

From obligatory WH-movement to optional WH-in-situ in Labourdin Basque

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In this article, we analyze the nature and origin of a new WH-question strategy employed by young speakers of Labourdin Basque. We argue that this new strategy implies a parametric change: while Basque has always been a bona fide WH-movement language, these new constructions are instances of WH-in-situ and display the syntactic and semantic properties and patterns of in-situ WH-questions in French. We analyze the emergence of this new strategy as being due to the combination of three factors: (i) the abundance of structurally ambiguous WH-questions in the primary linguistic data, (ii) the change in the sociolinguistic profile of bilingual Basque-French speakers, and (iii) an economy bias for movementless derivations.

Keywords: WH-movement, WH-in-situ, parameters, change, language contact, economy, Basque

1. INTRODUCTION: THE WH-QUESTION STRATEGY IN STANDARD BASQUE. The Basque language is spoken on both sides of the Franco-Spanish border and is in a diglossic situation with respect to both French and Spanish (see Moseley 2010, Eusko Jaurilaritza 2013, *inter alia*). In terms of grammar, it is a head-final language. The ‘neutral’ word order of constituents (the word order of an out-of-the-blue sentence) is subject-indirect object-direct object-verb (S-IO-DO-V) (see e.g. Laka 1993, Elordieta 2001). Regarding interrogatives, WH-questions in Basque are generally analyzed as involving WH-movement, followed by movement of the verb, which results in a strict adjacency between the WH-phrase and the verbal complex. For instance, the basic SOV word order of a sentence such as 1 becomes S_{WH}-V-O when producing a WH-question about the subject, as in 2 (see Ortiz de Urbina 1989).¹

(1) Peio_{ERG} gerezia_{ABS} jan ditu.

Peio.ERG cherries.ABS eat AUX

‘Peio ate the cherries.’

(2) Nor_{ERG} jan ditu gerezia_{ABS}?

who.ERG eat AUX cherries.ABS

‘Who ate the cherries?’

The very same type of structure can be observed in questions about DOs (3), IOs (4), and adjuncts (5, 6).

(3) Zer jan du Peio_{ERG}?

what.ABS eat AUX Peio.ERG

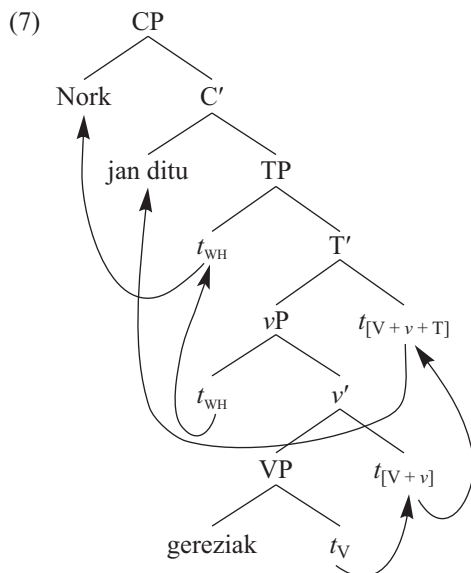
‘What did Peio eat?’

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¹ Abbreviations used in the glosses are as follows: ABS: absolutive, AUX: auxiliary, COMP: complementizer, DAT: dative, ERG: ergative, FOC: focus, FUT: future, INST: instrumental, NEG: negation, NMLZ: nominalizer, PL: plural, PRT: particle, SG: singular, TOP: topic.

- (4) Nori eman dio oparia Peiok?
 who.DAT give AUX present.ABS Peio.ERG
 ‘Who did Peio give the present to?’
- (5) Non erosi du oparia Peiok?
 where buy AUX present.ABS Peio.ERG
 ‘Where did Peio buy the present?’
- (6) Noiz erosi du oparia Peiok?
 when buy AUX present.ABS Peio.ERG
 ‘When did Peio buy the present?’

The classical analysis for Basque WH-questions stemming from the principles-and-parameters framework posits a displacement of the WH-phrase to the specifier of a left-peripheral projection (which is usually taken to be Spec-CP or Spec-FocP), followed by the movement of the inflected verb (composed of V + v + T) to the head of that projection (an instance of T-to-C movement; see Ortiz de Urbina 1989, Irurtzun 2007).² This strategy is illustrated in the tree in 7, which corresponds to example 2.



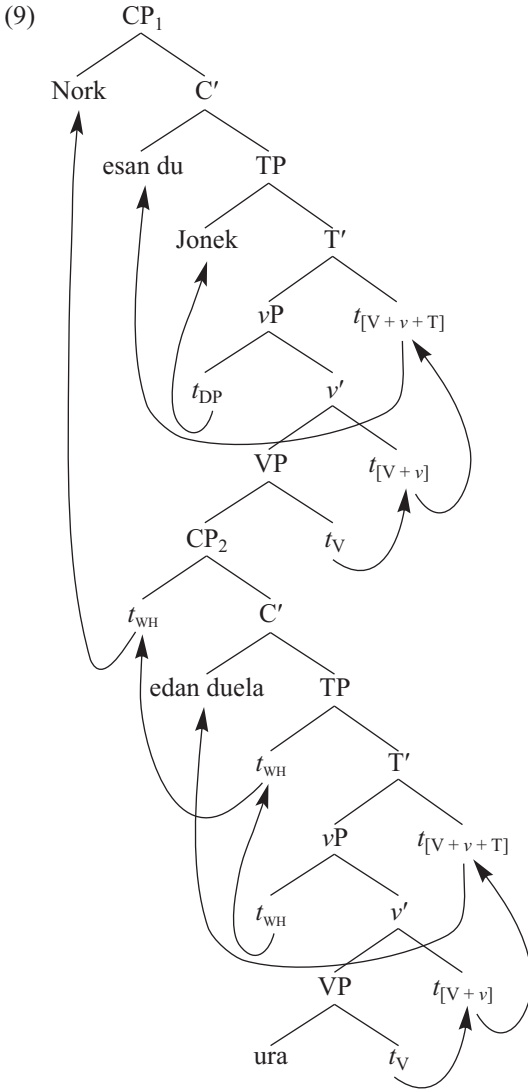
We observe the same strategy cyclically applied in long-distance WH-questions, which show verb fronting not only in the main clause, but also in the embedded clause. Thus, for instance, *esan du*, the verbal complex of the main clause, is fronted in 8, outscoping the subject, and the verb in the embedded clause *edan duela* is also fronted, resulting in a V-O inversion in the embedded clause.

- (8) Nork esan du Jonek [edan duela ura]?
 who.ERG say AUX Jon.ERG drink AUX.COMP water.ABS
 ‘Who did Jon say drank water?’

This inversion has been argued to result from the cyclic movement of the WH-phrase through Spec-CP of the embedded clause, which is accompanied by the movement of the verb to C. This is illustrated in the tree in 9.³

² See Laka & Uriagereka 1987 and Uriagereka 1999, as well as Arregi 2002, for alternative analyses.

³ Basque also has an alternative to long-distance extraction: clausal pied-piping. In this strategy, the WH-phrase is moved to Spec-CP of the embedded clause and followed by the verb, but instead of extracting the



In sum: Basque shows the canonical properties of a bona fide WH-movement language. Nevertheless, in what follows, we show that a very different pattern has emerged among the young speakers of the Labourdin dialect of Basque, which cannot be accounted for in terms of the standard construction resulting from WH-movement plus T-to-C movement. This new pattern raises questions about (i) its syntactic structure, (ii) the triggers for its emergence in Basque at precisely this point of the language's history, and (iii) what all this shows about the way that linguistic change occurs during language acquisition.

WH-phrase to Spec-CP of the matrix clause, it is the whole embedded clause that is fronted (Ortiz de Urbina 1989, 1993, Irurtzun 2007). The pied-piping counterpart to 8 is along the lines of (i) below.

- (i) [Nork edan duela ura] esan du Jonek?
 who.ERG drink AUX.COMP water.ABS say AUX Jon.ERG
 'Who did Jon say that drank water?'

This article is organized around these three questions. We first analyze the structure of the new WH-construction (§2). After introducing its basic properties, we compare it to similar constructions found in Old Basque and show that this similarity is only superficial. We then argue that the new WH-construction is actually a WH-in-situ construction, with the same properties as WH-in-situ questions in a language such as French. Second, the different possible triggers for the change from WH-movement to optional WH-in-situ are discussed in §3. We argue that the emergence of the WH-in-situ construction is due to the fact that an important proportion of the primary linguistic data available for the children acquiring Basque can be parsed as either WH-movement or WH-in-situ, combined with a strongly diglossic sociolinguistic context with respect to French. Third, we discuss the process by which language change and language acquisition appear to be intertwined in our case study (§4). Finally, a brief summary of the results obtained in this article is given in §5.

2. A NEW WH-QUESTION STRATEGY OF YOUNG SPEAKERS OF LABOURDIN BASQUE. The Navarro-Labourdin dialect of Basque (henceforth, Labourdin Basque) is one of the two dialects spoken in the French territory, in the area that extends from Hendaye, north to Bayonne along the coast line, and inland to the East up to the limits of the historical province of Lower Navarre with Zuberoa (Camino 2004, Zuazo 2008).⁴

In the speech of young speakers of Labourdin Basque (young Labourdin Basque, YLB hereafter), along with the standard constructions such as those in §1, we also find WH-constructions that are judged ungrammatical by older speakers of Labourdin Basque and by all speakers of other dialects in Southern Basque Country (in the Spanish territory). This strategy is illustrated in example 10.⁵

- (10) Nork gereziak jan ditu?
 who.ERG cherries.ABS eat AUX
 ‘Who ate the cherries?’

