Earliness Conditions on EPP-satisfaction: a view from Basque micro-comparative syntax
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0. Intro

The Agree mechanism, as defined by Chomsky (2000), together with the proposal that Merge applies freely (i.e. “it does not operate in order to create a configuration that allows interface-illegitimate features to be checked” – Epstein, Kitahara and Seely, 2014; Chomsky, 2004, 2007, 2008) dispenses with the idea that feature valuing is related in any systematic way with Internal Merge (unlike Chomsky 1995). The Labeling Algorithm (Chomsky 2013), whereby movement is motivated by the need to resolve ambiguous (symmetric) configurations for labeling (an interface requirement), only underlines the lack of connection between the licensing of features and Internal Merge.

The Labeling Algorithm has interesting consequences for classical English EPP (Chomsky, 2013; Epstein, Kitahara and Seely, 2014), in the sense that it provides a motivation for the displacement of the External Argument that does not depend on T. The traditional version of the EPP is a condition that involves T: T requires an overt specifier. This forces us to add some particular attracting feature to T (the EPP feature):

(1) \[[TP \text{ DP} T^* \ldots (DP) \ldots]\]

Under the LA, the underlying motivation for the raising of the External Argument is the symmetric structure that Merging the External Argument to vP produces:

(2) \[[XP \text{ EA} [vP \ldots IA \ldots]]\]

The EA must move so that the ambiguous configuration in (2) for Minimal Search is dissolved. The target of this movement is TP:

(3) \[[TP (EA) T [XP (EA) [vP \ldots IA \ldots]]]\]

Internal Merge of EA to TP makes the lower copy invisible for Minimal Search, and therefore XP is labeled as v. EA is freezed in T as both T and EA share a feature. It is this shared feature that labels the structure (say phi-features). Under LA, “Spec-Head agreement” is revived as a means to label the structure and freeze the moved XP in-situ. The labeling issue only arises with Internal Merge to TP, not before. It is compatible with the idea that the phi-features in T have been valued before raising (in fact, this may be required). T is not interested in “attracting” anything, for labeling purposes or for valuing its features. This motivates a view of the EPP as a derivative concept, one that is related to finding a matching feature between the moved EA and whatever projection it Merge to. Not without problems, see Epstein, Kitahara and Seely (2014; f.13):

(4) a. There is \[[SC \text{ a man in the room}]] (SC should not have a label)
b. There is \[[XP \text{ a man X [SC \_ in the room}]] (hypothesis: short movement)
c. \[*_ is [XP \text{ a man X [SC \_ in the room}]]* (but then why?)

F-related approaches to EPP

Chomsky (2015) suggests that not all features may be able to label a structure, and that merging a DP or an expletive to TP may be a way to label the structure (Weak T in English, unlike in Romance languages. If so, this is a retreat to more traditional analysis of the EPP (now under the Labeling Theory). EPP effects (Labeling-motivated operations in LT) are part of the Computational System.

(5) F-related EPP (part of CS)

To the extent that the EPP is part of the CS, it may have an effect at the CI interface too (Rosengren, 2002). This view can also be extended to analogous EPP effects in V2-languages (Roussou and Roberts’ analysis in terms of Tense dependency, 2001).

PF-motivated approaches to EPP

In some languages, such as Icelandic and Faroese (Holmberg, 2000), clauses that lack an overt grammatical subject must have either an expletive or something else in Spec of T. There is no categorial restriction in the kind of thing that can occur there (Holmberg, 2000:446).

(6) a. Dat hefur verid tekin erfid ákvördun
b. Tekin hefur verid _ erfid ákvördun

Holmberg (2000:447): “I will argue that the nominal features associated with Finite T should be held apart from the requirement that Spec,TP be overtly filled. In terms of feature theory, two features are involved: one, a feature attracting (features of) a nominal category to I (uD), and the other, a feature that requires filling Spec, IP [with phonological content, i.e. EPP].” Icelandic and Faroese value uD by Verb Movement to I (V having D-morphology). The EPP is satisfied by any term having a
The idea that the EPP could be a phonological requirement has been advanced in English in the context of repair phenomena under ellipsis (Chung, Ladusaw and McCloskey, 1995; Merchant, 2001; van Craenenbroeck and Den Dikken, 2006). Extraction from subjects is impossible in English, but it becomes possible under sluicing (van Craenenbroeck and Den Dikken: 654):

(7)  a. *Which Marx brother, is [a biography of _ ] going to be published this year?
    b. A biography of one of the Marx brothers is going to be published this year. Guess which (Marx brother).

On the assumption that the Subject Condition applies to derived subjects and that there is no ban on extraction from the subject when it is in its base position (which Max brother was there a good biography of?), the contrast seems to suggest that the subject does not raise in the elision case. One can draw the conclusion that raising to subject is only obligatory if the landmark position (Finite T) is phonologically realized, and therefore that the movement is phonologically motivated (see also Landau, 2007; Sigurdsson, 2010; Salzmann et al. 2013; McFadden and Sundaresan, 2018). But see Lasnik and Park (2003) for arguments against the idea that the subjects are in their base position in (8a,b), and a different account of the repair. In general, building up an argument in favour of the PF-status of the EPP is difficult in ellipsis, because elision has the property of also repairing island-violations.

