives:

a. *Synthetic constructions.*



b. *Analytic constructions.*



Concerning the PF-requirement on T being attached to a host, each derivation will give a different result. In synthetically constructed sentences, as

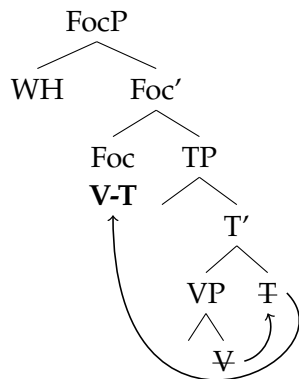
²³ The analysis crucially builds on the assumption that there are different types of processes behind the label *head-movement*, which can take place at different points of the derivation (see Bobaljik 1995, Chomsky 2001, Embick & Noyer 2001, Harizanov & Gribanova 2018).

shown in (49a), T will satisfy the PF host-requirement, since it has moved to Foc with V, which can thus host it.

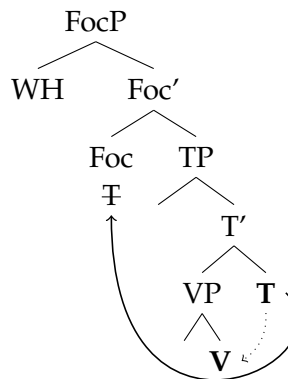
In turn, in analytic configurations (49b), where T is on Foc without V, the auxiliary does not have any suitable host. The *wh*-phrase to the left of T does not create a structural configuration in which T could undergo *Lowering* to the head of its complement. Therefore T on Foc in (49b) cannot satisfy the PF affixation requirement. And this is where lower copy pronunciation comes into play. The lower copy of T can satisfy the conditions for PF-convergence, via Lowering to V. Thus the higher copy of the T-to-C movement chain is deleted, and the lower one undergoes lowering to V. The two derivations, with copy-deletion and T-to-V Lowering (dotted line), are represented in (50):

(50) Movement, copy-deletion and lowering of T in Archaic Basque:

a. *Synthetic constructions.*



b. *Analytic constructions.*



This analysis explains generalization (14), that is, it accounts for why, on the surface, only synthetic verbs seem to adhere to the V2 effect resulting from T-to-C movement in Archaic Basque.

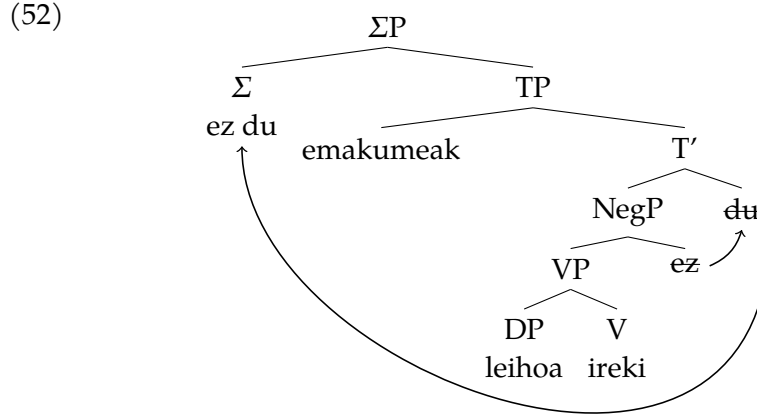
6.3 More evidence: Affixation with Negation

We are claiming that in Archaic Basque the auxiliary cannot be pronounced on Foc due to its status as an affix and due to the fact that there is no element on its left that could act as its host. Note that this makes an interesting prediction: if there were a distinct element α capable of hosting T, V2 orders of the type [WH α -AUX ...V] would be expected to be possible.

Precisely, Modern Basque has such a configuration, resulting from the grammar of negation. In Modern Basque, in clauses with sentential negation, the auxiliary is spelled out high in the structure, together with the negative marker, and separated from the verb (i.e., with [Neg-Aux ... V] order):

- (51) *Ez du emakumeak leihoa ireki.* [Modern Basque]
 NEG AUX woman window open
 The woman didn't open the window.

