

# The Interpretation of Imperfective Aspect in Basque and Its Implications for Our Traditional Classification of Verbs

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## Abstract\*

*This paper addresses a paradox in the interpretation of verbal aspect in Basque. In Indo-European, imperfective and progressive forms coexist with overlapping interpretations. In French and Spanish, for example, both forms are used to express the progressive (Comrie 1976, Giorgi and Pianesi 1997). In contrast, the equivalent forms in Basque compete for interpretation. If available, simple imperfective forms block the progressive interpretation of compound imperfective forms, which then read unambiguously as habitual. This reading distribution supports habitual as an independent feature (Chierchia 1995, Cinque 1999). In addition, simple forms replace the progressive form. The two losing forms contain the verbal suffix -t(z)en, considered an imperfective aspect marker (Ortiz de Urbina 1989, Laka 1990). I propose that -t(z)en lacks semantic content and that the blocking effect derives from competition for affix insertion. My proposal accounts for the syntactic and morphosemantic idiosyncrasies of the data set, which had not received a principled explanation to date. The conclusions of this analysis make it unnecessary to treat verbs with simple forms as a separate class, unlike the tradition in descriptive grammars of Basque.*

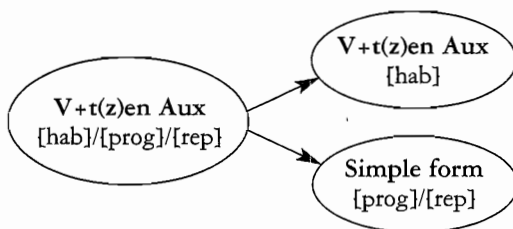
## 1. Introduction

My paper examines an unexpected phenomenon of semantic competition in Basque, a language isolate spoken on both sides of the Pyrenees (Comrie 1981, Dixon 1994, Primus 1999). In this language, a verb inflected with the suffix *-t(z)en* can be interpreted as progressive or habitual. Thus, Ortiz de Urbina (1989) and Laka

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(1990), among many, assume that this suffix is an imperfective aspect marker because it syncretizes both interpretations (Comrie 1976). As a footnote to the former assumption, it is noted that if a simple form is part of the paradigm, then  $V+t(z)en$  Aux (see figure 1) cannot be interpreted as progressive. Incidentally, the reportive reading—normally associated with imperfective forms (Giorgi and Pianesi 1997)—is also lost. I coin the term *imperfective paradox* here to refer to the paradigm schematically shown in Figure 1.

(1) Figure 1. The imperfective paradox: a split in the interpretation of the verbal suffix  $-t(z)en$ .



The data is puzzling. In languages that have a set of imperfective and progressive forms (where the imperfective form can also be interpreted as progressive), the aspectual interpretation of each form is independent of one another (Giorgi and Pianesi 1997). For instance, in the Indo-European languages that surround Basque, French and Spanish, the progressive form does not prevent the progressive interpretation of the imperfective form.

The split interpretations are a product of simple forms and only a handful of verbs have them. The Basque grammatical tradition refers to these as the *trinko* class (see Zubiri 2000 and references therein). The predicates in the *trinko* class have been segregated from the ordinary class with good reason. Grammarians point out morphological differences, for only the verbs in the *trinko* class may have finite forms, as well as semantic differences, namely, the imperfective paradox. In this paper I conclude that the only difference between the two classes is syntactic, and that such difference is arbitrarily associated with the *trinko* class for phonological reasons.

For the reader's convenience I will consistently refer to the verbs that may have simple forms as '*trinko* verbs' or the '*trinko* class' as a naming convention. The *trinko* class could be defined morphologically by having simple forms. Ordinary verbs—not including the *trinko* class—lack simple forms (ex. 3). In fact, all tenses in Basque involve a participial form and a conjugated auxiliary. *Trinko* verbs have mostly compound forms (ex. 4a), but some aspectual values require simple forms (ex. 4b).

(2) Table 1. Verb classes in Basque divided by form and some of their interpretations.

Verb class	Compound	Readings	Simple	Readings
Ordinary	$V+t(z)en$ Aux	[hab] [prog] [rep]	————	————
<i>Trinko</i>	$V+t(z)en$ Aux	[hab]	$V+Asp+T$	[prog] [rep]

- (3) Ni-k borobil-ak marraz-ten ditut  
 I-Erg circle-Abs.Pl draw-Def<sup>1</sup> have.1Sg.3Pl  
 'I draw circles/I am drawing circles'
- (4) a. Ni-k liburu-ak erama-ten ditut  
 I-Erg book-Abs.Pl carry-Def have.1Sg.3Pl  
 'I carry books/\*I am carrying books'
- b. Ni-k liburu-ak daramatzat  
 I-Erg book-Abs.Pl carry.1Sg.3Pl  
 'I am carrying books'

The predicates with simple forms do not constitute a natural class from a semantic perspective. Concerning aktionsart, by way of example, the four categories of inner aspect are represented (Vendler 1967, see Verkuyl 1989 for an equivalent compositional approach). We find states (e.g. *izan* 'be', *etzan* 'lie/rest'), activities (e.g. *ibili* 'move/walk', *esan* 'say'), achievements (e.g. *liburua ikusi* 'see the book', *abotsa entzun* 'hear the voice'), and accomplishments (e.g. *euritakoa ekarri* 'bring an umbrella', *Madrilera etorri* 'come to Madrid').

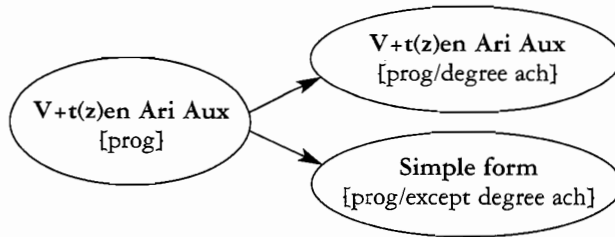
The ordinary class does not participate in the split interpretations. It is noteworthy that Basque has two periphrastic constructions that convey the progressive and habitual independently (ex. 5). These forms do not prevent an ordinary verb from expressing the progressive —as simple forms do— or habitual.