In the context of Icelandic Stylistic Fronting (SF), which Holmberg takes to be motivated by PF-considerations, there is nevertheless a certain ordering in the things that may occupy the preverbal position in SF: prominent above all the possible candidates is the subject (Holmberg, 2000:462; 2015), which has both nominal and phonological features, and blocks any other movement:

(8)  a. ad hann var fyrstur ad skora mark
    that he was first to score goal
    “…that he was the first to score a goal”
    b. *ad hann fyrstur var _ ad skora mark

Then, there is a hierarchy reminiscent of Minimal Search conditions (Maling, 1980):

(9)  Subject->negation/adverbs-> adjective (predicates) > verb/particle

In Holmberg’s system, the phonological matrix of syntactic terms is visible within the computational system. It may also be the Goal of syntactic probing (copy of the phonological matrix of a Goal raises). This is an extremely powerful option. It is also not clear how the notion of “closest” here compares to what “closest” means for PF computations (adjacency). Also, not clear why a phonological condition should involve the Specifier of a projection (Internal Merge). In all approaches to the EPP I am familiar with, the EPP is defined relative to a head or to the Outer edge of a phrase. The conditions on EPP satisfaction end up being articulated in such a way (EPP as “a feature of F”) that they invest PF with syntactic properties and the CS with PF-ones.

The point of the talk

I will present evidence for complete separation of PF-conditions and syntactic conditions in Basque EPP-repair situations. The kind of configuration that we will be focusing on can be represented as (9), where the gap must be filled with some overt element.

(10)  *[XP _ X…]

The logic we find in SF-type phenomena is the following: imagine that a term Y (say a subject) cannot be fronted to the Spec of XP. Since the requirement that that position be filled is a PF-requirement, any other element that has a phonological matrix will be able to satisfy (10). A way of interpreting this is that X includes an “EPP-feature”. This feature attracts a PF-matrix and it is “omnivorous”. Under this view, if Spec of X is not filled, the derivation crashes at PF.

What we will see in Basque is the following. Imagine that Spec of XP in (10) cannot be filled in a given derivation. In Basque, the derivation will not crash, and it will not attract any other phonological matrix to XP. It will go on by recruiting (merging) a higher category that attracts a term to its outer edge. The EPP will be satisfied there. We could say that the higher category “inherits” the (unrepaired) EPP condition.

(11)  *[VP _ Y [XP X…]]

If we can show that this is the case (without auxiliary processes like head-movement), then the EPP cannot be linked to X (it cannot be a feature of X). It must be an independent condition, one external to the computational system. We will see evidence that the Edge condition in (10) is sensitive to intonational boundaries. The hypothesis that I will explore is that the relation between (10) and (11) must be understood in terms of economy conditions governing the alignment of prosodic and syntactic edges.
Alignment cannot occur without a phonologically realized edge. Prosodic phrasing is sensitive to the presence of XPs in “Specifier positions” because they fix the left boundary of a prosodic constituent. Consider a natural syntactic domain (a Phase) in (12). The fact that the sequence of Fs in (b) are hierarchically arranged entails that there is an optimal move, namely satisfying (10) at the very first F in the hierarchy:

1. Analytic and synthetic verbal forms in Basque

1.1. Analytic forms

Basque verbal predicates typically have an analytic look, as shown in (14a,b). The lexical verb projects into an aspectual category (perfective, imperfective or prospective). Tense and Agreement markers occur in the finite auxiliary. The nature of the auxiliary depends on the type of lexical verb we have: transitive and unergative verbal predicates require the auxiliary *edun “have”. Unaccusatives ones require izan “be”.

1.2. Synthetic forms

1.2.1. V-to-T

A small set of Basque lexical verbs, called “synthetic verbs”, can still directly inflect for Tense and agreement:

For Haddican (2005), auxiliaries are functional restructuring verbs. Arregi and Nevins (2012) claim that they correspond to the direct lexicalization of C-T.

Background notions: Basque finite forms

Basque auxiliaries can be defined by the following descriptive properties:

a. They follow the Aspectual Phrase in analytic structures
b. They carry Tense/Mood and Agreement affixes
c. Their form (cf. be/have) depends on the transitivity of the lexical verb (simplifying)

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(17)  
  a. Jon etorrí da  
       Jon.ABS come.PARTC is  
       “Jon has come”  
  
  b. Jon ba-da-tor  
       Jon.ABS AFF-1s.ABS.PRESENT.ROOT  
       “Jon is coming”  

V-to-T is possible if aspect is not (morphologically) realized (Laka, 1990; Bjorkman, 2011; Berro, 2015). The configuration reminds Morphological Merger configurations (Embick and Noyer, 2001).

1.2.3. The class of synthetic verbs

Synthetic verbs possess a lexical root, but they constitute a closed class. In present-day Basque truly only a dozen or so verbs can be inflected (Berro, 2015). What I will try to show is that auxiliaries can belong in this class in Eastern varieties.

The starting issue


(18)  
  a. Etorri da  
       Come.PARTC is  
       “He/she has come”  
  
  b. Ez da etorri  
       NEG is come.PARTC  
       “He/she has not come”  

The asymmetry in (18a,b) must be put in relation to another prominent restriction in Basque: finite forms cannot occur first in the sentence (*First restriction).

(18)  
  a. _ dator  
       he/she comes  
  
  b. Xabier dator  
       Xabier.ABS comes  
       “Xabier is coming”  

c. Ez/Ba-dator  
       NEG/AFF-comes  
       “He/she doesn’t come”  

“First” in this case, is not a strictly linear notion (a topic in (19)):

(19)  
*Liburu, dakar  
book.he/she brings.it  

“The book, he/she is bringing it”

The Head Movement approach

The traditional head movement approach, developed by Ortiz de Urbina (1989) and Laka (1990), took the Auxiliary to be generated to the right of the vP. The presence of Negation forced T to adjoin to it (The Tense c-command condition):

(20)  
PolP  
Neg+T  
TP  
Asp  
vP  
(Asp)  
(V-v)  
(V-v)-Asp  
etorrí

That the Polarity Head is higher than IP in Basque is shown by the fact that polarity particles, such as negation and affirmation, survive IP-ellipsis (Laka, 1990):