In this construction, we do not observe the typical adjacency of the WH-phrase and the verb, and the order of constituents is SOV. In principle, data such as 10 could have two potential analyses: either both the WH-phrase and the verb are in situ, or the WH-phrase is leftward-moved without movement of the verb. If we contrast 10 with analogous questions about other clausal constituents, however, it clearly appears to be an in-situ strategy. Consider the data in 11–13, elicited from speakers of YLB.⁶

⁴ The other dialect is Souletin, spoken in the province of Zuberoa (Soule).

⁵ In Basque, the syntax of focus is virtually identical to that of WH-questions (Ortiz de Urbina 1989). In particular, it involves leftward movement of the focus and the verb to a position above TP, and WH-movement and focalization are normally mutually exclusive. Although in this article we only study WH-constructions, it is important to note that young Navarro-Labourdin speakers also seem to allow the in-situ constructions with foci, as in (i) (as an answer to 10, for instance).

(i) PEIOK gereziak jan ditu.
 Peio.ERG cherries.ABS eat AUX
 ‘Peio_{FOC} ate the cherries.’

⁶ We elicited data from YLB speakers from both the Labourd and the Lower Navarre provinces (seventeen speakers, twelve female; data collected in 2011). Our informants’ ages range from eighteen to thirty-five, all Basque-French bilinguals with or enrolled in higher education. Constructions such as 10 were produced and judged grammatical by a vast majority of speakers (only one speaker rejected them as completely ungrammatical) and are also widely attested in the database of the project NORANTZ (<http://www.norantz.org/>), developed by I. Epelde, B. Oyharçabal, and J. Salaberria.

- (11) *Zer Jonek jan du?
 what.ABS Jon.ERG eat AUX
 ‘What did Jon eat?’
- (12) Nori gereziak eman dazkozu?
 who.DAT cherries.ABS give AUX
 ‘Who did you give the cherries to?’
- (13) ??Zer Peiori eman dako zu?
 what.ABS Peio.DAT give AUX
 ‘What did you give to Peio?’

Example 11 shows that the interrogative DO cannot be fronted over the subject *Jonek*. Likewise, even if the leftmost interrogative IO can appear without the verb following it (12), we cannot front an interrogative DO over a dative, as illustrated in 13.⁷

Given that Basque is an S-IO-DO-V language, the new WH-question strategy seems to be a WH-in-situ strategy, allowing for patterns such as S_{WH}-IO-DO-V or S-IO_{WH}-DO-V, but disallowing those with the interrogative elements displaced leftward from their base position and the verb in its base position (*IO_{WH}-S-DO-V or *DO_{WH}-S-V).

The data on the position of adverbs also goes in the same direction. High, clausal adverbs and low, vP adverbs show some variability with respect to their position in the clause in Basque (Elordieta 2001, Hualde & Ortiz de Urbina 2003). Low adverbs such as the manner adverb *fite* ‘quickly’ appear in the immediately preverbal position in non-marked constructions, as in 14a. As predicted by the in-situ analysis, all things being equal, in YLB the adverb can surface in the very same position in interrogatives about the DO, as shown in 14b.

- (14) a. Jonek gereziak fite jan ditu.
 Jon.ERG cherries.ABS quickly eat AUX
 ‘Jon ate the cherries quickly.’
- b. Jonek zer fite jan du?
 Jon.ERG what.ABS quickly eat AUX
 ‘What did Jon eat quickly?’

Then, high adverbs such as *usu* ‘frequently’ most naturally appear in the position immediately following the subject (see Lafitte 1995 [1944]). This is illustrated in 15a. Again, as shown in 15b, in YLB the word order remains unchanged with an interrogative subject.

- (15) a. Jonek usu gereziak jaten ditu.
 Jon.ERG often cherries.ABS eat AUX
 ‘Jon often eats cherries.’
- b. Nork usu gereziak jaten ditu?
 who.ERG often cherries.ABS eat AUX
 ‘Who often eats cherries?’

⁷ WH-adjuncts can also remain in situ in YLB.

- (i) Zendako gereziak jan dituzu?
 why cherries eat AUX.2SG
 ‘Why did you eat the cherries?’

But this type of structure, without adjacency between the WH-adjunct and the verb, has been reported to be acceptable for certain speakers of Southern varieties (see Uriagereka 1999 for a syntactic analysis of WH-questions that builds upon this fact). We therefore focus on the constructions involving WH-arguments, which seem to be restricted to YLB.

In sum, all of the evidence bears testimony to the fact that the new WH-construction discussed here involves a WH-in-situ strategy.

In the next two subsections, we compare the properties of this construction with two similar constructions found in Old Basque and French.

2.1. A COMPARISON WITH OLD BASQUE WH-QUESTIONS. Even though we said that this construction (which coexists with the standard WH-movement construction that gives rise to WH-verb adjacency) is a recent development in the speech of young Labourdin Basque speakers, we can find constructions that are somewhat analogous in Ancient and (post-)Classical Basque texts. Consider examples 16–18.

- (16) Zer autoritatez gauza horiak egiten dituk? eta nork hiri
 what authority.INST thing those.ABS do AUX and who.ERG you.DAT
 eman drauk autoritate hori?
 give AUX authority that.ABS
 ‘With which authority did you do those things? And who gave you that authority?’
 (Leizarraga, 1571)
- (17) Zenbat ahal dudan, edo nork ni punituko nau neure
 how.much power.ABS have.COMP or who.ERG me.ABS punish AUX my
 obren gatik.
 works because
 ‘How much power I have or who will punish me because of my works.’
 (Ziburuko Etxeberri, 1665)

- (18) Eta nor gerlara prestatuko lizateke?
 and who.ABS war.to offer AUX
 ‘And who would offer (himself) for the war?’
 (Sarako Etxeberri, 1718)

In none of these constructions do we find the adjacency between the WH-phrase and the verb that is characteristic of canonical WH-questions in contemporary Basque; some element intervenes in all of them.

However, these WH-questions in Old Basque are not generated with a WH-in-situ grammar, but with a WH-movement that is not accompanied by the movement of the verb. Consider the data in 19 and 20.

- (19) Profetak ere hil izan dituk: nor hik eure burua egiten
 prophets.ABS even die have be who.ABS you.ERG your head.ABS do
 duk?
 AUX
 ‘Even the prophets died: who are you making of yourself?’
 (Leizarraga, 1571)
- (20) Somarioki zer horrek erran nahi du?
 summarily what that say want AUX
 ‘In summary, what does that mean?’
 (Leizarraga, 1571)

This type of construction can only be generated with WH-movement. In 19 the WH-word *nor* ‘who’ surfaces to the left of the subject (and not in its in-situ position within the small clause, to the right of *eure burua* ‘yourself’). Likewise, in 20 we observe an inversion of the canonical S-O word order whereby the interrogative DO *zer* ‘what’ appears to the left of the subject pronoun *horrek* ‘that’. This, we take it, is indicative of leftward movement of the WH-phrase. Note furthermore that in most of the examples above, the verb surfaces in final position, which is its position in out-of-the-blue sentences (the cases in which it does not can be explained in terms of a right-adjoined ad-

junct (in 17) or focus-related movement (in the second clause in 16)). This implies that verb movement is quite a recent grammatical property of WH-questions in Basque.⁸

In sum, the YLB in-situ WH-construction has no analogous structure in Old Basque. Next, we compare the in-situ WH-construction of Labourdin Basque to other WH-in-situ constructions that are available in the linguistic environment surrounding the speakers of Labourdin Basque, namely in French.⁹ We see below that they have very similar properties.

2.2. A COMPARISON WITH IN-SITU WH-QUESTIONS IN FRENCH. French is well known for having a variety of WH-constructions. We can distinguish four main types: WH-movement constructions (21), reinforced WH-movement constructions (22), WH-in-situ constructions (23), and clefted constructions (24) (see Bošković 1998, 2000, Boeckx 1999, Mathieu 1999, 2004, Cheng & Rooryck 2000, Oiry 2011, Shlonsky 2013, among others).

- (21) Qu'as-tu vu ?
 what.AUX-you see
 'What did you see?'
 (22) Qu'est-ce que tu as vu ?
 what.EST-CE QUE you AUX see
 'What did you see?'
 (23) Tu as vu quoi ?
 you AUX see what
 'What did you see?'
 (24) (C'est) quoi que tu as vu ?
 EXPL.is what COMP you AUX see
 'What is it that you saw?'

In what follows, we show that Basque in-situ constructions share many properties with those of French.

WH-in-situ in French is sensitive to intervention by negation and WH-elements. Several authors, such as Bošković (1998, 2000) and Mathieu (1999), have noted that WH-in-situ in French displays intervention effects with negation: when clausal negation outscopes the in-situ WH-phrase, the sentence is ungrammatical (25), while no such effect arises in constructions with WH-movement, as illustrated in 26.

- (25) *Jean ne mange pas quoi ?
 Jean NEG eat not what
 'What doesn't Jean eat?'
 (26) Qu'est-ce que Jean ne mange pas ?
 what.EST-CE QUE Jean NEG eat not
 'What doesn't Jean eat?'