- (5) a. Ni borobil-ak marraz-ten ari naiz (*ari* requires abs subjects and *be*)  
 I.Abs circle-Abs.Pl draw-Def Prog be.1Sg  
 'I am drawing circles'
- b. Ni-k borobil-ak marraz-tu ohi ditut (*ohi* requires perfective aspect)  
 I-Erg circle-Abs.Pl draw-Per Hab have.1Sg.3Pl  
 'I draw circles/I have been drawing circles'

Conversely, the interpretation of *-t(z)en* in the *trinko* class affects the *ari* construction. As noted above, simple forms block the progressive interpretation of *-t(z)en*. The *ari* construction builds on an event inflected with this morpheme, which then bears a progressive reading. Perhaps not surprisingly, this construction vanishes in the *trinko* class. The simple form alone expresses the progressive (ex. 7). *Ari* is used with degree achievements only (achievements with a subevent structure that expands over time; ex. 8 cfr Laka 1993b, modified). Degree achievements cannot resort to the simple form as a means to express the progressive (see Alcázar 2002a).

<sup>1</sup> The suffix *-t(z)en* cannot be glossed as an imperfective aspect marker. The reason being that the interpretation of *-t(z)en* is inconsistent (compare ex. 3 to ex. 4a). Instead, I will gloss *-t(z)en* as default aspect marker.

(6) Figure 2. A second split in the interpretation of *-t(z)en*: the *ari* construction.



- (7) a. Jon-ek liburu-a darama  
 Jon-Erg book-Abs.Sg carry.3Sg.3Sg  
 'John is carrying the book'
- b. \*Jon liburu-a erama-ten ari da  
 Jon.Abs book-Abs.Sg carry-Def Prog be.3Sg  
 'John is carrying the book'
- (8) a. Liburu honi kolore-a joa-ten ari zaio  
 Book this.to color-Abs.Sg go-Def Prog be.3Sg.3Sg(dative)  
 'This book is losing its color'
- b. Jende-a uholde-ka etor-tzen ari da  
 People-Abs.Sg flood-ly come-Def Prog be.3Sg.  
 'People are arriving in floods'

The interpretation of *-t(z)en* in (ex. 3-4, 7-8) raises a number of questions. Why do simple forms block the progressive interpretation of *V+t(z)en Aux* (figure 1)? Why is it the case that periphrastic forms that also express imperfective values do not cause a similar blocking effect (ex. 5)? What is the reason for the *ari* construction to be underrepresented in the *trinko* class (ex. 7b, 8)? Given this state of affairs, what is the meaning of the verbal suffix *-t(z)en*? Why is it allowed to alternate in interpretation (ex. 3 vs 4, 5a vs 7b)? There is also the related question of why simple forms are limited to the *trinko* class and further restricted to a set of imperfective values (table 1).

In this paper, I argue that *-t(z)en* is a default aspect marker, and that the split interpretations as shown in figures 1 and 2 are the result of competition for affix insertion. I assume that Basque has an imperfective morpheme that is morphologically conditioned to the *trinko* class and phonologically null (e.g. similarly to the past/past participle morpheme in *put, cut...*). This morpheme offers a simultaneous explanation for the distribution of the blocking effect and the changes in the interpretation of *-t(z)en* in compound and periphrastic forms of the *trinko* class. In addition, it motivates the formation of simple forms. The analysis then makes it unnecessary to divide Basque verbs into two distinct classes.

The structure of the paper is as follows. Section 2 offers a brief overview of imperfective aspect and the main reason why *-t(z)en* has been identified with this aspectual value. Details of aspectual interpretation concerning imperfective forms in Basque are

given in section 3. Section 4 is a summary and assessment of earlier proposals. An analysis where the alternating interpretation of *-t(z)en* does not result from competition for affix insertion is probed in Section 5, which elicits that such analysis is inadequate. Section 6 illustrates my analysis. The paper finishes with some concluding remarks.

## 2. Imperfective aspect and the verbal suffix *-t(z)en* in Basque

Imperfective verbal forms yield either habitual or progressive readings of events (Comrie 1976), with the possibility of expressing future-oriented readings and/or reportive readings in the present (Giorgi and Pianesi 1997). This verbal aspect is morphologically marked in some languages. For example, Italian has an imperfective past (ex. 9a) and a perfective past (ex. 9b).

- (9) a. Laura studi-av-a        nella biblioteca  
       Laura study-Imp-3Sg in.the library  
       ‘*Laura used to study in the library/Laura was studying in the library*’  
    b. Laura studi-ò        nella biblioteca  
       Laura study-3Sg.past in.the library  
       ‘*Laura studied in the library*’

Basque has distinct verbal suffixes that relate to perfective and imperfective interpretations in present (ex. 10) and past forms (ex. 11). Several morphologically conditioned morphemes indicate perfective aspect on the verb, namely *-tul-il-n*, (ex. 10a, 11a; see Ortiz de Urbina 1989). The only visible morpheme relating to imperfective aspect is *-t(z)en*, which is phonologically conditioned (see Hualde 1991). Yet this assumption needs reviewing given the interpretation of *-t(z)en* in compound and periphrastic forms of the *trinko* class (ex. 3, 7b).

- (10) a. Laura-k    liburutegi-an ikas-i    du  
       Laura-Erg library-in    study-Per<sup>2</sup>have.3Sg.3Sg  
       ‘*Laura has studied in the library*’  
    b. Laura-k    liburutegi-an ikas-ten<sup>3</sup> du  
       Laura-Erg library-in    study-Def have.3Sg.3Sg  
       ‘*Laura studies in the library/Laura is studying in the library*’

<sup>2</sup> The distribution of auxiliaries *be* and *have* in Basque resemble the auxiliary distribution in Italian described in Burzio (1986). Transitives (e.g. *give*) and unergatives (e.g. *phone*) select auxiliary *have*, while unaccusatives (e.g. *arrive*) and anticausatives/inchoatives (e.g. *break*) select *be* (see Laka 1993a, 1995; incidentally, see Alcázar 2003b for an analysis of Basque as a split-intransitive language in the typological sense). More generally, *be* is used with passives, *ari* and valence reduction (see Saltarelli 1988 and references therein).