(21)  
Xabier joan da baina Mikel ez (joan-da)  
Xabier leave.PARTC is but Mikel NEG  

“Xabier left but Mikel didn’t (leave)”

Problems (see recently Elordieta and Haddican, 2018). An obvious one is the
position of material (evidential and question particles) in between Neg and Aux:

(22) Ez omen da etorri
    NEG EVID AUX come.PARTC

“He/she didn’t reportedly come”

Sequences such as (22) can only be constructed via head-movement if the evidential is generated low, somewhere between the Aux and the Aspectual Phrase, and head movement constructs a complex head negation-evidential-aux:

(23) [[[AspP] EVID] AUX]
    -> head movement

But elision can target IP leaving the evidential untouched:

(24) A: Xabier etorri al da?
    Xabier come.PARTC Q is

“Did Xabier come?”

B: Bai/ez omen (etorri da)
    AFF/NEG EVID come is

“He reportedly did”

Predicate fronting approach

In a series of works, Haddican (2001, 2004, 2008) argued that negation is generated below INFL but higher than VP in Basque (also Ortiz de Urbina, 1994). From that position, it raises to a higher polarity phrase and rescues the auxiliary from first position (25a). This results in the canonical order for sentential negation (25b).

(25) a. [PoliP Pol0 [IP Aux [PoliP Neg Pol0 [VP ... V0]]]] \(\rightarrow\) Raising of Neg to PolP1
    b. [PoliP Neg Pol0 [IP Aux [PoliP (Neg) Pol0 [VP ... V0]]]]
    c. Ez da etorri
        NEG AUX come
        “He/she did not come”

According to Haddican (2004), when the polarity phrase in the vicinity of the AspP is not headed by overt negation, but occupied by a silent positive polarity head, it is the whole polarity phrase which raises to the higher polarity phrase, carrying the AspP behind (predicate fronting):

(26) a. [PoliP Pol0 [IP Aux [PoliP Neg Pol0 [VP ... V0]]]] \(\rightarrow\) Raising of the inner PolP
    b. [PoliP [PoliP Pol0 [VP ... etorri]] Pol0 [IP Aux...]]
    c. Etorri da
        come AUX “He/she has come”

IP-Ellipsis

We showed that polarity particles survive IP-ellipsis, suggesting Pol is higher than IP. Given Haddican’s analysis, we predict that AspP should also survive IP ellipsis, as it is fronted to the outer edge of PolP. This should only happen when no overt polarity particle is present (in ordinary affirmatives). The prediction is borne out, as shown in (27a), with the structural representation in (27b):

(27) a. Ni joan naiz eta zu etorri
    I left AUX and you come
    “I left and you came”
    b. eta [TopP zu Top0 [PoliP1 [PoliP2 etorri]] [IP ... AUX]]

Nothing like that can be constructed with negation in the second term of the coordination:

(28) *Ni joan naiz eta ez etorri
    I left AUX and you NEG come
    “I left and you didn’t come”

Light verb predicate fronting

There is also overt evidence that the fronted predicate is actually a phrasal projection. Martinez (2015) presents rich evidence from noun+verb light verb constructions in Basque of sequences in which verbal phrase immediately follows the focus, as in (29):

(29) a. Nork parte hartu du horretan?
    Who.ERG part taken AUX there.in
    “Who participated in that?”
This is relevant because nothing can intervene in Basque between the focus of the sentence and the Aspectual phrase. This is known as Altube’s law (1923):

(30)  

\[ \begin{align*}
  a. & \text{Nork/JONEK liburua erosi du} \\
  & \text{wh-word/Jon book.the bought has} \\
  & \text{“Who bought the book/JON bought the book”} \\
  b. & \text{(Liburua) JONEK erosi du (liburua)} \\
  & \text{book.the JON.ERG bought has book.the} \\
  & \text{“JON bought the book”} \\
  c. & \text{*FOCUS XP ASPP}
\end{align*} \]

This means that the bare noun in (29) must be internal to the fronted predicate, and therefore that the fronted element is complex (phrasal).

Sequences such as (29a) have always posed a problem for the idea that what precedes the auxiliary in Basque is a head. The usual account in the head movement approach for those sequences capitalizes on the notion of incorporation (Fernandez, 1997). But the two parts are separable in virtually all cases. Compare (29) with (31):

(31)  

\[ \begin{align*}
  a. & \text{Nork hartu du parte horretan?} \\
  & \text{Who.ERG taken has part this.in} \\
  & \text{“Who participated in this?”} \\
  b. & \text{*HORRETAZ bakarrik gogoetarik egin al duzu?} \\
  & \text{That.about only reflection.  Q AUX} \\
  & \text{“Did you reflect only on THAT?” (gogoeta egin “think.do”)}
\end{align*} \]

As you see the noun gogoeta is headed by a partitive determiner -rik, licensed by yes/no questions. See Haddican (2004, 2008), Etxepare and Uribe-Etxebarria (2009, 2012), and Elordieta and Haddican (2018) for arguments in favour of a predicate fronting analysis (reminiscent of *pseudo-incorporation, as in Massam, 2000).
The AspP and Negation in (35) determine the minimal expansion of a Finite clause. Finite structures smaller than that are not possible. For instance, evidentials come before the Finite verb in Basque, and they are accented, but they don’t rescue Fin from first position:

(36)  *Omén dator  
EVID comes  
“He/she reportedly is coming”

Descriptive generalization:

(37)  No Basque finite sentence without a functional projection (Pol) that precedes Evidentials and Fin, and which must be filled, alternatively by Negation or the Aspectual Phrase.