Likewise, WH-in-situ is clearly ungrammatical in WH-islands (27), whereas arguments can marginally undergo WH-movement out of them (28) (Mathieu 1999, Shlonsky 2013).

⁸ See also Ortiz de Urbina 1989:263, n. 7. For a functionalist analysis of this change, see Aldai 2011.

⁹ Reglero (2005) has argued that WH-in-situ strategies are used in Spanish in some specific discourse environments. But this view has been challenged by Uribe-Etxebarria (2002) and Etxepare and Uribe-Etxebarria (2005), who convincingly argue that these constructions involve a series of displacements whereby the WH-phrase ends up in sentence-final position.

- (27) *Tu te demandes [comment aider qui] ?
 you yourself wonder how help who
 'Who do you wonder how to help?'
 (28) ^{?(?)}Qui te demandes-tu [comment aider] ?
 who yourself wonder-you how help
 'Who do you wonder how to help?'

YLB displays the same sensitivity to intervention. Concerning negation, WH-in-situ constructions are ungrammatical when the WH-phrase is c-commanded by negation (29). The only way of asking a question with negation on the matrix clause is by resorting to the WH-movement strategy (30).

- (29) *Jonek ez du zer jaten?
 Jon.ERG NEG AUX what.ABS eat
 'What doesn't Jon eat?'
 (30) Zer ez du jaten Jonek?
 what.ABS NEG AUX eat Jon.ERG
 'What doesn't Jon eat?'

WH-islands in YLB are also like those of French: argumental WH-phrases cannot remain in situ in WH-islands (31), but they can move out of them (32).

- (31) *Ez dakizu [nola nori opari bat eskaini]?
 NEG know.2SG how who.DAT present a offer
 'Who don't you know how to give a present to?'
 (32) Nori ez dakizu [nola eskaini opari bat]?
 who.DAT NEG know.2SG how offer present a
 'Who don't you know how to give a present to?'

Another characteristic property of WH-in-situ constructions in French is that they can be embedded within strong islands (Obenauer 1994, Shlonsky 2013). The examples below show that while WH-movement out of an adjunct gives rise to a strong island effect (33), WH-in-situ in the same configuration does not (34).

- (33) *Qu'est-il tombé sur la solution en faisant ?
 what.is-he fallen on the solution in doing
 '*What has he fallen on the solution by doing?'
 (34) Il est tombé sur la solution en faisant quoi ?
 he is fallen on the solution in doing what
 'He has fallen on the solution by doing what?'

YLB shows the same asymmetry: while regular WH-movement displays island effects (35), WH-in-situ constructions are grammatical or only mildly deviant when embedded within strong islands (36).¹⁰

¹⁰ Unlike in French (see Obenauer 1994, Shlonsky 2013), subject WH-in-situ is also grammatical in YLB strong islands; compare French (i) and YLB (ii).

- (i) *?Il a construit une machine que qui va utiliser ?
 he has built a machine that who will use
 'He has built a machine that who is going to use?'
 (ii) ?[Nork Nobel saria ukan duenean] harritu zira?
 who.ERG Nobel prize get AUX.when surprise AUX.2SG
 'You got surprised when who got the Nobel prize?'

This contrast between Basque and French can be attributed to a more general difference in the behavior of subject WH-phrases in both languages. While in French (or English, for that matter) WH-movement of embedded subjects sometimes imposes a specific requirement on the form of the complementizer (the so-called *qui/que* alternation in French, *that*-trace effects in English), no such requirement is attested in Basque.

- (35) *Nori piztu dute jendearen kexua [etxea kentzean]?
 who.DAT light AUX people.of anger house remove.when
 lit. 'Who did they light people's anger when they took the house to?'
 (36) ?[Nori etxea kentzean] piztu dute jendearen kexua?
 who.DAT house remove.when light AUX people.of anger
 lit. 'They lit people's anger when they took the house to who?'

Finally, two other properties shared by the new WH-construction in YLB and WH-in-situ in French are semantic in nature: they concern presuppositionality and exhaustivity.¹¹ To begin with, several authors, like Baunaz (2005), have argued that in-situ WH-questions in French are not as presuppositional as clefts. In this regard, they display the same pattern as WH-questions involving WH-movement. For instance, even if questions involving clefts cannot generally accept a plain denial as an answer, in-situ WH-questions—like WH-movement questions—are not subject to this restriction and can be refuted without a strong discursive clash. Consider the difference between the oddness of 37 (involving a cleft), on the one hand, and the congruence of 38 (involving WH-movement) and 39 and 40 (involving WH-in-situ), on the other.

- (37) Q: C'est qui qui a mangé les cerises ?
 EXPL.is who COMP AUX eat the cherries
 'Who is it that ate the cherries?'

A: #Personne.
 'Nobody.'

- (38) Q: Qu'as-tu mangé ?
 what.AUX-you eat
 'What did you eat?'

A: Rien.
 'Nothing.'

- (39) Q: Qui a mangé les cerises ?
 who AUX eat the cherries
 'Who ate the cherries?'

A: Personne.
 'Nobody.'

- (40) Q: Tu as mangé quoi ?
 you AUX eat what
 'What did you eat?'

A: Rien.
 'Nothing.'

This has been argued to show that the different types of WH-questions involve different degrees of presuppositionality regarding the open proposition that the question denotes (see also Chang 1997, Boeckx 1999, Cheng & Rooryck 2000). Whereas cleft constructions heavily presuppose that the eventuality denoted by the open proposition holds of some individual, in-situ WH-constructions and questions involving WH-movement would have a lighter presupposition (and, hence, accept answers that plainly refute the presupposition).

¹¹ It has been claimed that another syntactic property of French WH-in-situ is that it is restricted to root clauses (see e.g. Boeckx 1999, Cheng & Rooryck 2000). Since this is, however, controversial (see e.g. Obenauer 1994, Oiry 2011, Shlonsky 2013), we do not take it to constitute a distinctive property of French WH-in-situ.

Interestingly, Basque patterns exactly the same way: there is a gradience in the acceptability of denial answers to different types of WH-questions: denial answers to in-situ WH-questions are fine (41), answers to questions involving WH-movement are fine too (42), and answers to ‘reinforced’ questions (which are not cleft constructions but involve WH-movement) are completely incongruent (43).¹²

(41) Q: Nork gereziak jan ditu? (YLB)

who cherries eat AUX
‘Who ate the cherries?’

A: Nehork ez.
nobody not
‘Nobody.’

(42) Q: Nork jan ditu gereziak? (Basque (all varieties))

who eat AUX cherries
‘Who ate the cherries?’

A: Nehork ez.
nobody not
‘Nobody.’

(43) Q: Nork ditu gereziak jan? (Labourdin Basque)

who AUX cherries eat
‘Who ate the cherries?’

A: #Nehork ez.
nobody not
‘Nobody.’

So, regarding presuppositionality, Basque in-situ WH-constructions pattern like French ones: they are not as presuppositional as the reinforced strategies (‘reinforced movement’ in Basque and ‘clefts’ in French).

Besides presuppositionality, in-situ WH-questions in French also differ from cleft constructions with regard to exhaustivity. Cleft constructions generally require an exhaustive answer, whereas in-situ WH-questions can explicitly deny the exhaustivity requirement of their answer. This can be tested with the inclusion of a nonexhaustive item such as *d’autre* ‘else/other’ associated with the WH-phrase. Consider 44 and 45.

(44) *C’est quoi d’autre que Paul a mangé ?

EXPL.is what of.other COMP Paul AUX eat
‘What else is it that Paul ate?’

(45) Paul a mangé quoi d’autre ?

Paul AUX eat what of.other
‘What else did Paul eat?’

¹² What we call the ‘reinforced’ WH-question is a question strategy specific to Labourdin Basque (used by all speakers of this variety) that involves regular WH-movement but, instead of being accompanied by movement of the verbal complex to C°, only involves movement of the auxiliary (see Duguine & Irurtzun 2010). Compare the standard WH-construction in 42a, where the WH-phrase is adjacent to the verbal complex *jan ditu* ‘has eaten’, with the reinforced construction in 43a, where only the auxiliary *ditu* has raised to that position.

It is generally assumed that reinforced WH-movement constructions in Labourdin Basque are analogous, in semantic terms, to cleft constructions in French. In fact, as Lafitte (1995 [1944]:48) says, ‘pour le traduire, le français *ce que* est obligatoire’ [‘in order to translate it, French *ce que* is necessary’]. See Duguine & Irurtzun 2010 for discussion.

We can apply the same test to YLB, comparing WH-in-situ (46), standard WH-movement (47), and reinforced WH-movement (48) constructions when the WH-phrase is associated with the nonexhaustive particle *besterik* ‘else’.

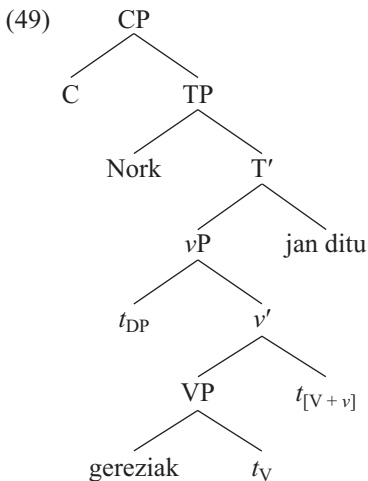
- (46) Nork *besterik gereziak jan ditu?* (YLB)
 who.ERG other.PRT cherries.ABS eat AUX
 ‘Who else ate the cherries?’
- (47) Nork *besterik jan ditu gereziak?* (Basque (all dialects))
 who.ERG other.PRT eat AUX cherries.ABS
 ‘Who else ate the cherries?’
- (48) *Nork *besterik ditu gereziak jan?* (Labourdin Basque)
 who.ERG other.PRT AUX cherries.ABS eat
 ‘Who else ate the cherries?’