<sup>3</sup> The suffix *-t(z)en* expresses the reportive reading in the present.

- (1) a. Bi-garren ezen-ean, Laura-k liburutegi-an ikas-ten du  
       Two-ordinal scene-in, Laura-Erg library-in    study-Def have.3Sg.3Sg  
       ‘*In the second scene, Laura studies in the library*’  
    b. \*Bi-garren ezen-ean, Laura-k liburutegi-an ikas-i du  
       Two-ordinal scene-in, Laura-Erg library-in    study-Per have.3Sg.3Sg  
       ‘*In the second scene, Laura studies in the library*’

- (11) a. Laura-k liburutegi-an ikas-i zuen  
 Laura-Erg library-in study-Per have.3Sg.3Sg.past  
 'Laura studied in the library'
- b. Laura-k liburutegi-an ikas-ten zuen  
 Laura-Erg library-in study-Def have.3Sg.3Sg.past  
 'Laura used to study in the library/Laura was studying in the library'

### 3. The blocking effect on the interpretation of *-t(z)en*

This section elaborates on the facts of aspectual interpretation and cross-linguistic predictions discussed in the introduction, elucidating the readings of simple forms and bringing about the uniqueness of the blocking effect observed in Basque.

As noted earlier, simple forms are limited to an arbitrary class of verbs, which exceptionally allows them. While this class has predicates that are frequently used, it has been in decay for the past four centuries. The prognosis is that the class will eventually become obsolete, with the possible exception of auxiliaries *be* and *have*. The aspectual value of the simple forms is imperfective (see Alcázar 2002a, 2003a). The following sentences (ex. 12) contain time modifiers that are compatible with imperfective aspect to better illustrate these aspectual values:

- (12) a. Laura **une** hon-etan liburutegi-ra doa ikas-te-ra  
 Laura.Abs moment this-in library-to go.3Sg study-Nom-to  
 'At this moment, Laura is going to the library to study'
- b. Ezena hor-retan, Laura liburutegi-ra doa ikas-te-ra  
 scene that-in, Laura.Abs library-to go.3Sg study-Nom-to  
 'In that scene, Laura goes to the library to study'
- c. Laura **bihar** liburutegi-ra doa ikas-te-ra  
 Laura.Abs tomorrow library-to go.3Sg study-Nom-to  
 'Laura goes to the library to study tomorrow'
- d. Laura **azken aldi hon-tan** liburutegi-ra doa ikas-te-ra  
 Laura.Abs last time this-in library-to go.3Sg study-Nom-to  
 'Laura goes to the library to study these days'

In this class, the suffix *-t(z)en* can no longer express the progressive or reportive. The sentences below (ex. 13) employ the same time modifiers as in (ex. 12) above (there is no need to exemplify the use of a future-oriented adverb with a verb inflected with *-t(z)en* because this suffix cannot express the futurate regardless of class). As a result, verbs inflected with *-t(z)en* are non-ambiguous in the sense that their aspectual interpretation is fixed to habitual.<sup>4</sup>

<sup>4</sup> A similar kind of blocking effect can be observed in the nominal domain in English: (*the*) nouns (e.g. *school, hospital, church...*). In this set of nouns, which varies according to the dialect of English, there is a split in interpretation as well. The use of the bare noun expresses that one goes to that edifice to partake of the purpose for which it was built. When the article is introduced, the intended meaning is that one goes to that edifice for some other purpose (ex. 2 below). This contrasts with the set of nouns that refer to edifices outside this class. These nouns require the article and are ambiguous between the two interpretations (ex. 1 below). Therefore, (*the*) nouns could be viewed as a parallel case

- (13) a. \*Laura une hon-etan liburutegi-ra joa-ten da ikas-te-ra  
 Laura.Abs time this-in library-to go-Def be.3Sg study-Nom-to  
 'At this moment, Laura is going to the library to study'
- b. Laura azken aldi hon-tan liburutegi-ra joa-ten da ikas-te-ra<sup>5</sup>  
 Laura.Abs last time this-in library-to go-Def be.3Sg study-Nom-to  
 'Laura goes to study to the library these days'
- c. \*Ezena horretan, Laura liburutegi-ra joa-ten da ikas-te-ra  
 Scene that-in, Laura.Abs library-to go-Def be.3Sg study-Nom-to  
 'In that scene, Laura goes to the library to study'

This phenomenon of semantic competition cannot be observed in other languages, where imperfective and progressive forms coexist with overlapping interpretations (e.g. see Giorgi and Pianesi 1997 for examples from Indo-European). In languages where imperfective forms are available (and the progressive is one of the possible readings), the presence of less ambiguous or plainly unambiguous forms does not upset the interpretation of the imperfective forms. For example, the simple present in peninsular Spanish is an imperfective form (ex. 14a) ambiguous between the progressive and habitual, among other possible readings. The progressive form can also express the progressive reading for the same verbs (ex. 14b).

- (14) a. Laura estudi-a en la biblioteca  
 Laura study-3Sg in the library  
 'Laura studies in the library/Laura is studying in the library'
- b. Laura est-á estudi-ando en la biblioteca  
 Laura be.3Sg study-ing in the library  
 'Laura is studying in the library'

In addition to imperfective forms, some languages express the habitual and the progressive independently. For example, Peninsular Spanish has a progressive form (ex. 14b above); the simple present in English expresses the habitual reading. Similarly, Basque has two independent forms that express the progressive and habitual unambiguously: *ari* (ex. 16) and *ohi* (ex. 17), respectively. As in Indo-European languages, the existence of these forms does not upset the progressive or the habitual interpretation of ordinary verbs in Basque (ex. 15).