I will also assume the following left periphery for Basque:

(38)  a. [FocP Foc\(^d\) [PolP Pol\(^\theta\) [EvidP Evid\(^\theta\) [TP... ]]]]  
       b. Nork ez ote du liburu hori erosi  
who.ERG NEG PTC AUX book that bought  
“Who didn’t possibly buy that book?”

The form of the argument

Haddican’s analysis follows a canonical Agree-plus-Move treatment of the relation between the higher and the lower Polarity projections: the Goal ends up being attracted to the Specifier of the head that contains the Probe, in virtue of the fact that they share the feature Polarity. The analysis assumes a two-part operation illustrated in (39) (note that movement cannot be triggered by LA, Chomsky 2013):

(39)  a. Agree: \[X_{vf...}[Y...[ZP...Z_{f...}]]\]  
       b. Move: \[[ZP...Z_{f...}]\] \[X_{vf...}Y...t_{f...}...\] \[\underline{\text{Agree}}\]  
       \[\underline{\text{Move}}\]

We can define the two relations as involving feature valuation on the one hand, and a ban on phonologically empty Specs on the other:

(40)  a. Feature Valuation  
\[\text{XP} [\text{Fw}\alpha]...\text{Goal}...\]  
\[\underline{\text{Agree}}\]  
( Agree)  
b. No empty “Spec”:
\[\sigma[x_{vf}\alpha]\]  
(Move)

Failing to comply with any of those two requirements results in a crashed derivation in the analysis proposed.

I will show, on the basis of microcomparative evidence, that the two parts of (40a,b) are not directly related: they are motivated by different components of the architecture of the grammar. Agree is part of the Computational System. The second requirement is external to the CS.

How are we going to show this? Imagine that we slightly modify (39) in such a way that Agree between the higher Pol head and the lower one remains possible, but Move is not anymore. The prediction is that in an Agree+Move approach, the derivation should crash. The Basque dialectal system allows for just such a small modification. As shown by Etxepare (in press), in Eastern varieties of Basque, the finite auxiliary can be independently combined with an independent root, which combines with T at PF by Morphological Merger (no overt material can stand between T and the root), and selects the Aspectual Phrase. In central dialects, on the other hand, the auxiliaries can only correspond to the lexicalization of purely functional material (T/Agr, as argued for by Ortiz de Urbina, 1986; Elordieta, 1997; Rezac, 2011, and Haddican, 2005; or T/C, as in Arregi and Nevins, 2012). (40a,b) illustrate the relevant structures:

(41)  a. [PolP Pol\(^\theta\) [TP T [PolP (ez) Pol\(^\theta\) [Aupp...etorri...]]]]  
       Central and Eastern  
b. [PolP Pol\(^\theta\) [TP T v\leftrightarrow root\text{Affix} [PolP Pol [Aupp...etorri...]]]]  
       Eastern

The insertion of this verbal root has consequences for the cyclic derivation of the sentence: the lower AspP Phrase goes to Spell Out upon insertion of the root (see Boskovic, 2014) and cannot be accessed by the higher Polarity Head. The higher verbal phrase is unable to satisfy the edge condition of the PolP, as the root is a bound form that must obligatorily merge with T (a so-called synthetic verb in the Basque grammatical tradition, see De Rijk, 2008).

(42)  [PolP * Pol\(^\theta\) [TP T v\leftrightarrow root\text{Affix} [Aupp...etorri...]]]  
\[\rightarrow\text{Spell Out}\]
What happens in such a case? The expected outcome, from a view in which displacement to the outer edge is part of the syntactic derivation, is that the derivation will crash, as the root configuration is one that fails to comply with the ban on empty Specs. I will show that the derivation nevertheless does not crash: it recruits a higher head, Focus, and attracts a focus operator to its outer edge. That is, in Eastern dialects, unlike in Central ones, something like (43) is possible:

(43) a. JONEK du liburu ea eroi
Jon.ERG has book.the bought
“It is JON who bought the book”

b. [FocP JONEK Foc [PPol Pol [TP du [vP v root [AdjP…erosi…]]]]]

In other words, the edge condition is independent of the particular functional projection in which it applies.

The dialectal divide: Eastern auxiliaries

2. The auxiliary as main predicate

One well-known difference between central/western and eastern auxiliaries concerns their use as the main predicate of the sentence: the auxiliary izan “be” in Eastern dialects is used in the same contexts as the synthetic verb egon “to be in a location” (cf. Spanish estar) in Central ones; and the auxiliary edun “have” in the same contexts in which central dialects use the synthetic verb eduki “to own, to contain”.

(C=Central dialects; W=Western dialects; E=Eastern dialects):

Locatives

(44) a. Jon hor dago
Jon.ABS there is.LOC

“Jon is there”

(C/W/E)

b. Jon hor da
Jon.ABS there is

“Jon is there”

(E)

Temporary states

(45) a. Jon nekaturik dago
Jon.ABS tired.ABL is.LOC

“Jon is tired”

(C/W/E)

b. Jon nekaturik da
Jon.ABS tired.ABL is

“Jon is tired”

(E)

Existentials

(46) a. Etxe hartan bi logela zeuden
House that.LOC two bedroom.ABS were

“There were two bedrooms in that room”

(C/W/E)

b. Etxe hartan baziren bi logela
House that.LOC AFF.AUX two bedroom.ABS

“There were two bedrooms in that house”

(E)

Possessives

(47) a. Gizon batek bi seme zeuzkan
man one.ERG two son.ABS owned

“A man had two sons”

(C/W/E)

b. Gizon batek bazituen bi seme
man one.ERG AFF.AUX two son.ABS

“Jon has a car”

Conclusion:

(48) Eastern auxiliaries be and have may be used as main predicates in those contexts in which central and western varieties use synthetic verbs (locative be and possessive own).
3. Rescuing the finite form: Auxiliaries and synthetic verbs