Again, we see that Basque in-situ WH-questions pattern like the French ones. Semantically, they are equivalent to WH-movement-based constructions in that they are neither strongly presuppositional nor exhaustive.

In sum, the new WH-question strategy in YLB shares the following properties with French WH-in-situ.¹³

- It shows WH-island effects.
- It shows intervention effects with negation.
- It is licensed within strong islands.
- It is not strongly presuppositional.
- It is not strongly exhaustive.

On the basis of these results, we conclude that the new WH-structure of Labourdin Basque uncovered in this article is a WH-in-situ construction similar to the WH-in-situ found in French. The structure of a question such as 10 above can thus be represented as in 49, with a WH-phrase that does not raise to Spec-CP and a verbal complex that does not move to C°.



¹³ From what we have been able to see, YLB WH-in-situ differs from French WH-in-situ in just one relevant aspect: while it is barred in indirect questions in French (i), it is acceptable in YLB (ii).

(i) *Tu te demandes [Jean a vu qui].
 you yourself ask Jean has seen who
 ‘You wonder who Jean has seen.’

Next we analyze the possible factors favoring the emergence of this new in-situ strategy in Basque.

3. EXPLAINING THE CHANGE. We assume that language acquisition is a source for syntactic change (see in particular Lightfoot 1979, 1999). During the process of language acquisition, the learners set parameters on the basis of the analysis of specific structural properties—so-called triggers or cues—found in their PRIMARY LINGUISTIC DATA (PLD). Syntactic change occurs in a language when a new generation of speakers, when analyzing the PLD, posits structures or parameter settings that are not part of the grammar of previous generations.

It is generally accepted that besides the nature of the PLD, factors external to grammar, such as sociolinguistic factors or language contact, influence syntactic change (see Labov 1972, Lightfoot 1999, Pintzuk et al. 2000, Roberts & Roussou 2003, among others). The hypothesis that we put forth here is that the emergence of the WH-in-situ strategy in Labourdin Basque is due to the conjunction of three factors.

- the availability of ambiguous triggers in the PLD
- the change in the sociolinguistic profile of the speakers of Labourdin Basque
- an economy bias favoring movementless derivations

In what follows, we expose and discuss the two first points. We return to the third one in §4.

3.1. AMBIGUITY IN THE PRIMARY LINGUISTIC DATA. We propose that one of the crucial factors triggering the change is the abundance of critically underspecified data in the PLD that Labourdin Basque learners have to parse.

There is a large number of ambiguous WH-constructions that could equally well be parsed with a WH-in-situ strategy or a WH-movement strategy. Our general hypothesis is that in the face of this ambiguity, children (the language learners) end up positing an optional WH-in-situ grammar where previous generations only posited WH-movement grammars (see §4).

This section discusses these ambiguous data. We show that although WH-movement always affects the position of the different elements of the clause, there is a variety of constructions in which the resulting word order is the exact same as the neutral word order. We discuss three properties of Basque that give rise to such ambiguity: (i) the generalized pro-drop system, (ii) the structure of intransitive constructions, and (iii) the patterns of topicalization. Finally, at the end of this section, we quantify the number of ambiguous WH-questions available to children learning Basque.

PATTERNS OF PRO-DROP. A factor that plays a highly relevant role in generating ambiguous PLD is the interaction of WH-movement with pro-drop.

Basque is a three-way pro-drop language: subjects, direct objects, and indirect objects can all be null in a clause (see e.g. Ortiz de Urbina 1989, Elordieta 2002, Duguine 2013). This is illustrated in the pair in 50–51.

-
- (ii) Ez dakit [nork gerezia]k jan dituen].
 NEG know.1SG who.ERG cherries.ABS eat AUX.COMP
 ‘I don’t know who has eaten cherries.’

Note that this cannot be taken as a point against an in-situ analysis of these YLB constructions, since it has been observed that WH-in-situ is acceptable in indirect questions in languages such as Chinese and European Portuguese (Cheng & Rooryck 2000).

- (50) Zuk Mireni gereziak eman dizkiozu.
 you.ERG Miren.DAT cherries.ABS give AUX.2SG.ERG.3SG.DAT.3PL.ABS
 ‘You gave cherries to Miren.’
- (51) *pro pro pro* eman dizkiozu.
 give AUX.2SG.ERG.3SG.DAT.3PL.ABS
 ‘You gave them to him/her/it.’

Pro-drop is therefore a very prominent feature of Basque. Note furthermore that pro-drop is not restricted to cases such as 51, where it correlates with the three-way agreement morphology displayed in finite clauses. Rather, pro-drop also extends to nonfinite domains, as illustrated in 52.

- (52) [*pro pro pro* ema-tea] keinu polita da.
 give-NMLZ sign pretty be.3SG.ABS
 ‘{I/you/(s)he/it/we/they} giving {me/you/him/her/it/us/them} to {me/you/him/her/it/us/them} is a nice gesture.’

A natural consequence of this feature of Basque is that *pros* within a WH-construction can render it surface-ambiguous. Take for instance the question in 53.

- (53) Noiz etorriko zara zu?
 when come.FUT AUX.2SG.ABS you
 ‘When will you come?’

Example 53 is fully grammatical. However, it sounds pretty marked and inappropriate due to the presence of (pragmatically) unnecessary overt arguments, and Basque speakers strongly prefer resorting to constructions such as 54 (cf. the ‘avoid pronoun principle’ in Chomsky 1981).

- (54) Noiz etorriko zara *pro*?
 when come.FUT AUX.2SG.ABS
 ‘When will you come?’

The string resulting from pro-drop in 54 is structurally ambiguous. The only constituents that are overtly expressed are the WH-phrase and the verbal complex (lexical verb + auxiliary). Crucially, given that Basque is a verb-last language, this type of string can be parsed equally well using a WH-movement grammar, where the WH-phrase has undergone a leftward movement to Spec-CP followed by movement of the verbal complex to C°, or using a WH-in-situ grammar, where both the WH-phrase and the verb surface in their base-generated positions.

Furthermore, we would like to stress that this is a pervasive feature of Basque WH-questions, given that, just like with the adjunct interrogative in 54, WH-questions about direct objects (55), indirect objects (56), or subjects (57) can also generate ambiguous strings when interacting with multiple pro-drop.

- (55) Zer eman duzu?
 what.ABS give AUX.2SG.ERG.3SG.ABS
 ‘What did you give?’
- (56) Nori eman dizkiozu?
 who.DAT give AUX.2SG.ERG.3SG.DAT.3PL.ABS
 ‘Who did you give them to?’
- (57) Nork eman digu?
 who.ERG give AUX.3SG.ERG.1PL.DAT.3SG.ABS
 ‘Who gave it to us?’

In sum: the massive use of pro-drop renders a large number of WH-constructions structurally ambiguous in Basque. Next, we present another important source of ambiguity: the structure of clauses with intransitive verbs.

AMBIGUITY IN INTRANSITIVES. The first and very basic observation on the syntax of intransitives in Basque is that in simple sentences with a subject and an intransitive verb, their relative ordering will remain unchanged, whether the subject is a WH-phrase or not. The reason for this is that, on the one hand, the neutral word order in Basque is S-V, and, on the other hand, WH-movement results in the WH-phrase being left-adjacent to the verb (see §1). This is illustrated with the unaccusative verbs *erori* ‘to fall’ in 58 and *hil* ‘to die’ in 59.

- (58) Q: Zer erori da?
 what.ABS fall AUX
 ‘What fell down?’
 A: Hostoa erori da.
 leaf.ABS fall AUX
 ‘The leaf fell down.’
 (59) Q: Nor hil da?
 who.ABS die AUX
 ‘Who died?’
 A: Jon hil da.
 Jon.ABS die AUX
 ‘Jon died.’

Given that in the neutral word order the subject precedes the verb, questions such as those in 58 and 59 are structurally ambiguous; they can be parsed equally well by positing a WH-movement to Spec-CP, followed by movement of the verbal complex to C°, or by positing that all of the elements remain in situ, in the same position in which they surface in out-of-the-blue statements.

The same ambiguity can be found in unergatives of the ‘conflation’ type. These are predicates such as *dantzatu* ‘to dance’ and *abestu* ‘to sing’, illustrated in 60 and 61, respectively.

- (60) Q: Nork dantzatu du?
 who.ERG dance AUX
 ‘Who danced?’
 A: Jonek dantzatu du.
 Jon.ERG dance AUX
 ‘Jon danced.’
 (61) Q: Nork abestu du?
 who.ERG sing AUX
 ‘Who sang?’
 A: Jonek abestu du.
 Jon.ERG sing AUX
 ‘Jon sang.’

Summarizing, both unaccusatives and conflated unergatives generate ambiguous structures in constructions with subject WH-phrases, for the simple reason that the S-V order is maintained.