- (15) Laura-k liburutegi-an ikas-ten du  
 Laura-Erg library-in study-Def have.3Sg.3Sg  
 'Laura studies in the library/Laura is studying in the library'

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to the *trinko* class. Like the simple form, the bare noun cancels one of the interpretations that the noun with the article has. Thanks to James Higginbotham for pointing this parallel.

(1) I go to the library to check out a journal/to pick up my kids

(2) I go to church to attend mass/I go to the church to pick up my kids

<sup>5</sup> The habitual reading in the *trinko* class is subject to restrictions. The compound form is the preferred choice to express habitual, but it is disallowed in generic contexts (middles excepted). The simple form is used in generic contexts and proverbs. It can also express some form of habituality with the aid of adverbials (as in ex. 12d above), but many of these are disallowed, especially those with universal quantification (explicitly, as in *egun-ero* 'every day (day-ly)', or implicitly as in *ostegun-etan* 'on Thursdays (Thursday-Loc.pl)'). In contrast, simple forms do well in when-clauses, widely assumed to involve universal quantification. This fact is all the more puzzling on the observation that the formation of when-clauses in Basque involves the locative suffix, albeit in the singular.

- (16) Laura liburutegi-an ikas-ten ari<sup>6</sup> da  
 Laura.Abs library-in study-Def Prog be.3Sg  
 'Laura is studying in the library'
- (17) Laura-k liburutegi-an ikas-i ohi du  
 Laura-Erg library-in study-Per Hab have.3Sg.3Sg  
 'Laura studies in the library'

#### 4. Earlier proposals

This paradox in the interpretation of imperfective aspect in Basque has been dealt with in the literature in passing, yet as shown in figure 1 only. I have observed two major trends. One trend assumes that the morpheme *-t(z)en* is an imperfective marker and regards the lost readings in the *trinko* class as a matter for further research (e.g. Ortiz de Urbina 1989, Laka 1990). A priori, this stance has the advantage that it has broad empirical coverage. On the other hand, one other prominent trend would assume that the surviving reading of *-t(z)en*, habitual, indicates the basic value of this morpheme (e.g. Arregi 2000). This assumption reverses the paradox as I have presented it in this paper. How readings are gained for verbs outside the *trinko* class is left uncharted. This stance has the seeming disadvantage that it has narrow empirical coverage.

In my understanding of this issue, the above assumptions do not serve as starting points to account for the phenomenon under scrutiny in figure 1 only, or comprehensively considering both figure 1 and 2. In the first place, either approach would depart without a clear idea of why the interpretation of *-t(z)en* varies according to verb class (ex. 3 vs 4, 5a vs 7b). Second, the absence of blocking effects from periphrastic *ari* and *obi* starts off not being part of the paradox, at least at the descriptive level. Third, following the same line of argument, the restriction of the *ari* construction to degree achievements in the *trinko* class is not considered either.

#### 5. Is there actual competition?

This section explores the possibility that the paradox in the interpretation of imperfective aspect might be a mirage, rather than the effect of competition in a component of the grammar. While this approach may provide a formal account of the data, it comes at a theoretical cost and it does not offer an insight into the phenomenon.

As a first step in building a theory, one has to assess whether the blocking effect that simple verbal forms have over compound and periphrastic forms is in actuality an instance of semantic competition. The answer to this depends on the characterization of the morpheme *-t(z)en* when it combines with predicates of the *trinko* class. Indeed, one could approach this paradox assuming that the suffix *-t(z)en* interpreted as imperfective and the suffix *-i(z)en* interpreted as habitual are not the same morpheme: they happen to share the same pronunciation. This assumption would take care of the changing interpretation of *-t(z)en* and the seemingly blocking effect (which in fact would not exist).

<sup>6</sup> Note that *ari* affects case morphology as well as verbal agreement (see Izagirre 2001). Here I focus on the aspectual value of *ari*. I mean to illustrate that the progressive and habitual can be expressed independently without giving rise to a blocking effect.



The assumption entertained here can be pursued in the framework of the Strong Lexicalist Hypothesis. This theory requires further commitment to a certain view of morphology where we need to assume a lexicon component that houses a fully inflected representation of words. For Basque morphology, this translates as four lexical entries for imperfective aspect for ordinary verbs (e.g. *jan* 'eat', ex. 18) and five for *trinko* verbs (e.g. *joan* 'go', ex. 19):

- |                                   |                                    |
|-----------------------------------|------------------------------------|
| (18) a. ja-ten 'eat[progressive]' | (19) a. doa 'go.3Sg [progressive]' |
| b. ja-ten 'eat[reportive]'        | b. doa 'go.3Sg [reportive]'        |
| c. ja-ten 'eat[habitual]'         | c. doa 'go.3Sg [futate]'           |
| d. ja-ten 'eat[generic]'          | d. doa 'go.3Sg [generic]'          |
|                                   | e. joa-ten 'go [habitual]'         |

From this perspective, *trinko* verbs inflected with *-t(z)en* cannot be interpreted as progressive, reportive or generic, for the reason that the corresponding forms, *-t(z)en* [progressive], *-t(z)en* [reportive] and *-t(z)en* [generic], do not exist in this special class. In addition, it follows from this analysis that the *ari* construction should not exist in the *trinko* class, as *-t(z)en* [progressive] is not available. However, the existence of the *ari* construction with degree achievements would motivate one additional morpheme: roughly, *-t(z)en* [*progressive for degree achievements only*]. This last morpheme would be accessible to both ordinary and *trinko* verbs.