3.1. Central and Western varieties

Synthetic verbs and Auxiliaries do not display the same *Fin1 restrictions in C/W:

**Auxiliaries**

(49) a. Etorri da come PARTC AUX
   “He/she/it came”
   
   b. Ez da etorri NEG AUX come PARTC
   “He/she didn’t come”
   
   c. *JON da etorri *FOC AUX come PARTC
   “JON came”

**Synthetic verbs**

(50) a. Ez dator NEG comes
   “He/she/it is not coming”
   
   b. JON dator come PARTC AUX
   “JON is coming”

(51) **Fin-first restrictions in Central/Western Basque**

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<th>Focus</th>
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<td>SYNTHETIC</td>
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3.2. Eastern varieties

Turning now to Eastern auxiliaries, we observe that unlike central ones, they can be licensed by focus (Duguine and Irurtzun, 2008), as synthetic verbs (50b):

(52) a. XABIER da jin Xabier.ABS AUX come.PARTC
   “It is Xabier who came”
   
   b. XABIER dator Xabier comes
   “XABIER is coming”

They also accept the rescuing configurations typical of auxiliaries in Central and Western varieties:

(53) a. Ez da etorri NEG AUX come.PARTC
   “She/he did not come”
   
   b. Etorri da come.PARTC AUX
   “She/he came”

Eastern auxiliaries show synthetic verb behavior in terms of positional restrictions and rescuing configurations.

(54) **Fin-first restrictions in Eastern Basque**

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4. Inner Left Peripheries

A variable complement domain is one of the signature syntactic properties of lexical restructuring (see Wurmbrandt, 2004, i.e). The presence of inner left peripheries is another one. Haddican 2001, 2004, 2005, 2008; Etxepare and Uribe-Etxebarria, 2009 (the left periphery of Basque):

(55) a. JON ez omen da etorri Jon.ABS NEG EVID AUX(3SA) come.PARTC
   “It is JON who reportedly did not come”
   
   b. [FocP Foc0 [PolP Pol0 [Evid0 Evid0 [TP ...]]]]

Eastern varieties present “inner” left peripheries. This only arises in the synthetic configuration.
Negation

Negation can occur in a position following the auxiliary in Eastern varieties. This negation has not scope over the focus, but it does have scope over the event. (54B) is a possible answer to (54A).

(56) A: NORK du deus ere ez egin?
    Who-ERG AUX anything-ABS NEG do-PARTC
    “Who didn’t do anything?”

B: JONEK du deus ere ez egin
    Jon-ERG AUX anything-ABS NEG do-PARTC
    “It is Jon who didn’t do anything”

This negation is not constituent negation, since it licenses negative polarity items to its left (Etxepare and Uribe-Etxebarria, 2009), as does ordinary sentential negation (Laka, 1990). One plausible way of thinking of this is as Neg occupying the left edge of the aspectual complement, an inner polarity head:


The fact that this negation can be combined with the higher one suggests we have two «left peripheries»:

(58) A: NORK ez du deus ere ez egin?
    Who-ERG NEG AUX anything-ABS NEG do-PARTC
    “Who is the guy who failed not to do anything?”

B: JONEK ez du deus ere ez egin
    Jon-ERG NEG AUX anything-ABS NEG do-PARTC
    “JON is the guy who failed not to do anything”

Focus

The periphery of the participial phrase also hosts focus. Importantly, this focus can be combined with a higher one (from Dirassar, 2013:145):

(59) a. …ala HURA zen BERA jin ene ondotik?
    Or him.ABS was himself.ABS come.PARTC my after.ABL
    “Or was it he himself who came after me?”

b. …[FocP hura Foc [Aux zen [FocP bera Foc [InflP ha t1 jin ene ondotik]]]]

Evidentials

A hearsay evidential like omen can only occur in the position immediately preceding the Aux in central dialects, but it may show up in the periphery of the aspectual verb in eastern ones (Ettepare and Uria, 2016):

(60) Langonen zen omen bizi Hipokraten alaba bakarra
    Langon-INSS AUX(PAST-3SP) EVID live Hipocrates’ daughter single-D
    “It was in Langon where Hipocrates’ single daughter reportedly lived”

Occasionally, evidential doubling can be found (from the atlas Basyque, informant from Senpere, Labourd, translation of French Il n’a rien avoué, paraît-il):

(61) Ez omen du omen deusik erran
    NEG EVID AUX(3S-3SA) EVID anything-PART say-PARTC
    “He didn’t reportedly say anything, reportedly”

We can therefore conclude that the aspectual clauses have a full left periphery, identical in structure to the one of main clauses:


The periphrastic structure is to some degree biclausal. The auxiliary, like synthetic verbs, possesses a lexical root, inserted outside the aspectual domain. Lexical verbs can take complements of different syntactic complexity. This may include a set of discourse-related projections.

(63) …[BE/HAVE [FocP Foc [PolP Pol [EvideP Evid [AspP …]]]]]

5. Eastern auxiliaries as (optionally) synthetic verbs

(64) Auxiliaries in Eastern dialects may

(i) be used in same contexts as lexical be (locative) and own of Central dialects

(ii) show the same positional restrictions as synthetic verbs (which possess a lexical root), and

(iii) give rise to a double set of “left peripheral hierarchies”
Finite forms with and without roots

Two possible takes:

Hypothesis 1: “Unselective *Fin1“ in Eastern varieties, as with synthetic verbs” (Laka, 1990)

(65)  \[ \text{XP Pol/Foc}^0 [T/Agr [ v [ VP]]] \]

Hypothesis 2: ambiguous status of BE/HAVE

(66)  a. \[ \text{[du T/Agr [ v [ VP]]]} \] (Central/Western and Eastern)

b. \[ \text{[T/Agr [v root [ v [ VP]]]} \] (Only Eastern)

6. Rescuing conditions and restructuring

Evidence in favour of Hypothesis 2 is provided by the interaction between restructuring and the corresponding rescuing configurations.