Interestingly, in the specific case of unergative verbs, there is another source of ambiguity that is specific to the Labourdin Basque dialect (for all speakers of this dialect, not just the speakers of YLB): the pattern of unergative verbs that are composed of a

meaningful nominal root and a dummy *do*-like verb ([N + *egin*]). These are verbs such as *irri egin* ‘to laugh’, *min egin* ‘to hurt’, *lan egin* ‘to work’, *laster egin* ‘to run’, *alde egin* ‘to leave’, *galde egin* ‘to ask/demand’, *euri egin* ‘to rain’, *elur egin* ‘to snow’, and so forth. Examples 62 and 63 illustrate simple constructions with these verbs, as they are found in all dialects of Basque: the dummy verb follows the noun and is itself followed by the auxiliary.

- (62) Jonek negar egin du.
Jon.ERG cry do AUX
‘Jon cried.’

- (63) Jonek barre egin du.
Jon.ERG laugh do AUX
‘Jon laughed.’

In Southern Basque dialects, this relative order changes in WH-questions, for the dummy *egin* verb and the auxiliary undergo T-to-C movement following the WH-movement and leave the nominal root stranded, as in 64 and 65.¹⁴

- (64) Nork egin du negar? (Southern Basque)
who.ERG do AUX cry
‘Who cried?’

- (65) Nork egin du barre?
who.ERG do AUX laugh
‘Who laughed?’

Note that in order to parse a question such as 64 we need to posit a grammar involving WH-movement, since the fronting of the verb over the nominal (as we said, an instance of T-to-C movement) in a WH-in-situ grammar would be completely unmotivated.

Nonetheless, things are quite different in Labourdin Basque. In this dialect, the [N + *egin*] structure has a more compound-like behavior, and even if the pattern of statements is just like that in Southern Basque (i.e. the structure of the statements in 66a and 67a is the same as it would be in Southern Basque), the pattern that we see in WH-questions containing this type of verb is different. In Labourdin Basque, the whole [N + *egin*] structure generally appears left-adjacent to the WH-phrase, as illustrated in 66b and 67b. That is, instead of the nominal root being stranded, the whole [N + *egin*] structure remains together.¹⁵

- (66) a. Jonek negar egin du.
Jon.ERG cry do AUX
‘Jon cried.’

- b. Nork negar egin du? (Labourdian Basque)
who.ERG cry do AUX
‘Who cried?’

- (67) a. Jonek irri egin du.
Jon.ERG laugh do AUX
‘Jon laughed.’

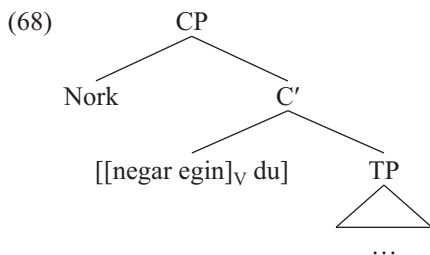
¹⁴ It should be noted, nonetheless, that although this is the most widespread strategy in most Southern dialects nowadays, some speakers (especially of the older generations) may also produce questions such as 66b below (thanks to I. Camino and I. Laka for discussing this point with us).

¹⁵ There is a difference between Labourdin Basque and Southern Basque in the lexical make-up of the predicate ‘to laugh’, which in Southern Basque is *barre egin* and in Labourdin Basque *irri egin*. This lexical difference is irrelevant for the present discussion.

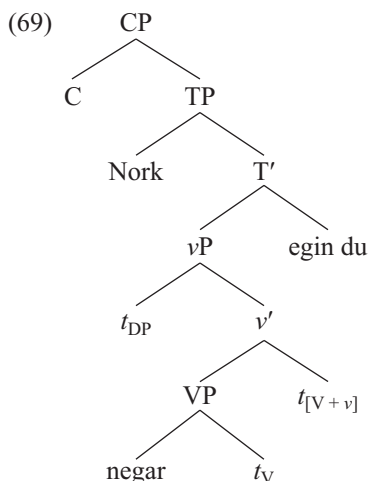
- b. Nork irri egin du?
 who.ERG laugh do AUX
 ‘Who laughed?’

(Labourdin Basque)

Now, in order to parse a question such as 66b or 67b, we could certainly use a WH-movement strategy like that depicted in 68, where the WH-phrase is moved to Spec-CP and the whole [N + *egin*] structure undergoes T-to-C movement as a complex verb.



Examples 66b and 67b can also be generated with a WH-in-situ grammar, however, whereby the WH-subject would be in its base position (Spec-TP), the nominal in the DO position, and the verbal complex (V + v + T) in its canonical position (T)—that is, with no WH-movement and no T-to-C movement, as represented in 69.¹⁶



That is, unlike in Southern Basque, in Labourdin Basque WH-constructions with [N + *egin*], unergatives are structurally ambiguous. It should further be noted that this is not an idiosyncratic feature of just a couple of verbs. As we said above, these [N + *egin*] unergatives constitute a large and common set of verbs. Thus, the amount of ambiguous evidence that these verbs generate is important (see below).

TOPICALIZATION OVER CP. A third property of Basque that generates structural ambiguity in WH-questions is the syntax of topicalization. The topic position stands above CP in this language (see Ortiz de Urbina 1989), and thus topics surface to the left of WH-phrases. These properties of topicalization are illustrated in 70.

- (70) a. Nork jan ditu gereziak?
 who.ERG eat AUX cherries.ABS
 ‘Who ate cherries?’

¹⁶ An alternative analysis would be to have the WH-phrase in situ and the whole verbal complex [N + *egin*] moving to T, which would result in the same word order.

- b. Gereziak nork jan ditu?
 cherries.ABS who.ERG eat AUX
 ‘Who ate the cherries_{TOP}?’
- c. *Ezer nork jan du?
 nothing who.ERG eat AUX
 ‘Who ate nothing_{TOP}?’

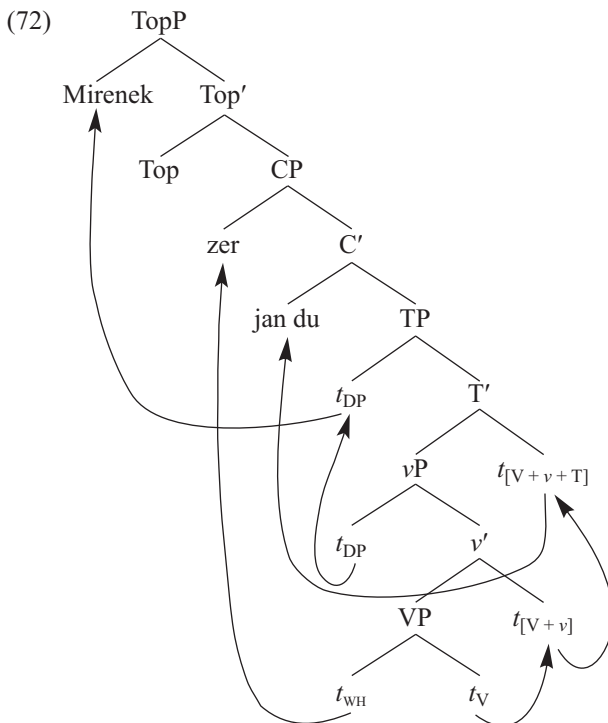
Example 70a gives the ‘neutral’ word order of an interrogative. As illustrated in 70b, the object DP can surface to the left of the WH-phrase, in which case it is interpreted as a topic. That it is indeed a topic is shown in 70c: negative quantifiers in that position are ungrammatical.

An important consequence of the syntax of topicalization is that in constructions in which WH-movement and T-to-C movement take place, other constituents can be topicalized, in which case they surface to the left of the WH-phrase. This also constitutes a source for ambiguous structures.

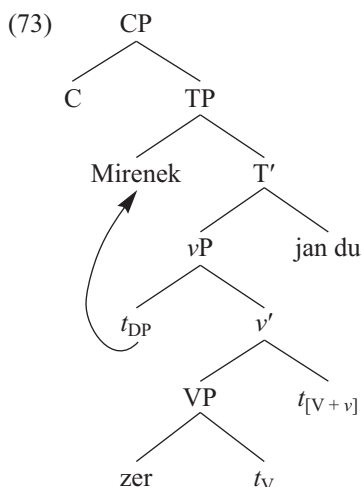
Take, for example, a very common type of WH-question over the direct object of a transitive predicate, such as that in 71.

- (71) Mirenek zer jan du?
 Miren.ERG what.ABS eat AUX
 ‘What did Miren eat?’

Certainly, 71 can be parsed using a WH-movement grammar: besides the WH-movement, the learner would posit a topic movement of the subject over the WH-phrase. This structure is represented in 72.



However, a WH-in-situ strategy could equally generate surface structures such as 71. This would correspond to 73, where the subject *Mirenek* stays in Spec-TP, the interrogative DO in its VP-internal object position, and the verbal complex [V + v + T] in T.



That is, topicalization can in a sense reestablish the neutral word order within the clause, whereby the verb surfaces in the final position.

But the reestablishment of the neutral word order is not the only possible source for ambiguity that topicalization can give rise to. For instance, in a grammar with operations of topicalization, even if we posit a WH-in-situ strategy, we do not expect all interrogatives to show neutral word order. Take 74 (= 70b), for instance.