As the reader may appreciate, the Strong Lexicalist Hypothesis succeeds in accounting for all the data, albeit in a fairly accidental fashion; namely, all meanings arbitrarily expressed by *-t(z)en* are available to ordinary verbs, but the *trinko* class has access to a subset of them only. This approach would also require some explanation about why simple forms are interpreted as imperfective. For instance, by virtue of a default interpretive mechanism (Arregi 2000): if a verb does not come specified for aspect, interpret it as imperfective (why not have this as an option for ordinary verbs too?). Or else assume that there is an imperfective morpheme that is phonologically null (Laka 1990). From the current approach, four of these would be required:  $\emptyset$  [progressive],  $\emptyset$  [reportive],  $\emptyset$  [futate],  $\emptyset$  [generic]. Finally, the motivation for verb movement to Tense in simple forms and its connection with imperfective readings is not brought about either.

The Weak Lexicalist Hypothesis, which does not include inflectional morphology in the lexicon, could also account for at least part of the Imperfective Paradox of Basque in a similar accidental fashion, but at the point of lexical insertion. Lexical insertion would prevent certain derivations from converging at PF by allowing only derivations for which a morphological form can be provided. For instance, we could assume that ordinary verbs are always compound because this class of verbs does not have a morpheme that can express both Aspect and Tense. In contrast, the *trinko* class would have a morpheme that can express both Aspect and Tense. How the Weak Lexicalist Hypothesis could account for the interpretation split in figure 2 would have to be worked out.

In the following section, which elaborates my proposal, I assume that there is a single *-t(z)en* morpheme, and thus understand that the blocking effect is an instance of semantic competition. I believe that the reading distribution can be better captured with the idea that interpretations for which no morpheme exists are expressed

by means of a default morpheme. I propose to derive the interpretation of the default and the blocking effect arising with simple forms as the outcome of choices in affix insertion. These two claims are sufficient to answer the various questions posed by the inconsistent interpretation of imperfective and progressive forms.

## 6. The blocking effect as a result of competition for affix insertion

### 6.1 On the absence of blocking effects in the ordinary class

The first part of this section proposes that  $-t(z)en$  has no meaning. Considering  $-t(z)en$  as a default for aspect fares equally well with  $-t(z)en$  as an imperfective morpheme as far as ordinary verbs are concerned. This move answers one of the questions raised in the introduction: why the independent progressive *ari* and habitual *obi* constructions in Basque do not cause blocking effects. I propose that their heads target a higher aspectual projection, instead of the position where  $-t(z)en$  is inserted. In addition, this section lays the ground for the analysis based on competition for insertion developed in section 6.2.

Granted that  $-t(z)en$  is a single morpheme, its inconsistent interpretation (figures 1 and 2) points out that this morpheme may not contain semantic information,<sup>7</sup> only information about its position in the syntax (e.g. aspectual suffix). Note that whether or not morphemes contain phonological information is a matter open for discussion, as it depends on the choice of theoretical framework. By way of example, in Distributed Morphology (Halle and Marantz 1993) morphemes split in two: *morphemes* and *vocabulary items*. Morphemes are bundles of syntactic and semantic features; vocabulary items contain the phonological representation and a subset of the syntactic and semantic features of their corresponding morpheme.

Let us contemplate the idea that  $-t(z)en$  has no semantic information (ex. 20).

- (20) Set of aspectual morphemes in Basque [to be extended]
- |                     |              |                             |
|---------------------|--------------|-----------------------------|
| $-tu$ , $-i$ , $-n$ | [perfective] | morphologically conditioned |
| $-t(z)en$           | [ ]          | phonologically conditioned  |

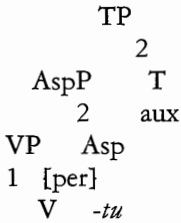
The insertion of  $-t(z)en$  takes place when there is no suitable morpheme to express a given aspectual value (i.e. non-perfective). I am open on how to handle the decision of morpheme insertion in technical terms, which is theory-dependent as well. We could match the features in the morpheme against an absolute set of abstract features expecting a one-to-one correspondence for a successful match (e.g. assuming the Strong/Weak Lexicalist Hypothesis) or match just a proper subset of the morpheme features, where even a relative match would succeed (e.g. assuming underspecification in Distributed Morphology, Halle and Marantz 1993).

Technical implementations notwithstanding, the prediction is that  $-t(z)en$  is a default expressing non-perfective aspectual values (ex. 22). This prediction does not prevent the blocking effect as shown in figure 1 and 2, for the blocking effect does

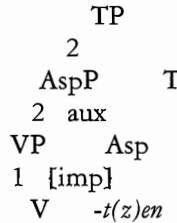
<sup>7</sup> Demirdache and Uribe-Etxebarria (1998) propose that  $-t(z)en$  was originally bimorphemic: Nominalizer  $-t(z)e$  + Locative  $-n$ . They argue that locatives are a common source of the progressive across languages (e.g. *John is at-crossing the street*).

not involve perfective aspect. In contrast, the earlier assumptions in the literature attribute some semantic content to *-t(z)en* and, at that point, become incongruent with the Imperfective Paradox.

(21) Perfective



(22) Non-Perfective/default



As already mentioned, progressive *ari* and habitual *obi* do not affect the interpretation of *-t(z)en*. *Ari* and *obi* are free morphemes inserted in a position over Aspect Phrase (see ex. 24 and 25 below). The proposal predicts then that these periphrastic constructions will not cause a blocking effect because their syntactic locus is different from that of *-t(z)en*. An updated set of aspectual morphemes is given in (ex. 23):

(23) Set of aspectual morphemes in Basque [extended]:

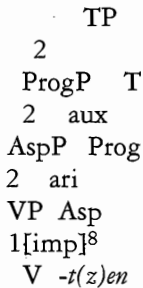
a. Bound

- tu, -i, -n [perfective]
- t(z)en [ ]

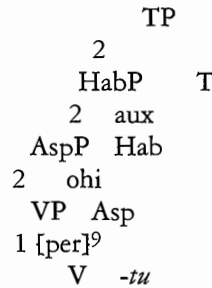
b. Free

- morphologically conditioned *ari* [progressive]
- phonologically conditioned *obi* [habitual]