This surface order results from head-to-head movement of negation to a higher head (here Σ), as illustrated in (52) (cf. [Ortiz de Urbina 1994](#), [Elordieta 1997](#), [Duguine 2022b](#)):²⁴

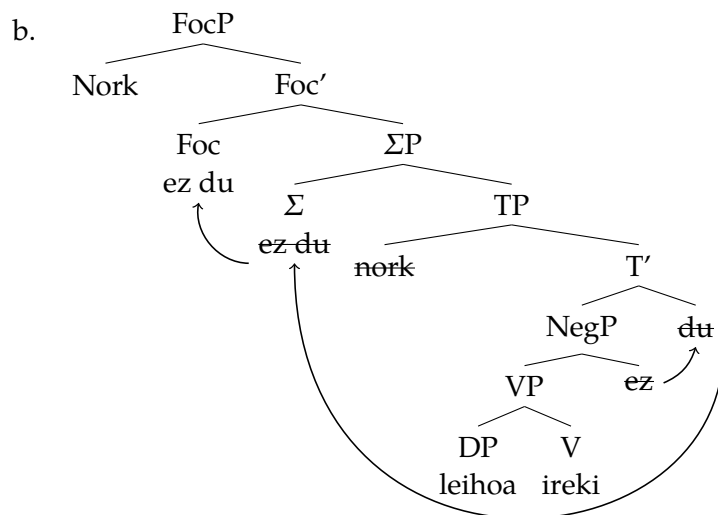


With [Ortiz de Urbina \(1994\)](#) and [Elordieta \(1997\)](#), we will assume that T's syntactic affixation requirement is satisfied by the negative marker *ez*, as a result of the head-to-head movement of latter through T on its way to Σ .

In interrogatives, the Neg-Aux complex raises to Foc as a whole:

- (53) a. *Nork ez du leihoa ireki?* [Modern Basque]
 who NEG AUX window open
 Who didn't open the window?

²⁴ This analysis adopts [Laka's \(1990\)](#) hypothesis whereby negation and the auxiliary surface on Σ . It differs from it, however, in that the negative marker is not base-generated there, but rather raises from a lower position (cf. [Ortiz de Urbina 1988, 1994](#), [Haddican 2004](#), [Duguine 2022b](#)).



Here, like in the non-interrogative variant in (51), T's syntactic affixation requirement is satisfied by the negative marker.

Interestingly, negation in Archaic Basque displays the very same ordering effects as in Modern Basque, as illustrated in the following examples:

- (54) *Munduan cen, eta mundua harçaz eguin içan da, eta munduac eztu hura eçagutu.* (Leiz Jh 1:10)
 world.in was and world them.INSTR make be AUX and world.ERG
 NEG.AUX them know

He was in the world, and the world was made through him, and the world did not recognize him.

- (55) *Ez dot eguingo gauça gaxtoric...* (Laz. A9.1175r)
 NEG 3SG.ABS.AUX.1SG.ERG make.FUT thing bad.PART
 I will not do any bad thing...

We can thus safely speculate that the syntax of negation in Archaic Basque is the same as that of Modern Basque, and that the negative marker takes the auxiliary with it on its way to a higher projection.²⁵ In such a derivation, crucially, T is adjoined to Neg, a configuration that satisfies the PF-requirement on T being attached to a host.

This analysis is interesting in that it explains the exceptional behavior of the auxiliary which, in the presence of negation, seems to exceptionally not require adjacency with the verb. But it also provides an ideal context for testing the prediction made above: in a *wh*-interrogative construed on an analytically conjugated verb, the auxiliary should be pronounced on Foc, together with

²⁵ See Salaberri (2018) who argues that this order reflects a recent change in Archaic Basque.

the negative marker (like in Modern Basque), rather than to the right of the verb as in non-negative interrogatives, with order [WH Neg AUX ...V]. That is, negation acting as a host for the auxiliary should ensure PF-convergence, rendering the appeal to lower copy pronunciation unnecessary.