6.1. Restructuring aspectual configurations: the progressive

One clear instance of optional restructuring in eastern dialects comes from progressive constructions. Progressive constructions are typically bi-absolutive in all dialects, and they are headed by a verbal form \textit{ari}, which can independently take aspectual endings. \textit{Ari} selects a nominalized clause headed by a locative postposition -\textit{n} (central coincidence, Hale, 1986; Demirdache and Uribe-Etxebarria, 2000), that I will gloss as ASP:

(67)  a. Xabier \[ \text{[ _liburuak erosten] ari da} \] (C)

\text{Xabier.ABS books.ABS buy.NOM.NESS PROG-HAB AUX(3P.SA)}

“Xabier is usually buying books”

b. Xabier \[ \text{[ _liburuak erosten] ari-tu da} \] (E)

\text{Xabier.ABS books.ABS buy.NOM.ASP PROG-PARTC AUX(3P.SA)}

“Xabier has been buying books”

The verb \textit{ari} also has non-finite forms, as well as stem forms which combine with the subjunctive. It behaves as an ordinary verb in Basque. The structures in (66a,b) have been traditionally analysed as control structures, and have a clear biclausal status (Hualde and Ortiz de Urbina, 1987; Laka, 2006).

Eastern varieties, however, have developed an alternative configuration with \textit{ari}, illustrated in (67). Compare (67a,b), from Lafitte (1944):

(69)  a. Xabier \text{ura/uraren karriatzen ari da}

\text{Xabier.ABS water.ABS/water.GEN carry-NOM.ASP PROG AUX(3P.SA)}

“Xabier is carrying water”

b. Xabierrek \text{ura/uraren karriatzen ari du}

\text{Xabierrek.ERG water.ABS/water.GEN carry-NOM.ASP PROG AUX(3PSE-3PSA)}

“Xabier has been carrying water”

This alternative configuration has the following properties:

(i) it shows auxiliary switch under the embedded lexical verb;

(ii) it shows the case alignment which corresponds to the embedded verb;

(iii) the auxiliary agrees in number and person with the embedded object and the main subject;

This configuration is impossible under any overt aspectual marking on the progressive particle, as illustrated below:

(70)  a. *Xabierrek \text{ura karriatzen ariten du}

\text{Xabierrek.ERG water.ABS carry-NOM.ASP PROG-HAB AUX(3PSE-3PSA)}

“Xabier is usually carrying water”
b. *Xabierrek ura karriatzen aritu du
   Xabier-ERG water-ABS carry-NOM.ASP PROG-PARTC AUX(3SP.E.3SPA)
   “Xabier is usually carrying water”

In all those cases, the progressive particle does not define a separate clausal domain, and it behaves as a functional head. This correlates with case alignment: the case marking of the arguments is dependent on the lower lexical verb. We can structurally translate the contrast between (69a,b) in the following way. In (69a), *ari is merged as a verb in the clausal spine, within reach of both participial and gerundive aspectual heads (from Cinque, 2004:133):

(71) …FHabitual…FProgressive…FCompletive…[VP arit [PostP …VP…]]

In (69b), *ari is merged directly in the progressive aspectual head, and behaves as a functional head. In that case, you have a monoclausal structure.

(72) …[ari FProgressive…[VP …VP…]]

6.2. Rescuing configurations

If *ari in (69b) is a functional head merged outside the VP and the finite form is structurally higher, then the auxiliary must in this case be directly merged in a functional projection too. The expectation is therefore that it should behave as an auxiliary in the kind of rescuing configuration it allows. This prediction is borne out, as shown in the contrast below (73-74):

Non-restructuring configuration

(73) a. Nor *ari da ura karre?zten?
    Who-ABS PROG AUX(3SA) water.ABS carry.NOM.ASP
    “Who is carrying water?”

   b. Nor da ura karre?zten ari?
    Who-ABS AUX(3SA) water.ABS carry.NOM.ASP PROG
    “Who is carrying water?”

Restructuring configuration

(74) a. Nork karre?zten ari du ura?
    Who-ERG carry-NOM.ASP PROG AUX(3SA-3SE) water.ABS
    “Who is carrying water?”

This follows from the combined effects of two things: (i) the eastern semi-lexical auxiliary is necessarily inserted below the progressive; and (ii), the intervening presence of the aspectual head prevents the affix to incorporate to T (Morphological Merger or HM).

(75) [TP T…[ProgP Prog…[AspP BE/HAVE [AspP AspP…]]]

6.3. Conditions on synthetic auxiliaries

If FMODAL, FHABITUAL, FPROGRESSIVE, are occupied by overt lexical material the rescuing pattern associated to synthetic verbs becomes impossible.

(76) The synthetic copula is only available in Eastern dialects in the absence of overt intervening grammatical/outer Aspect

But this is precisely the occurrence condition for synthetic verbs.

The highest position that can be occupied by the purported synthetic auxiliary in eastern dialects is right above the basic aspecual phrase (imperfective or perfective). Nothing can intervene between it and T.

(77) F tense (*FModal) (*Fhabitual) (*Fprogressive) F BE/HAVE [Perf/Imperf …VP…]

The synthetic copula must have a lexical root.

7. Other blocking configurations

Double auxiliation, modal constructions, among others (Etxepare, in progress).