(24) [V+t(z)en] ari aux



(25) [V+tu] ohi aux



<sup>8</sup> Basque morphology suggests a Progressive Phrase and a Habitual Phrase. The structures proposed in (ex. 24-25) are not parallel configurations. For one thing, these higher aspectual heads impose different morphological requirements (e.g. *ari* determines auxiliary selection and subject case). This caveat could be extended to imperfective forms as well. Regarding (ex. 24), it would seem that the progressive form in Basque is built on top of an imperfective form. But it could also be argued that imperfective forms contain a Progressive Phrase with a null head if interpreted as progressive. Similarly, imperfective forms would have a Habitual Phrase with a null head if interpreted as habitual (indeed, this could be the case of *V+t(z)en* in the *trinko* class —ex. 4a). From this perspective, the structure of imperfective forms could vary depending on their interpretation. I leave as a matter for further research the issue of why and how imperfective forms can yield the progressive reading in the relevant languages.

<sup>9</sup> Sentences with habitual *obi* often translate as a simple present (e.g. *John sells houses*) or a present perfect continuous (e.g. *John has been selling houses*). Either translation captures the habitual reading of sentences

*Ari* and *obi* occur between the participle and the auxiliary. Of the two, they relate more strongly to the participle. This can be observed in Negative Fronting (Laka 1990), where Neg attracts the auxiliary (compare ex. 26a to ex. 26b). *Ari* and *obi* remain in place in negative sentences (see ex. 27-28). In contrast, every other element occurring between the participle and the auxiliary is carried over with the latter (e.g. interrogative *al*, dubitative *ote*... see Ortiz de Urbina 1989 for examples).

- (26) a. Laura-k liburutegi-an ikas-ten du  
 Laura-Erg library-in study-Def have.3Sg.3Sg  
 'Laura studies in the library/Laura is studying in the library'
- b. Laura-k ez du liburutegi-an ikas-ten  
 Laura-Erg Neg have.3Sg.3Sg library-in study-Def  
 'Laura does not study in the library /Laura is not studying in the library'
- (27) a. Laura liburutegi-an ikas-ten ari da  
 Laura.Abs library-in study-Def Prog be.3Sg  
 'Laura is studying in the library'
- b. Laura ez da liburutegi-an [ikas-ten ari]  
 Laura.Abs Neg be.3Sg library-in study-Def Prog  
 'Laura is not studying in the library'
- (28) a. Laura-k liburutegi-an ikas-i ohi du  
 Laura-Erg library-in study-Per Hab have.3Sg.3Sg  
 'Laura studies in the library'
- b. Laura-k ez du liburutegi-an [ikas-i ohi]  
 Laura-Erg Neg have.3Sg.3Sg library-in study-Per Hab  
 'Laura does not study in the library'

The first subsection has shown that my proposal covers the same amount of data, with no additional theoretical cost, as the bona fide assumption in Ortiz de Urbina (1989) and Laka (1990) that *-t(z)en* is an imperfective morpheme. Also, at this point my proposal offers a partial account of the distribution of the blocking effect, which is predicted not to arise from periphrastic forms.

## 6.2 Deriving the blocking effect on imperfective forms: figure 1

The second subsection of my analysis opens with a discussion of two earlier proposals concerning the aspectual interpretation of simple forms mentioned in section 5. The first considers that simple forms are defective for aspect (Arregi 2000), and the second that simple forms have a phonologically null aspectual morpheme (Laka 1990). The former is not compatible with the competition for insertion analysis; the latter is. Under my competition for insertion approach, the  $-\emptyset$  morpheme prevents the insertion of the default to express imperfective values in the *trinko* class. This is

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with *obi*. However, note that the simple present has the option of a generic reading in English (e.g. What John does for a living is sell houses; even if John has not sold a house yet). *Obi* disallows the generic reading. Hence, the use of the present perfect continuous in the gloss, which forces a habitual reading. This may serve as a tentative explanation of why *obi* requires perfective aspect.

congruent with the natural class of aspectual values that simple forms express and predicts the blocking effect as shown in figure 1. Since ordinary verbs do not have an imperfective morpheme of their own, the default spells out imperfective aspectual values in this class, as shown in section 6.1.

Let us turn to the Imperfective Paradox in the light of my proposal, concentrating on figure 1 first. The next section discusses figure 2.

As shown earlier, the phenomenon of semantic competition arises from the existence of simple forms. Simple forms express imperfective values, namely progressive, reportive, generic and, with the aid of adverbials, some form of habituality (see ex. 12 in section 3). The paradox lies in the blocking effect that these forms have on the interpretation of *-t(z)en*, where only habitual survives, becoming the dominant form for this reading (see ex. 13). There are two earlier assumptions concerning the aspectual specification of simple forms in Laka (1990) and in Arregi (2000), even though their focus is not aspectual interpretation (see Alcázar 2002a, 2003a instead). My analysis will serve as an independent means to assess their proposals.

Arregi (2000) assumes that simple forms have no aspectual features and that a default interpretive mechanism is invoked to interpret them. In the tree representations of Arregi, simple forms do not project an aspectual phrase, while compound forms do. Simple forms are defective for Arregi. In addition, simple forms differ from compound forms in verb movement (following Laka 1990). In compound forms, the verb moves up to Aspect and stays there (ex. 29a). In simple forms, the verb moves to Tense (ex. 29b) to avoid violation of a morphological constraint, proposed by Arregi, against uninflected verb roots. Indeed, some constraint is necessary on the observation that verbs do not surface as roots (e.g. the citation form is the perfective participle: *amai-tu* 'finish-Per'). In compound forms, the verb moves to Aspect only, as this movement suffices to satisfy the morphological constraint.