Negative interrogatives are not very frequent in our corpus, but we can find some sentences that correspond exactly to the expected pattern. In both (56) and (57), the auxiliary surfaces separated from the lexical verb and immediately follows the negative marker *ez*: the latter functions as the host for the auxiliary, which can raise to Foc without the verb:

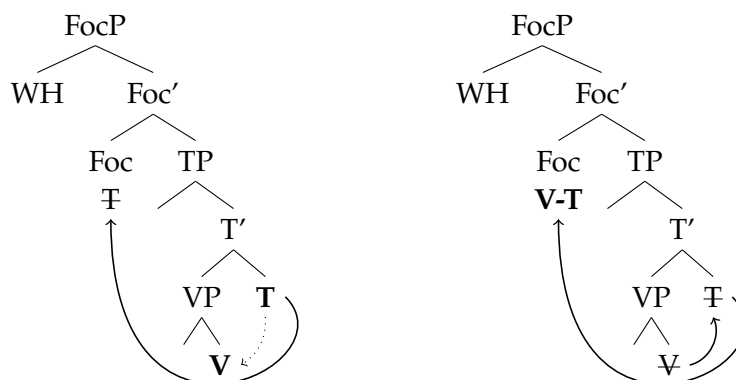
- (56) *Prophetetarik cein ez tute persecutatu çuen aitéc?*
 prophets.PART which NEG.AUX persecute your fathers
 (Leiz Acts 7:52)
 Which one of the prophets did your fathers not persecute?
- (57) *Cergatic eçtuçue hura ekarri ?* (Leiz Jh 7.45)
 why NEG.AUX them bring
 Why didn't you bring him in?

In sum, our analysis accounts for why the auxiliary is spelled out separated from the verb and higher in the structure in negative interrogatives, while it remains to the right of V in non-negative interrogatives.

7 DIACHRONIC CHANGE AND THE NATURE OF “RESIDUAL” V2.

Under our analysis, both Archaic and Modern Basque are languages with *wh*-movement and T-to-C movement. They differ however in the elements that undergo the latter movement in analytic constructions: in Archaic Basque, it is only the auxiliary which moves, while it is the V-Aux complex in Modern Basque, as represented below:

- (58) a. *Archaic Basque analytic verb.* b. *Modern Basque analytic verb.*



We argued that this contrast results from a difference in the morphosyntactic properties of T in the two varieties. Whereas both are subject to an affixation requirement, the nature of this requirement is different in each case: it is a PF-requirement in Archaic Basque and a syntactic requirement in Modern Basque. When it is a syntactic requirement, V-to-T movement will systematically precede T-to-C movement, leading to systematic [WH V Aux ...] orders with analytic verbs (Ortiz de Urbina 1994, Elordieta 1997). However, when it is a PF-requirement, T-to-C movement takes place in the absence of previous V-to-T movement, and leads to the bare auxiliary raising to C.

Thus our proposal implies that the systematization of V2 effects from Archaic Basque to Modern Basque results from the development of V-to-T movement in analytic constructions. More precisely, what was a (morpho-phonological) requirement on affixation for T has become a syntactic requirement, via Elordieta's (1997) [Affix] feature.