- (74) Gereziak nork jan ditu?
 cherries.ABS who.ERG eat AUX
 ‘Who ate the cherries_{TOP}?’

Although 74 displays DO-S-V order, it can be generated both by a WH-movement grammar and by a WH-in-situ grammar. In the first, the movement of the WH-phrase and the verbal complex is followed by topicalization of the object. And in the second, although the interrogative subject and the verbal complex remain in situ, the object DP between them is topicalized. That is, the nonneutral word order in 74 can be seen as resulting from topicalization only, without there being any other movement to the left periphery.

Note finally that multiple topics are allowed in Basque, which makes it possible to have structurally ambiguous WH-constructions that are more complex than 71 above.

- (75) Atzo Mirenek zer jan du?
 yesterday Miren.ERG what.ABS eat AUX
 ‘What did Miren_{TOP} eat yesterday_{TOP}?’
 (76) Mirenek Joni zer eman dio?
 Miren.ERG Jon.DAT what.ABS give AUX
 ‘What did Miren_{TOP} give to Jon_{TOP}?’
 (77) Joni gereziak nork eman dizkio?
 Jon.DAT cherries.ABS who.ERG give AUX
 ‘Who gave cherries_{TOP} to Jon_{TOP}?’

In sum, the properties of topicalization are such that it gives rise to ambiguous structures in two respects: (i) it allows WH-questions in which the basic clausal word order is reestablished, and (ii) it makes it possible to parse constructions involving WH-movement + topicalization as WH-in-situ + topicalization.

QUANTIFYING THE AMBIGUITY. So far in this section we have argued that the grammar of Basque and, in particular, the grammar of Labourdin Basque have a series of properties that make certain WH-structures surface-ambiguous in such a way that they

can be parsed either with a WH-movement grammar or with a WH-in-situ grammar. We now want to quantify in more precise terms the ambiguity in the PLD available to children acquiring Basque.

There is, unfortunately, no corpus of PLD for Labourdin Basque that we can use for this estimation. For this reason here we use the only Basque corpus that is currently available for research, namely, the ‘Luque Basque corpus’ (in the CHILDES database). The Luque Basque corpus is composed of informal and spontaneous (nonelicited) conversations (26,833 utterances in total) between teachers and caretakers and thirty-eight children aged two to four. All of the children are bilingual speakers of a southwestern variety of Basque and Spanish. The relevant PLD represented in the Luque corpus should not vary significantly from the PLD available to Labourdin children, since the standard WH-movement construction is usually the sole strategy for interrogatives in all dialects of Basque (we partially requalify this statement when discussing unergatives below).

Regarding WH-questions, we can find in the PLD in the Luque corpus a variety of sentences that unambiguously cue for WH-movement grammars, alongside other types of sentences that are surface-ambiguous—in the terms defined in the preceding sections—and, hence, can equally well be parsed using a grammar with either WH-movement or WH-in-situ. Examples 78–80 give a sample of the type of unambiguous WH-questions that we find in the conversation in transcript [lax4pinmatxo.cha].¹⁷

- (78) Nork egin dau puzzlea?
 who.ERG do AUX puzzle.ABS
 ‘Who made the puzzle?’
- (79) A ver, zelan abesten dau igelak?
 to see how sing AUX frog.ERG
 ‘Let’s see, how does the frog sing?’
- (80) Zein da zure izena?
 which is your name
 ‘What is your name?’

None of the structures in 78, 79, or 80 can be parsed with a WH-in-situ grammar. For instance, the inversion of the basic DO-V word order in the question in 78 constitutes a signature of the T-to-C movement that follows WH-movement. Likewise, the postverbal position of the subject in 79 and the intermediate position of the verb in the copular 80 can only be generated positing a WH-movement grammar.

Along with these unambiguous structures, however, there is also a range of structurally ambiguous strings, such as those in 81–83.

- (81) Hau norena da?
 this whose be
 ‘Whose is this?’
- (82) Eta koroa non dago?
 and crown.ABS where be
 ‘And where is the crown?’
- (83) Burua aterata nork deko?
 head stick.out who.ERG have
 ‘Who has the head stuck out?’

¹⁷ WH-questions were extracted from the corpus with the help of a Perl script targeting the morphophonological shape of Basque WH-words.

The ambiguity in these constructions derives from the properties discussed above. Question 81 is structurally ambiguous because the word order in the question corresponds to that of a statement. It could thus be generated either by leaving everything in situ, or by WH-movement followed by movement of the verb and topicalization of the demonstrative *hau* ‘this’. The analysis of 82 would go along the same lines: since the word order is the very same one that appears in statements, it is structurally ambiguous.

Question 83 is also structurally ambiguous, even if it does not have S-O-V word order. It can only be generated via the topicalization of the small clause *burua aterata* ‘the head out’. But once we analyze the position of the small clause as deriving from topicalization, the rest of the clause can be generated either by a WH-movement grammar or by a WH-in-situ grammar.

We examined the WH-questions present in the entire Luque corpus, distinguishing structurally ambiguous constructions from nonambiguous ones.¹⁸ Their distribution is represented in Figure 1 ($N = 4,007$).

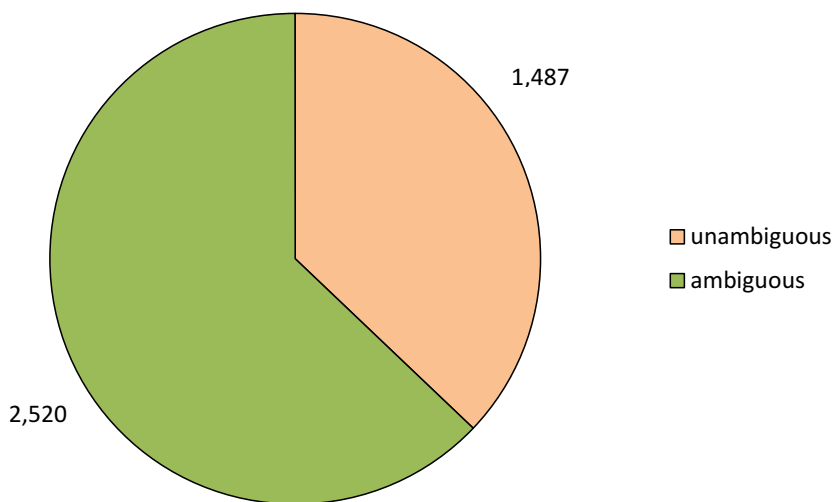


FIGURE 1. Primary linguistic data of WH-questions in Basque (southwestern variety).

For a total number of 4,007 utterances with a WH-question, only 37.1% of them are unambiguous (1,487 WH-questions), while the vast majority are structurally ambiguous (2,520 questions, i.e. 62.9% of the relevant PLD). Simple statistical tests such as Pearson’s chi-square clearly attest the statistical significance of the difference in distribution.¹⁹

Table 1 below summarizes the distribution of ambiguous vs. unambiguous WH-phrases in the Luque Basque corpus. Ambiguous items form the majority in each sort of WH-phrase (the only exception being the set of multiple WH-constructions, in which there is just one item).²⁰

It is important to recall, at this point, that the data collected in the Luque corpus is from Southern Basque speakers, and not from Labourdin Basque speakers. We saw

¹⁸ For our analysis of the PLD, we only took into account the productions of adult speakers.

¹⁹ Pearson’s chi-square $p < 2.2\text{e-}16$. The analysis was conducted using R (R Development Core Team 2008).

²⁰ The difference in distribution is also significant across the different syntactic constructions.

	AMBIGUOUS	UNAMBIGUOUS
subject	232	165
direct object	893	546
indirect object	31	6
adjunct	998	556
attribute	366	213
multiple-WH	0	1
TOTAL	2,520	1,487

TABLE 1. Distribution of structural ambiguity across different types of WH-questions.

above that in the latter dialect the behavior of [N + *egin*] unergative verbs in WH-constructions is such that it tends to give rise to a linear order identical to the order that would result from a WH-in-situ grammar. Consequently, the expected proportion of ambiguous WH-constructions in this dialect would be even higher than the 62.9% we found in the Luque corpus.

All in all, the picture that emerges is one where a representative majority of the PLD that children are hearing and parsing is structurally ambiguous and can be generated equally well with a WH-movement or WH-in-situ grammar.

This fact alone does not suffice to explain the emergence of the new strategy, however, since we would otherwise expect it to have emerged in all dialects and earlier, given that those ambiguities, *mutatis mutandis*, are equally available to all speakers across generations. Hence, here is where the second factor plays a decisive role.

3.2. THE CHANGE IN THE SOCIOLINGUISTIC PROFILE OF LABOURDIN BASQUE SPEAKERS. The second factor that we consider to have played a decisive role in the emergence of the WH-in-situ strategy is the change in the sociolinguistic profile of Labourdin Basque speakers.

Basque is classified by UNESCO as being a ‘severely endangered language’ in Northern Basque Country, the Basque-speaking French territory where Labourdin Basque is spoken (Moseley 2010).²¹ Since French is the only official language, Basque has no legal recognition. This absence of a legal status, together with other factors, results in Basque being largely excluded from the public domain and relegated to domestic use.

According to Eusko Jaurlaritza 2013, slightly more than a fifth of the population speaks Basque in Northern Basque Country (21.4% are classified as ‘bilinguals’, whereas 9.1% are ‘passive bilinguals’, the remaining 69.5% being French monolinguals).²² This same study further shows a clear pattern of language loss: 64.5% of Basque speakers are older than fifty years.