On the other hand, Laka (1990) assumes that simple forms have an aspectual phrase headed by a null morpheme that is phonologically null, and with an intricate aspectual characterization (1993b). In the tree representations of Laka, both compound and simple forms project an aspectual phrase. The aspectual interpretation of simple forms thus proceeds in the same way as the interpretation of compound forms. The only difference between the two lies in verb movement. In compound forms, the verb moves up to Aspect only (ex. 30a). In contrast, in simple forms the verb moves through Aspect all the way to Tense (ex. 30b). The reason is possibly to add some phonological weight to the verb. This is unnecessary in compound forms because they take bound aspectual suffixes with phonological content (ex. 23a).

## (29) a. Compound

TP
2
AspP T
2 aux
VP Asp
1 {imp}
V <i>-t(z)en</i>

## b. Simple

TP
2
VP T
1
V

(30) a. Compound TP 2 AspP T 2 aux VP Asp 1 [?] V <i>-t(z)en</i>		b. Simple TP 3 AspP T 2 VP Asp 1 [imp] V $\emptyset$
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In this paper, I propose to derive the blocking effect from choices in affix insertion. Semantic competition with simple forms indicates that some morpheme prevents the insertion of the default for the progressive and reportive interpretations. The absence of a blocking effect caused by progressive *ari* and habitual *obi* shows that competition for insertion is limited to the aspectual node closest to the verb. Arregi considers simple forms defective for aspect; therefore, his proposal is not compatible with competition for insertion, as there is no room to insert an aspectual morpheme.<sup>10</sup> In contrast, Laka's proposal is compatible with competition for insertion, since she considers that simple forms project an aspectual node headed by a null morpheme (ex. 31).

(31) Set of aspectual morphemes in Basque [final extension]:

a. Bound <i>-tu, -i, -n</i> [perfective] <i>-t(z)en</i> [ ] $\emptyset$ [imperfective]	morphologically conditioned phonologically conditioned morphologically conditioned to the <i>trinko</i> class	b. Free <i>ari</i> [progressive] <i>obi</i> [habitual]
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In view of the earlier examples in (12), the aspectual information expressed by  $\emptyset$  is imperfective. It is important to stress here that  $\emptyset$  is a true imperfective morpheme, unlike *-t(z)en*, which expresses a set of imperfective values in the ordinary class (ex. 3), yet only one value—habitual—in the *trinko* class (ex. 4a, 13). This reading distribution suggests that habitual is a feature of its own (Higginbotham p.c.), projecting over the aspectual node (Cinque 1999, see Chierchia 1995 on generic readings), much as the position of *obi* suggests in (ex. 5b, 25; see fn 9).

This subsection has shown that competition for insertion can account for the paradox illustrated in figure 1 and at the same time preserve the empirical ground covered for ordinary verbs. Assuming an imperfective morpheme morphologically conditioned to the *trinko* class makes it unnecessary to posit an independent interpretive mechanism for simple forms. In addition, it provides a straightforward answer to the question of why this phenomenon of competition is limited to the *trinko* class. And it cancels the traditional argument in Basque grammars that the *trinko* verbs are semantically distinct from ordinary verbs.

<sup>10</sup> If simple forms have no aspectual node, the interpretation of *-t(z)en* cannot be disturbed due to competition for insertion. Perhaps for this reason, Arregi proposes that this morpheme expresses habitual and thus his approach is equivalent to the mirror image of the Imperfective Paradox (figure 1 only) as presented in this paper. Arregi does not provide a thesis to account for the readings that, from his perspective, *-t(z)en* gains in the ordinary class.

### 6.3. Verb movement as a repair-strategy and the *ari* construction: figure 2

This section discusses the motivation for the verb to move to Tense in simple forms. I propose that this movement is a repair strategy caused by inserting  $-\emptyset$ . I assume that what prevents verbs from surfacing as stems is a phonological condition on representation. This proposal offers a simultaneous explanation for the formation of simple forms and the vanishing of the *ari* construction in the *trinko* class.

The only case where the verb carries tense in Basque is limited to the *trinko* class: the imperfective forms. Verb movement to Tense seems a repair strategy to prevent that the verb surface as a root. One could capture the observation that Basque verbs do not surface as roots by a phonological well-formedness condition. In that case, one need not assume with Arregi (2000) that simple forms are defective for aspect. If anything, the compound form would be defective for aspect, as it loses interpretations by comparison with verbs outside this class. Then,  $-\emptyset$  appears as the cause of verb movement to Tense.

Let us show one test from Laka (1990) proving that simple forms result from syntactic verb movement to Tense (i.e. not affix hopping as in English; see Ortiz de Urbina 1989 for additional tests: e.g. intervening particles, complementizer agreement). The attraction of tense in negative sentences shows that *trinko* verbs move to Tense in their simple form (ex. 33a), while ordinary verbs move to Aspect only (ex. 35a). If the tensed verb stays in the same position as in declaratives (ex. 33b), the sentence is ungrammatical.

- (32) Mikel-ek liburu-a dakar  
 Mike-Erg book-Abs.Sg bring.3Sg.3Sg  
 'Mike is bringing the book'
- (33) a. Mikel-ek ez dakar liburu-a  
 Mike-Erg Neg bring.3Sg.3Sg book-Abs.Sg  
 'Mike is not bringing the book'
- b. \*Mikel-ek ez liburu-a dakar  
 Mike-Erg Neg book-Abs.Sg bring.3Sg.3Sg  
 'Mike is not bringing the book'

In contrast, if the verb is overtly marked with aspect, it does not move to Tense. An auxiliary is spelled out in this position. Negation attracts the auxiliary (compare ex. 34 with ex. 35a), which cannot remain in the same position as in declaratives (ex. 35b). The verb is not attracted: it remains in Aspect Phrase.