Another consequence of the results we obtained here concerns the nature of "residual" V2 in Basque. We can see that rather than a verb-second phenomenon, it is an 'inflection-second' phenomenon. This is clear in the syntax of Archaic Basque analytic constructions, where only the auxiliary undergoes T-to-C movement. But it is also the case in Modern Basque: V is dragged to C only to the extent that it ensures that the auxiliary's affixation needs are satisfied. And the same is shown by the interaction with negation in both varieties: if the affixation requirement is satisfied (in the syntax or at PF) by the negative marker, then the lexical verb does not need to raise together with the auxiliary. The grammar of Basque "residual" V2 is thus similar to that of English, where interrogatives display V2 with inflected auxiliaries but not with inflected verbs (with the exception of the verb *to be*). The main difference seems to be that unlike Modern and Archaic Basque, English has no (syntactic or PF) affixation requirement on T; nor does it have systematic V-to-T

movement like Modern Basque does. Our analysis in fact converges with that of German V2 by [Bayer & Freitag \(2020\)](#). These authors show that in German V2 sentences, the lexical part of the verb is interpreted in its base-position, and not in its surface-position. They propose that German V2 actually results from the movement of inflection *per se*, coupled with generalized pied-piping, whereby the lexical stem of the verb raises only to the extent that it ensures morphological integrity with the inflectional morpheme.

8 THE POTENTIAL INFLUENCE OF LANGUAGE CONTACT

Basque has been in contact with Latin and then Romance varieties uninterruptedly since the latinization period, and their mutual structural influence has been largely established ([Menéndez Pidal 1950](#), [Michelena 1974](#), [Landa 1995](#), [Echenique 2005](#), [Gómez Seibane 2020](#), [Ledgeway 2020](#)). Around the 16th c., Basque cohabits especially with Spanish, Gascon and Navarrese Romance ([Lakarra & Mounole 2018](#)). All these varieties were characterized by a prevalence of a general V2-grammar ([Benincà 2004](#), [Salvi 2012](#), [Ledgeway 2017](#), [Wolfe 2019](#)). Despite the close language contact, their influence on the development of word order regularities in Basque seems to have been rather small. As far as declaratives are concerned, there is no evidence for the transfer of V2 regularities to Basque, given that (non-negative) declaratives do not exhibit any regular V2 order neither in Archaic or Modern Basque, which are both characterized by a V-final order.²⁶

In turn, Basque shows V2 effects in *wh*-interrogatives. We have also seen that this V2 order is strict in Modern Basque, but less strict in Archaic Basque, which allows deviation from V2 in conjunction with analytic verbs. In this respect, Modern Basque is very similar to most Modern Romance languages. Although these have lost V2 order in declaratives, V2 order has largely been retained in *wh*-clauses. However, similarly to Basque, one of the few contexts where in most Romance languages *wh*-interrogatives do not exhibit strict V2 order are interrogatives with causal *wh*-phrases. This is also the case for Romance languages that are or have been in contact with Basque, as illustrated by data from Bible translations into Modern (Standard) Spanish (59) and Aragonese Spanish (60). Like Modern Basque (see (12)), both languages allow intervening elements after a causal *wh*-interrogative.

26 It should be noted that there is evidence that Proto-Basque had not SOV order, but rather SVO or VSO ([Trask 1977](#), [Gómez 1994](#), [Gómez & Sainz 1995](#), [Lakarra 2006](#)).

- (59) *¿Cómo tú, siendo judío, me pides a mí de beber, que soy mujer*
 how you being Jewish me ask to me to drink that am woman
samaritana? (John 4:9)
 Samaritan
 How can You, being a Jew, ask me for a drink since I am a Samaritan?
- (60) *¿Cómo tú, siendo chodigo, me demandes de beber à yo, que so una*
 how you being Jewish me ask to drink to me that am a
muller samaritana? (John 4:9)
 woman Samaritan
 How can You, being a Jew, ask me for a drink since I am a Samaritan?

It is conceivable that language contact could have played a role in the emergence of these similarities between Modern Basque and Romance languages. Indeed, we will assume that language contact fostered a general language-internal development in Basque, namely the cliticization of auxiliaries. In this respect, Basque shows a development similar to that assumed for the emergence of V2 effects in Old Romance. According to an analysis put forward first by [Thurneysen \(1892\)](#) for Old French, auxiliaries have undergone a cliticization process. Thurneysen assumes that this process led to an attachment of auxiliaries to the first element in the clause and that, by analogy, main verbs also underwent this cliticization process later on, leading to a (largely) general V2 order. With this analysis, [Thurneysen \(1892\)](#) builds on an observation by [Wackernagel \(1892\)](#), known as Wackernagel's law, according to which most Indo-European languages were previously characterized by a general occurrence of sentential clitic elements in the second position of the clause. We assume that a similar process of cliticization also occurred with Basque auxiliaries and, supported by the contact with Romance, has largely become established, leading to V2 orders in *wh*-interrogatives, where it has been retained in Romance, too ([Rizzi 1996](#)).