In fact, whereas in the older generations (sixty-five years and older) 30.6% are bilingual, this percentage drops dramatically in younger generations (17.6% of the sixteen- to twenty-four-year-old group and 13.9% of the twenty-five- to thirty-four-year-old group).²³

²¹ Considering the whole Basque-speaking territory, UNESCO classifies Basque as a ‘vulnerable’ language (see Moseley 2010).

²² Eusko Jaurlaritza 2013 is a study diagnosing the sociolinguistic situation of the Basque Country. The data presented here are based on data collected in Northern Basque Country (239,000 inhabitants in total) between June and December 2011 (2,000 interviews). The data from Eusko Jaurlaritza & Nafarroako Gobernua 1997 cited below are based on 1,400 interviews.

²³ It should be noted that, as of 2011 (Eusko Jaurlaritza 2013), there are no Basque monolinguals anymore, though there were still some in 1996 (Eusko Jaurlaritza & Nafarroako Gobernua 1997).

We can also observe a change in the sociolinguistic profile of Basque speakers across generations in terms of language acquisition. Figure 2 shows the distribution of the population according to their L1 and age.²⁴

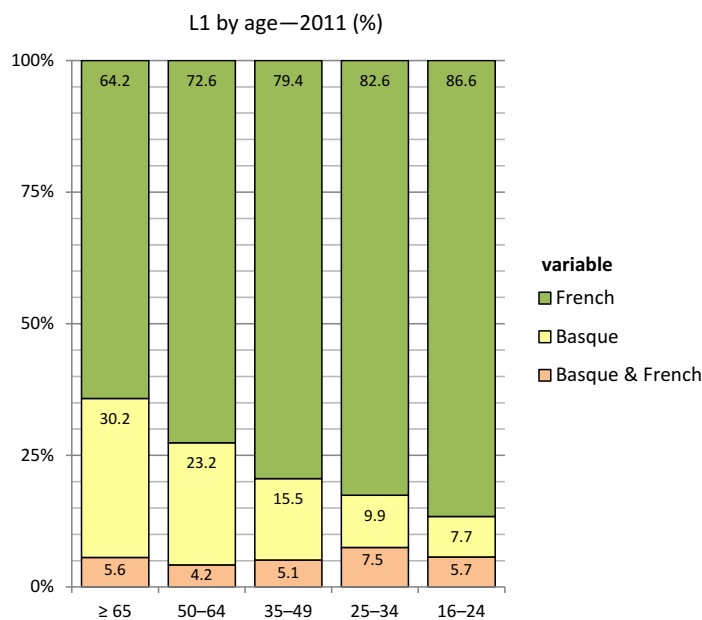


FIGURE 2. L1 by age, Northern Basque country (2011).

Basque as the only L1 decreases with younger generations, and 2L1 situations become almost as common as Basque L1 situations. This gives a picture of the growing presence and hegemony of French in the Northern Basque Country both because Basque is not being learned by/transmitted to the younger generations, and because when it is transmitted, it is increasingly being learned along with French.

Now, if we focus on the Basque-speaking population, we can observe that together with a quantitative loss, there is also a qualitative loss of the Basque language. Consider Figure 3, which shows the distribution of the different age segments of Basque speakers in function of whether they have a dominance of Basque, equal dominance of Basque and French, or dominance of French (based on self-report data; Eusko Jaurlaritza 2013).

In the older generation, almost three quarters of Basque speakers have a high command of Basque (with either equal dominance of both languages or dominance of Basque). But this proportion drops generation after generation, and among the younger Basque speakers, almost one in two reports having a better command of French than Basque. Furthermore, it is crucially the profile of Basque speakers with a dominance of Basque that drops; the proportion of speakers that have an even command of both languages is more stable.

The change in the typology of Basque speakers interestingly relates to two observations about the distribution of the younger Basque speakers with respect to their L1. First, as we saw in Fig. 2, the youngest generations are mostly growing up in 2L1 situations, in contrast to their parents and grandparents. And furthermore, as stressed by Eusko Jaurlaritza 2013, what is also new with the younger generations of bilinguals is that an important proportion has learned Basque as a second language. Actually, 38.5%

²⁴ All of the graphs in this section are adapted from the data in Eusko Jaurlaritza 2013.

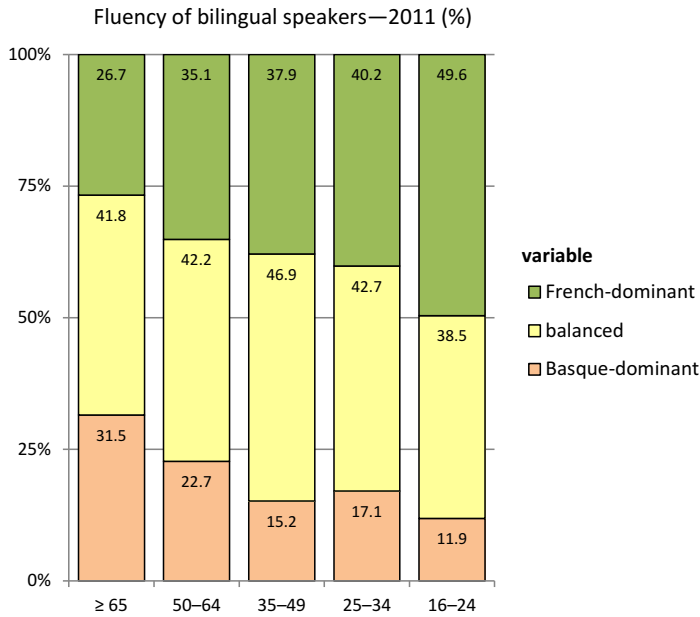


FIGURE 3. Typology of Basque speakers (2011).

of the sixteen- to twenty-four-year-old bilingual speakers have French as their only L1, while a characteristic feature of Basque speakers in the older generations is that they are mainly L1 Basque speakers (only 2.6% of the bilinguals over sixty-five learned Basque as a second language).

The picture that emerges from this overview of the sociolinguistic profile of YLB speakers is one where French is very prominent.

- Basque is clearly a minority language, both in terms of the number of speakers and in terms of its legal status.
- A very small proportion of the youth masters Basque.
- The change in the typology of bilinguals shows the growing space that is occupied by French. In general, young Basque speakers tend to be French-dominant bilinguals.
- Young bilinguals that have Basque as an L1 often have French as an L1 too (i.e. they are 2L1 speakers) and are led to interact with many bilinguals that have Basque as an L2.

In sum, if we focus on the learners that are the catalysts of the change in WH-patterns, what we observe is a particularly marked diglossic situation and a change in the sociolinguistic profile of the learners of Basque. In particular, they are a very small minority surrounded by monolingual French speakers, and they are also the generation for whom the dominance of French becomes clear quantitatively and qualitatively, since among other things almost half of them do not master Basque as well as they master French.

We think that this situation has played an important role in the emergence of the WH-in-situ construction among the young speakers of Labourdin Basque. More precisely, our idea is that, combined with the fact that, as we saw above, an important proportion of the WH-constructions in Basque is structurally ambiguous, the new sociolinguistic profile of the learners of Basque has made a change in the grammar of Basque possible, making it an optional WH-in-situ language, just like French.

Next we discuss conceptual questions about language change that the emergence of an optional WH-in-situ grammar in Labourdin Basque raises.

4. THE NATURE OF THE CHANGE. We have argued that in our case study, the catalysts for the change are grammatical and sociolinguistic in nature. What we have to clarify now is how this fits within the model of syntactic diachrony developed in generative studies.

In generative studies, it is generally assumed that language acquisition and language change constitute a dynamic process (e.g. Andersen 1973, Lightfoot 1979, Yang 2002), as represented in Figure 4.

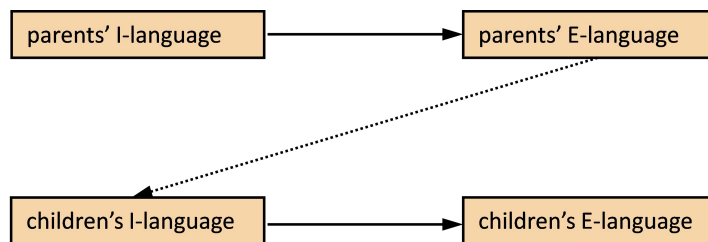


FIGURE 4. Dynamics of language acquisition and language change.

The idea is that children (i.e. the language acquirers) do not have direct access to the grammar/I-language of their parents, but an indirect one, through the E-language that they parse. This E-language will include some signatures or triggers that will guide the children in the choice of the correct target I-language.

For instance, Yang (2002) analyzes the setting of some parameters, such as the high position of the verb in French (as compared to English). The generally accepted analysis is that, even if both languages are S-V-O, in French the verb is fronted to T, whereas in English it remains in situ (see e.g. Pollock 1989), a feature that French-learning children will have to discover during the acquisition process. Yang (2002) argues that the unambiguous signature that will guide French learners toward the correct setting of this parameter is the PLD in which verbs surface over negation or adverbs. From an analysis of the PLD available in the CHILDES database, he shows that 7% of the sentences heard by children display this feature—an amount of data prominent enough to trigger an early setting of this parameter value.