- (34) Mikel-ek liburu-a ekarr-i du  
 Mike-Erg book-Abs.Sg bring-Per have.3Sg.3Sg  
 'Mike has brought the book'
- (35) a. Mikel-ek ez du liburu-a ekarr-i  
 Mike-Erg Neg have.3Sg.3Sg book-Abs.Sg bring-Per  
 'Mike hasn't brought the book'
- b. \*Mikel-ek ez liburu-a ekarr-i du  
 Mike-Erg Neg book-Abs.Sg bring-Per have.3Sg.3Sg  
 'Mike hasn't brought the book'

Following Laka (1990), and in the light of my proposal,  $-\emptyset$  prevents the insertion of the default to express imperfective aspect in the *trinko* class. This predicts semantic and syntactic consequences in this class. First,  $-t(z)en$  expresses a more reduced subset of non-perfective values (i.e. habitual), as discussed in section 6.2. Second, since  $-\emptyset$  is phonologically null, the verb stem needs to acquire weight. The verb moves to Tense, forming simple imperfective forms. Third, the insertion of  $-\emptyset$  in the progressive construction has fatal consequences: *ari* stands as an intervening head, preventing further movement of the verb. Movement to Tense as a repair strategy cannot apply. The phonological condition on the representation of verbs prevents convergence at PF.

This analysis requires that phonology play a role in a syntactic repair strategy. This role could be formalized in different ways. I sketch various morphological as well as syntactic approaches below.

The role of phonology could be mediated by a morphological component through the point of lexical insertion. We need to assume first that morphemes have phonological information (e.g. the earlier comment on the notion of Vocabulary item in Distributed Morphology). Second, lexical insertion (of at least affixes) precedes syntactic operations (see Embick 2000 for a similar implementation). On the other hand, if lexical insertion were post-syntactic (Halle and Marantz 1993), then verb movement may be characterized as post-syntactic merger (Noyer 1997).

Alternatively, the emphasis could be shifted from pre/postsyntactic lexical insertion to verb movement per se. The repair strategy could be understood as *Greed* (Chomsky 1995) in the sense that the verb means to satisfy an interface condition. In more recent implementations of minimalism (Chomsky 1999), the derivation proceeds cyclically or in *phases*. Like CP and TP, lower Aspect could be assumed to be a phase in Basque. When the Aspect phase is complete, the verb needs to move to Tense or else the derivation will crash at PF in the last phase.

The above, among other possibilities, are some formal ways in which knowledge of phonology can trigger movement as a repair strategy. I remain theory-neutral with respect to particular implementations of this otherwise descriptively adequate idea.

My analysis raises the question of what the underlying semantic feature is in the progressive of degree achievements, where the affix choice is the default. The interpretation of degree achievements is somewhat different from other events. Degree achievements are not a singular event, but rather consist of a multiplicity of events (e.g. of people arriving, of the book discoloring). Note that the plurality of events itself does not suffice for the situation to be considered habitual: it is not a characteristic property of people that they arrive in floods, or of books that they discolor. Following this line of thinking, if degree achievements have a feature distinct from imperfective in the aspectual projection closest to the verb, it would be reasonable to assume that this feature is [plural]. These sentences could be assimilated to something like the English *people were arriving all afternoon*, where the speaker asserts the existence of a family E of events *e*, thus allowing the progressive.<sup>11</sup> As a matter of

<sup>11</sup> My thanks to an anonymous reviewer for elaboration on this point.



fact, some languages employ the same morphosyntactic means to express plurality in nouns and aspectual values in verbs (e.g. reduplication in the Salish family; see Kroeber 1999).

The assumption that degree achievements have an aspectual feature different from imperfective is descriptively adequate for Basque.

Two forms interpreted as progressive coexist in the ordinary class: the compound imperfective form (ex. 3) and the *ari* construction (ex. 5a). The default is inserted with imperfective forms. Since the default is not phonologically null, it is unnecessary for the verb to move further in seek of phonological weight. This form thus surfaces as a participle with an auxiliary that spells out tense. The default is also inserted in the *ari* construction. Again, further movement is not necessary.

In contrast, in the *trinko* class, the two forms that convey the progressive are in complementary distribution (figure 2): the simple form expresses the progressive of regular events (ex. 7a); the *ari* construction expresses the progressive of degree achievements (ex. 8). Simple forms arise from the choice of a phonologically null morpheme. The same morpheme choice prevents the *ari* construction from converging when it is intended to express the progressive of regular events in (ex. 7b). Since degree achievements presumably involve a feature distinct from imperfective, the choice in this case is the default (ex. 8). As in the imperfective and progressive forms of the ordinary class, the phonological content of the default makes further movement of the verb unnecessary.

This section has established a link between verb movement and the morphosyntactic split in the expression of the progressive, providing a much-needed comprehensive account of the distribution of aspectual interpretation with respect to morphosyntactic form across verb classes in Basque.

## 7. Conclusion

In this paper, I have proposed that the imperfective paradox of Basque follows from choices in affix insertion. This proposal predicts the morphosyntactic distribution of forms bearing the progressive interpretation across verb classes. Basque behaves like Indo-European in the ordinary class. Imperfective and progressive forms coexist with overlapping interpretations, expressed by default *-t(z)en*. Unlike Indo-European, however, Basque has a subset of verbs with a morphologically conditioned imperfective morpheme. This morpheme accounts for the three exceptional characteristics of the *trinko* class: (a) the blocking effect on the progressive interpretation of compound imperfective forms (figure 1); (b) the morphosyntactic split to express the progressive (figure 2); (c) verb movement to Tense exclusive to imperfective forms. The last characteristic ultimately relates to a phonological condition that is arbitrarily associated with this group of verbs due to their silent imperfective morpheme. In view of the above, this analysis has questioned the need to divide Basque verbs into two classes on the basis of morphological and semantic differences.

## Appendix: List of abbreviations

Abs	absolutive	Hab	habitual	Nom	nominalizer	Sg	singular
Def	default	Imp	imperfective	Per	perfective	Pl	plural
Erg	ergative	Neg	negation	Prog	progressive	-	morpheme boundary

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