8. Interim Summary

(78) *Auxiliaries in Eastern dialects may optionally

(i) be used in same contexts as lexical be (locative) and own of Central dialects
(ii) show the same positional restrictions as synthetic verbs (which possess
a lexical root), and

(iii) give rise to a double set of “left peripheral hierarchies”

And in those cases

(iv) they can be shown to be merged in a relatively low position in the clausal structure (below progressive, habitual and modal heads), at the edge of the aspectual phrase.

(v) they show locality effects vis-à-vis T/Agr, of the HMC/MMerger sort

Hypothesis 2: ambiguous status of BE/HAVE, repeated here:

(79) a. …\[ du T/Agr [ v [ VP]]\] (Central, Western and Eastern)
     b. …\[ T/Agr [ v root [ v [ VP]]]\] (Only Eastern)

9. Ellipsis (Suicing)

The ambiguity in the status of the auxiliary may help to account for another intriguing asymmetry between Eastern and Central/Western varieties of Basque: those varieties differ in terms of the domain targeted by ellipsis in both negative and positive sentences. In Eastern varieties (but not in Western/Central varieties), ellipsis can target the complement of the Polarity head, or the complement of the focus head, as shown by the free alternation between (80) and (81). It invariably targets the complement of Polarity in central dialects.

(80) a. Jon etorri da, eta \[TopP Miren Top [ FocP ere [PolP ba Pol [TP]]]\]
      Jon.ABS come is and Miren.ABS also yes

      ‘Jon has come and Miren has too.’ (Central/Western/Eastern)

b. Jon etorri da, eta \[TopP Miren Top [ FocP ere Foc [**hai** Pol]]\]
      Jon.ABS come Aux and Miren.ABS also

      ‘Jon has come and Miren has too.’ (Only Eastern)

(81) A: Nor etorri da? Who.ABS come.PARTC is

   “Who came?”

   B: a. \[FocP Nehor [PolP ez [TP Pol]]\] (Eastern/Central/Western)
      anyone NEG

      “Noone”

   b. \[FocP Nehor Foc [PolP ez (Pol)][TP Pol]] (Eastern only)
      anyone NEG

   « Noone »

Taking into account that Basque is a strict Negative Concord language (overt negation is always necessary to license NPIs), it is natural to interpret this cross-dialectal difference in terms of the ambiguous status of the auxiliary. The Phase Edge is the focus in one case (when the auxiliary is the synthetic one, with elision targeting the Polarity Phrase), and the IP in the other case.

Why roots?

10. Contextual Determination of Phases

Boskovic (2014):

“The highest phrase in the extended projection of all lexical categories functions as a phase”

Let us take a synthetic auxiliary phrase with an inner left periphery:

(82) \[PolP * Pol [TP T root [FocP Foc [PolP Pol [Evid [AspP …]]]]]\]

Boskovic’s system implies that access to the contentful lexicon is going to trigger Spell Out (of the complement of the previous phase head). The highest phrase in the complement of the root (or the root-plus-T) is FocP. Upon insertion of the root (about this, see Borger 2005a,b, for a pre-Labeling Theory approach, and De Belder and Craenenbroeck 2015; Roberts, 2019, for a post-LT treatment), the complement domain of the Phase head goes to Spell Out. In this case, since the inner left periphery is maximally expanded, what goes to Spell Out is the inner Polarity Phrase. This phrase is not available anymore to satisfy the edge condition on the higher Pol. The expected outcome from a view in which displacement into the outer edge is part of the syntactic derivation, is that the derivation will crash. But it doesn’t: it recruits a higher functional projection, Focus, and attracts an overt phrase to its outer edge:
   b. XABIERREK du liburu erosi
      Xabier.ERG has.book.the bought
      “It is Xabier who bought the book”

Remember that this is only possible upon insertion of a root (the synthetic verb option). Not as a general rescuing strategy for all cases.

Another option is AspP focus, with the AspP raised to the inner focal position and then raising to the higher one. This yields the distinctive VP PTC Aux orders of Eastern dialects (from corpus, journal *Herria*):

(84) a. Hola denek *ikusi ere dute* erregina oraino pixkor dagoela
    Thus all.ERG see.PARTC too Aux queen.DET.ABS still alive is.COMP
    “Thus all have also seen that the queen is in good shape”
   b. Erabakia *hartu bederen dute* berriz mintzatza biltzeko
data.ERG decision take.PARTC at least AUX again speaKML-ALL meet.NML.PROSP
    “At least they have taken the decision to come together again to talk.”

(85) [FocP [FocP Etorri ere…] Foc [PolP TP da...(etorri ere)]]

11. Freezing effects in extraction

Duguine and Irurtzun (2008) note that extraction is impossible out of the edge position in root-auxiliary configurations:

(86) *Nor erran duzu [CP (nor) d-ela etorri]?*  
Who.ABS say.PARTC AUX(3S-2E) is-COMP come.PARTC
   “Who did you say has come?”

(86) contrasts on the one hand with the absence of freezing effects in extraction out of ordinary auxiliation constructions:

(87) Nor erran duzu [CP (nor) etorri d-ela]?  
Who.ABS say.PARTC AUX(3S-2E) come.PARTC is-COMP
   “Who did you say has come?”

On the other, with synthetic verb configurations (unexpected contrast):

(88) Nor erran duzu [CP (nor) da-tor-ela]?  
Who.ABS say.PARTC AUX(3S-2E) T.COME.COMP
   “Who did you say is coming?”