9 EVALUATION OF TWO ALTERNATIVE ANALYSES

9.1 No *T-to-C* movement

The analysis we have developed above assumes *T-to-C* movement to take place across the board in Archaic Basque *wh*-interrogatives, and explains the cases of non-adjacency between *wh*-phrases and verbs in terms of morphophonological conditions and operations. But the opposite approach could also be explored, where *T-to-C* movement never takes place in the

syntax.²⁷ The issue, then, would be to account for the exceptions. That is, the question would be: why are V2 effects systematic with synthetically conjugated verbs?

An explanation could be explored which appeals to another trait of Basque, namely the *V1 (or *T1) constraint, which disallows inflected verbs or auxiliaries from being realized as the first (overt) element of the clause (cf. [Ortiz de Urbina 1994](#) and references therein):

- (61) a. *Miren dator / etortzen da.*
 Miren come.3SG come AUX.3SG
 Miren comes.
- b. **pro dator.*
 come.3SG
 They come.
- c. *pro etortzen da.*
 come AUX.3SG
 They come.

The idea could be that synthetic verbs are clitic-like elements which attach onto a preceding element of the clause (cf. second position clitics in e.g. Slavic languages). In *wh*-interrogatives, they would attach onto the *wh*-phrase, thus producing adjacency effects (cf. [Aldai 2011](#): 1130).

However, this explanation would face important problems. First of all, ordinary lexical verbs do not belong to the set of “well-established clitics” ([Anderson 1992](#)). But more importantly, it is unclear why these verbs would show no visible sign of leftward cliticization in e.g. declarative clauses, but would necessarily have to cliticize onto *wh*-phrases in interrogatives.²⁸

9.2 Micro-syntactic variation

An interesting alternative explanation could be developed within the framework of recent approaches to variation that integrate both large-scale and small-scale variation introduced in Section 1. It could be posited that interrogatives with synthetic vs. analytic verbs differ with respect to whether T-to-C takes place or not.

For instance, in a parametric hierarchy approach (cf. [Biberauer & Roberts 2012](#), [Roberts 2019](#), [Wolfe 2022](#) among others), Archaic Basque could have

²⁷ As suggested by a reviewer, this hypothesis could be formalized in terms of the *Wh* Criterion ([Rizzi 1996, 2001](#)), by stating that in Archaic Basque – unlike in Modern Basque –, Foc itself (rather than T) is endowed with a *Wh* feature and thus no movement to Foc is required for *wh*-phrases on SpecFocP to satisfy the criterion.

²⁸ Furthermore Basque does not fit with [Bošković’s \(2016\)](#) generalization whereby second position clitic systems are only found in languages without definite articles.

set a micro-parameter for V2 in interrogatives that only affects a subcategory of verbs, namely synthetic verbs. In Modern Basque, it would then have changed into a higher-level type of parameter –e.g. a mesoparameter–, affecting all verbs. Somehow similarly, under a micro-cues approach (cf. [Westergaard 2009, 2014, 2021](#)), the change would have been made from a specific micro-cue for V2 that targets synthetic verbs in Archaic Basque into a broader one in Modern Basque, generalized to all verbs.²⁹