Another case that Yang (2002) studies is the EPP in English (the requirement to overtly fill the subject position). He argues that the signature that will unambiguously force the learner to posit a grammar without null subjects is the introduction of expletive subjects. In Yang's analysis of the appearance rate, it can be seen that only 1.2% of the sentences heard by English-learning children display overt expletives. This is a low amount of evidence, which for Yang explains the late acquisition of this feature (around 3;0, as attested in Valian 1991).

Returning to our case study, the central question we have to answer concerns the motivation for the change: why do Labourdin Basque learners posit an optional WH-in-situ I-language when parsing an E-language generated with a WH-movement grammar? We have argued that a wide range of the WH-questions that are available to children in their PLD are structurally ambiguous. The idea, therefore, is that the significant amount of ambiguous PLD is what has led children to posit a WH-in-situ syntax for interrogative constructions.

Yet the number of unambiguous signatures is much larger than, for example, what is sufficient for setting the EPP in English. According to Yang (2002), even 1.2% of unambiguous PLD suffices to correctly identify the target grammar. In Labourdin Basque, as we saw, the amount of unambiguous data can be estimated to be much higher. So, this quantity of unambiguous triggers should suffice to identify the target grammar (i.e. the WH-movement grammar of the older generations) in a short time and, thus, should block the choice of an optional WH-in-situ grammar.

We can therefore ask this question: why did the children acquiring Labourdin Basque not adhere to the SUBSET PRINCIPLE and converge on a grammar with a single WH-question strategy? The answer that we would like to propose to this puzzle builds upon the results of our discussion in §3.2: that is, that the children acquiring Labourdin Basque, the children catalyzing the change, are fully competent in French, a language that has both WH-in-situ and WH-movement strategies. Thus, when positing an optional WH-in-situ grammar in Basque, they are using a feature that is available to them in their other L1, French (cf. the ‘full transfer/full access model’ of L2 learning; Schwartz & Sprouse 1996).²⁵ Paradis and Genesee (1996:3), for example, suggest that ‘[t]ransfer is most likely to occur if the child has reached a more advanced level of syntactic complexity in one language than the other. Such a discrepancy could occur either because it is typical in the monolingual acquisition of the two languages, or because the child is more dominant in one of his or her languages’, and as we saw, the latter is the situation of half of the Basque-French bilinguals.

Note also that it has been emphasized that transfer may occur when ‘two different grammatical hypotheses are compatible with the same surface string’ (Müller 1998:153), which is precisely one of the properties of the case under study here (see §3.1).

Furthermore, it is important to emphasize that the grammar of YLB is an optional WH-in-situ grammar. That is, we are not facing a radical parametric change, but a type of broadening of the strategies for WH-questions. Therefore, we should not expect all of the PLD available to the children to be possibly parsed with a WH-in-situ grammar. In fact, a very similar situation holds in French; some of the PLD unambiguously trigger a WH-in-situ grammar, whereas the rest require WH-movement strategies. In the case of Basque, before the change happened, none of the PLD required a WH-in-situ strategy in order to be appropriately parsed. Nevertheless, children ended up parsing ambiguous data with a WH-in-situ strategy. The question then is: why did they posit two WH-question strategies when one was sufficient? We would like to suggest that there is a crucial factor allowing transfer of WH-in-situ: its computational economy.

In fact, there is some consensus on the idea that not moving is computationally simpler than moving and that children prefer economical derivations, avoiding movement when possible (Clark & Roberts 1993, Rizzi 1994, 2000, van Kampen 1997, Hulk & Zuckerman 2000, Zuckerman 2001). Roberts (1997:399) puts it in the following terms:

This kind of change is well attested, and if Clark & Roberts [1993] are right, can be understood in terms of the idea that the language-learning algorithm contains a simplicity metric which values the absence of overt movement, and therefore weak features on functional heads, more highly than overt movement, i.e. strong features of functional heads. Hence language acquirers will tend to assign representations without movement to parts of the input which involve movement in the adult grammar.

There is indeed evidence that WH-in-situ constructions are favored over movement constructions. Jakubowicz (2011) shows that children acquiring French (both typically

²⁵ Studies such as Yip & Matthews 2000 have similarly attested transfer of both object-drop and WH-in-situ from Cantonese into English in a situation of bilingualism.

developing children and children with specific language impairment (SLI)) attempt to avoid those syntactic patterns that involve a long-distance relation between the surface and thematic positions of the WH-phrase by resorting to in-situ constructions that can be target-deviant (see also Hamann 2006, Scheidnes & Tuller 2010). What is more, some studies have shown that English-speaking L2 learners of French show preference for in-situ WH-questions over movement-based WH-questions, even though the in-situ strategy is not available in their native language (e.g. Scheidnes & Tuller 2010). Likewise, some experimental studies such as van der Meulen 2004 have shown that Broca aphasics' comprehension of French WH-in-situ questions is better than that of WH-questions involving overt WH-movement. All of this, in our opinion, bears testimony to our hypothesis that WH-movement structures involve more complexity than WH-in-situ structures. Under this view, it is also unsurprising that when creolization takes place from a mixed input comprising a WH-movement language and a WH-in-situ language (e.g. Chinese-English or Marathi/Gujarati-Portuguese), the creole language almost always displays an in-situ strategy (see Kim et al. 2009 and especially Clements & Mahboob 2000).

In a nutshell, positing an in-situ strategy could be seen as an economy bias that children deploy when parsing their PLD. And this, we would like to claim, is at the core of the change that we are observing in Labourdin Basque, that is, from obligatory WH-movement to optional WH-in-situ.

To conclude this discussion, we want to point out certain typological facts related to the general analysis developed in this article. We said that the combination of massive pro-drop and basic S-O-V word order generates a vast surface ambiguity in interrogative constructions. If we add to this our hypothesis of a bias for not positing movement if not necessary, we can make some conjectures about language typology. In particular, we may expect an important number of languages with these two features to display WH-in-situ strategies. A quick overview of languages with these properties indeed leads us to the following typological generalization.

- (84) OV & PRO-DROP \rightarrow WH-IN-SITU: OV languages with massive pro-drop generally display WH-in-situ question strategies.²⁶

Unfortunately, the literature on object pro-drop is limited (but see notable exceptions such as Huang 2000 and Neeleman & Szendrői 2007), and we were not able to find many descriptions of languages displaying all three features. However, the vast majority of the languages with O-V order and pro-drop of subjects and objects that we have checked have WH-in-situ strategies. These are well-known languages such as Japanese, Korean, Chinese, Turkish, Hindi/Urdu, and Gujarati, as well as the lesser-known Telugu, Garo, Amharic, Neo-Aramaic, Assamese, Guugu Yimidhirr, Burmese, Pashto, and Tamil. The WH-question strategies of three other languages (Yidiny, Lezgian, and Malayalam) are still unclear.²⁷ Remarkably, we were able to find just one language that seems to clearly escape our generalization: Epena Pedee (a Choco language spoken in

²⁶ This generalization is more restrictive than previous proposals, such as Bach's, who claimed that 'Question Movement will never occur in languages that have the deep and surface order SOV' (1971:161). See also Greenberg's universal 12 (Greenberg 1963).

²⁷ In Yidiny, WH-phrases 'may occur anywhere, although initial position is the preferred one' (Dixon 2010:497). In Lezgian, WH-questions 'are formed by substituting an interrogative pronoun ... for the questioned constituent. The phrase containing the interrogative pronoun is usually in preverbal position, but it may also be in clause-initial position' (Haspelmath 1993:421). Likewise, even if the pattern of WH-questions in Malayalam has been traditionally taken to be WH-in-situ, recent proposals analyze it as involving some sort of WH-movement to a clause-internal focus position (see e.g. Jayaseelan 2004).

Colombia), which, even though it has object pro-drop and S-O-V order, does not display WH-in-situ and has to obligatorily front the WH-phrase (Harms 1994). We can thus conclude from this quick overview that the typological correlation between S-O-V order + pro-drop and WH-in-situ is very strong, and it therefore supports the analysis of the emergence of the WH-in-situ strategy in YLB that we propose in this article.

5. SUMMARY AND CONCLUSIONS. We have analyzed a new construction found in the speech of young speakers of Labourdin Basque, and we have provided a range of arguments showing that it is a WH-in-situ strategy. The central question that we have tackled then is the following: why do young Labourdin Basque speakers end up with a different grammar from their parents'? That is, why did this parametric change happen?

We have proposed that the appearance of this WH-in-situ strategy is due to the conjunction of three factors.

- the availability of largely ambiguous data in the PLD
- a change in the sociolinguistic profile of the speakers of Labourdin Basque
- a bias for postulating movementless operations

We have argued that most of the WH-questions that the children acquiring Labourdin Basque are parsing are structurally ambiguous; they can be interpreted equally well using a WH-movement grammar or a WH-in-situ grammar. Nonetheless, a very similar input was available to their parents, who converged on obligatory WH-movement grammars. Here, the crucial difference triggering the change is a sociolinguistic one. We have claimed that emergence of the WH-in-situ strategy is mediated by the full access that the learners have to the grammar of French (a language with both WH-in-situ and WH-movement strategies). When positing the availability of in-situ strategies in Basque, language learners would also be adhering to an economy bias leading to postulating movementless derivations when possible. This bias is what would be guiding Labourdin Basque learners to posit an optional WH-in-situ grammar when their parents were positing an obligatory WH-movement grammar.

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