Let us propose the following (simplified) derivation for (88), with –ela (the declarative complementizer) the head of W:

(89) Starting point
   a. [IP da-tor [IP …(–tor…)]]
   Merge C/Pol (*-ela)
   b. [CP -ela [IP da-tor [IP …(–tor…)]]]
   EPP satisfaction via roll up (Kayne, 1994)
   c. [CP [IP dator…]-ela (IP)]
   Merge Foc to C/Pol
   c. [CP Foc [IP [IP dator…]-ela [IP da-tor [IP …(–tor…)]]] ->
   Merge Wh-word with FocP (extracting it from IP)
   d. [FocP wh-word C [CP [IP …dator…]-ela [IP …]]]
   Move Wh-word out of the clause
   e. …[CP (wh-word) C [CP [IP dator…]-ela [IP da-tor [IP …(–tor…)]]]]

Now let us try the same with the analytic counterpart of etorri “come”:

(90) Merge C/Pol (*-ela)
   a. [CP -ela [IP da+root [IP …(–tor…)]]]
   *Roll up Movement to WP (v-AspP structure, *FOFC)
   b. *[CP [IP da+root …[FocP wh-word [IP…etorri…]]], –ela
Alternative derivation: recruit a higher category to satisfy the EPP.

(91) Move I into C/Pol (cf. Ortiz de Urbina 1994, cf order in negative clauses)
   a. \([CP \ (da-root-ela) \ [IP \ da-root \ [\lambda_{asp} \ \ldots \ etorri\ldots]]]]\]

Merge Foc (recruit a higher category)
   b. \([\text{Foc} \_ \ Foc \ [CP \ (da-root-ela) \ [IP \ (da+root-ela) \ [\lambda_{asp} \ \ldots \ etorri\ldots]]]]\]

Merge Wh-word internally to Foc (satisfy the alignment condition)
   c. \([\text{Foc} \_ \ Wh-word \ Foc \ [CP \ (da-root-ela) \ [IP \ (da+root-ela) \ [\lambda_{asp} \ \ldots \ etorri\ldots]]]]\]

Now, extracting the wh-word violates the alignment condition
   d. \(*_{\text{[CP]}} \ (wh-word) \ Foc \ [CP \ (da-root-ela) \ [IP \ (da+root-ela) \ [\lambda_{asp} \ \ldots \ etorri\ldots]]]]\]

Ann (2007): Intonational Phrase Edge Generalization

(92) The Edge of an obligatorily parsed prosodic phrase cannot be phonetically empty

Cf.: PF approaches to that-trace effects (Kandybowicz, 2009; McFadden and Sundaresan, 2018, among others).

Conclusions and Open Issues

The different status of auxiliaries in Western and Central areas and Eastern areas has various ramifications in the basic syntax of the clause. The presence of a root in the case of Eastern auxiliaries allows us to give a unified explanation of:

(93) a. Main predicate status of HAVE/BE in Eastern varieties
   b. Rescuing configurations for *FinI similar to the ones in Synthetic verbs for Auxiliaries in Eastern varieties
   c. Inner left peripheries in Eastern dialects
   d. The relation between restructuring and the absence of synthetic verb properties in eastern Auxiliaries
   e. The larger scope of ellipsis in Eastern dialects
   f. AspP Focus particle Aux orders in Eastern varieties
   g. Freezing effects

The unified analysis of a-g capitalizes on the idea that the obligatory overt realization of the outer edge of a phrase (the EPP) is a PF-phenomenon. Satisfaction of EPP requirements has been shown to be parasitic on, but not directly dependent on any Functional Head. It is a movable requirement across the phase. One that favours an early alignment of prosodic and syntactic edges.

(94) a. \([\text{Domain of Assertion} \ \ldots \ [\text{FP} \ XP_{pf} \ F_1 \ldots \ [IP] \]]\]
    (Optimal)
   b. \([\text{Domain of Assertion} \ \ldots \ [\text{FP}_2 \ XP_{pf} \ F_2 \ [FP_1 \ F_1 \ldots \ [IP] \]]\]
    (Suboptimal)

(95b) is possible, but only when forced (when (95a) is not possible for independent reasons).

(13) Align as soon as possible Prosodic and Syntactic Edges (Earliness Condition)

Given (a,b)
   a. \([\text{Intonational Phrase} \ \ldots \ [\text{IP}] \]]\]
   b. \([\text{Domain of Assertion} \ F_n \ldots \ F_1 \ [\ldots]]\]

Optimal alignment:
   c. \([\text{Domain of Assertion} \ F_n \ldots \ [XP \ F_1 \ldots \ [IP] \]]\]
   d. \([\text{Domain of Assertion} \ F_n \ldots \ [\text{XP} \ F_1 \ldots \ [\text{IP} \ [\text{PhWord} \ XP] \ldots]]\]

Suboptimal alignment:
   e. \([\text{Domain of Assertion} \ F_n \ldots \ [\text{FP} \ XP \ F_n \ldots \ [\text{FP}_1 \ F_1 \ldots \ [\ldots]]\]
   f. \([\text{Domain of Assertion} \ F_n \ldots \ [\text{XP} \ F_n \ldots \ [\text{IP} \ [\text{PhWord} \ XP] \ldots]]\]

That establishing a left boundary is relevant in the analysis is supported by the fact that preverbal topics in Basque, which have an independent intonational contour, are irrelevant in rescuing configurations:

(96) *Liburuak, daramazkit
    books.the I.bring.them.now

“"The books, I am bringing them with me”"
subcase of referential DPs (proper names).
- What view of the construction of prosodic domains (see recently Richards, 2017, for Agree as an operation that establishes prosodic domains, in its contiguity theory framework (2016).
- The relation between classical EPP and this (closer to stylistic fronting). What happens if the prosodic activity is at the right and not the left? The phonological conditions (right edge) and the syntactic ones at the left periphery are disjoint. Prosodic movement outside vPs (Zubizarreta, 1998).

Some References

1. Sources

Basic Basque Syntactic Atlas of North Eastern Varieties (Basyque)

2. Some theoretical references


Review 21, 87-124.