However, the evidence does not go in the expected direction. On the one hand, synthetic and analytic verbs do not constitute properly speaking different subcategories of verbs. If they were, we would expect them to be in complementary distribution. But, even though they probably constituted two distinct sets of verb at some earlier point ([Mounole 2014\[2018\]](#)), in Leizarraga’s writings we find verbs with both types of conjugation ([Mounole 2014\[2018\]](#), [Broughton 2022](#); cf. also Lafon 1944). This is illustrated in the following pair of examples, where the same verb *joan* “to go” is used with synthetic conjugation in (62a) and analytic conjugation in (62b):

- (62) a. *Eta lasterca cioacen biac elkarrequin* (Leiz Jh 20:4)
 and running 3PL.ABS.go.PST two.D each.other.with
 And both of them were going together running
- b. *Eta gendetze handiac ioaiten ciraden harequin*
 and crowd bigs go 3PL.ABS.AUX.PST them.with
 (Leiz Lk 14:25)
 And large crowds were going with him

It is true that one could also postulate a functional head at the origin of the opposition. For instance, [Laka \(1993\)](#) argues that what distinguishes synthetic from analytic conjugation is, respectively, the absence vs. presence of an Aspect projection, between VP and InflP/TP. So under this analysis, we could make the hypothesis that for some reason, V2 –i.e., T-to-C movement– only takes place in the absence of an Aspect projection in Archaic Basque. But this reasoning faces another problem. Given that V2 is a property of left-peripheral heads (namely, Foc in Basque, under standard assumption), *wh*-interrogatives in which movement to Foc does not take place –i.e., analytic constructions, under the hypothesis explored here–, should lead to a crash. In fact, we would expect to observe some alternative ‘repair’ strategy, similar to English *do*-insertion for instance. Thus, the absence of V2 effects is precisely what makes it doubtful that no T-to-C movement takes place whatsoever in analytic constructions.

²⁹ See also [Cruschina & Sailor \(2022\)](#) (and references therein) on how changes in V2 –including “residual” V2– are to be attributed to changes in the syntax of the C-layer of the clause.

In turn, the analysis put forth in Section 6, in which T-to-C movement is generalized in the syntax of interrogatives though its effects on the surface form are hidden in analytic constructions, gives a straightforward explanation of the two patterns.

10 CONCLUSION

This paper has analyzed the loss of “optional” adjacency between the *wh*-phrase and the finite verb in Basque *wh*-interrogatives, and the emergence of a systematic “residual” V2 grammar. We have shown that while in Archaic Basque systematic V2 order was limited to the synthetically construed verbal structures, Modern Basque displays regular V2 effects across all verbal constructions. However, according to our proposal, this change in the surface does not derive from a change in the syntax of V2 properly. It actually takes place in the morphosyntax of inflection. In fact, in Archaic Basque like in Modern Basque, both *wh*-movement and T-to-C movement occur. The only difference concerns the nature of the affixation requirement on T: while it is a PF-interface requirement in the former variety, it is a syntactic one in the latter. This results in the bare auxiliary moving to C/Foc in Archaic Basque, whereas in Modern Basque it is the whole verb+auxiliary complex which moves to C/Foc. In the former case, the auxiliary lacks a proper host for affixation, and must therefore be pronounced lower in the structure, ‘hiding’ the effects of the V2 syntax.

We therefore present a multifactorial analysis in the sense that in order to get a general picture of word-order facts, other aspects of the grammar must be factored in together with the syntax of V2. In other words, the absence of linear V2 orders, especially at the level of micro-variation, does not necessarily indicate the absence of a V2 syntax. Note finally that we have referred to the change in V2 orders in Basque as indicating the “emergence” of systematic V2 effects in *wh*-interrogatives.³⁰ What our results show is that this is descriptively accurate if we consider surface orders, but inaccurate if we are talking about the syntax of V2, since both Archaic and Modern Basque have a V2 grammar in *wh*-interrogatives, i.e., *wh*-movement combined with T-to-C movement.

³⁰ Adopting the terminology used by [Cruschina & Sailor \(2022\)](#), it could also be characterized as an “extension” of V2 from synthetic verbs to all verbal constructions.

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