Approaches to Complex Predicates

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From Adpositions to Events: The Case of Location Verbs in Basque

Ane Berro

Introduction

1.1 Derived Verbs in Basque

In Basque, there are many verbs where the element selected by the morpheme -tu (the infinitive or the participle morpheme) is independently used in the language out of the verbal environment: there are verbs built on adjectives (like gorri-tu ‘redden’ from gorri ‘red’ and txiki-tu ‘make smaller or cut’ from txiki ‘small’) (1), nouns (like dantza-tu ‘dance’ from dantza ‘dance’ and dirdira-tu ‘shine’ from dirdira ‘shine’) (2), allative adpositional phrases (etxe-ra-tu ‘go/take home’ from etxe-ra,all ‘to home’, itsaso-ra-tu ‘go to the sea, flow into’ from itsaso-ra,all ‘to the sea’) (3) and instrumental adpositional phrases (ure-z-ta-tu ‘water’ from ure-z,inst ‘with water’, olio-z-ta-tu ‘oil’ from olio-z,intr ‘with oil’) (4).

(1) a. Sukaldaria-k berakatza-k txiki-tu ditu

cook-erg garlic-pl.abs small-tu aux.3pl.abs.3erg

‘The cook has chopped the garlic’

1 I want to thank Ricardo Etxepare and Beatriz Fernández for their corrections, suggestions and very inspiring discussions on the topic. I am also thankful to the anonymous reviewers who have helped me to improve and enrich the paper extensively, as well as to the colleagues of the research team Gogo Elebiduna / The Bilingual Mind. All errors are mine. The research leading to these results has received funding from the European Union’s Seventh Framework Programme for research, technological development and demonstration under grant agreement no. 613465. Moreover, this study has been developed thanks to several projects funded by the Basque Government (the pre-doctoral grant BFIO9.203 and the project IT665-13) and by the Spanish Ministry of Economy and Competitiveness (FFI2011-26906 and FFI2014-51878-P).

2 The latter type of verbs, that is, the ones built on instrumental adpositional phrases, involve additionally the affix -ta- following the instrumental -z-. The affix -ta- has been considered an indefinite marker which precedes the locative adposition (de Rijk 2008: 54) (see Berro 2015). Here it is directly glossed as TA.

3 Abbreviations: abl = ablative adposition, abs = absolutive case, all = allative adposition, appr = approximative adposition, aux = auxiliary verb, erg = ergative case, ine = inessive
b. *Kipula hori oso txiki-a da*
   onion that.ABS very small-det aux.3ABS
   ‘That onion is very small’

(2) a. *Nesk-ek asko dantza-tu dute*
   girl-pl.ERG a lot dance-TU aux.3plERG
   ‘The girls have danced a lot’

b. *Neske-i dantza hori gusta-tzen zaie*
   girl-pl.DAT dance that.ABS like-TZEN aux.3plDAT
   ‘The girls like that dance’

(3) a. *Arrantzalea-k itsaso-ra-tu dira*
   fishermen-pl.ABS see-versalitas-TU aux.3plABS
   ‘The fishermen have gone to the sea’

b. *Haie-i itsaso-ra joa-tea gusta-tzen zaie*
   They-DAT sea-ALL go-NMLZ like-TZEN aux.3plDAT
   ‘They like going to the sea’

(4) a. *Miren-ek landarea ur-ez-ta-tu du*
   Miren-ERG plant.ABS water-versalitas-TU aux.3ERG
   ‘Miren has watered the plant’

b. *Miren-ek ur-ez bete du pitzarra*
   Miren-ERG water-INSTR fill.TU aux.3ERG pitcher.ABS
   ‘Miren has filled the pitcher with water’

In this paper I am going to deal with verbs based on allative adpositional phrases (3a). I call this type of predicates location verbs, following Hale & Keyser’s (1993, 2002, 2005). I show that in location verbs, the PP headed by -tu can only be a GoalP and, basing on that fact, I argue that a silent v analysis must be abandoned. Instead, I suggest that in order to understand the restriction on GoalPs of location verbs, the structural isomorphism of event decomposition and adposition decomposition must be considered.

adposition, INSTR = instrumental adposition, KO = the -ko suffix (relational or genitive, also used as prospective), NMLZ = nominalization, TU = the -tu suffix (infinitie or participial), TZEN = the -tzen suffix (imperfective).
1.2 *About Basque Verbal Forms*

All location verbs share a distributional feature: they have to occur in the analytic verbal form. Basque verbs can appear in the synthetic (5) and in the analytic configuration (1)–(4). Nowadays, the synthetic configuration is restricted to about fifteen verbs (such as *joan* ‘go’, *etorri* ‘come’, *ekarri* ‘bring’, *eraman* ‘carry, bring or wear’ and *jakin* ‘know’) (Euskaltzaindia 1997[1987]), and its aspectual interpretation is restricted to the imperfective reading (5) (see Albizu 2001, Alcazar 2002, Berro 2015).

(5) \(\text{Nesk-ek} \quad \text{sagar-poltsa bat dakarte} \)

\[\text{Nesk-ek} \quad \text{sagar-poltsa} \quad \text{bat} \quad \text{dakarte} \]

\(\text{Girl-pl.ERG} \quad \text{apple-bag} \quad \text{a.ABS} \quad \text{3ABS.bring.3plERG} \)

‘The girls carry/are carrying a bag of apples’

The analytic form, on the contrary, is available for all verbs, is the only productive configuration and can be used in perfective, imperfective and prospective aspectual contexts. The analytic configuration consists of two elements: an auxiliary (which can be *be* or *have* depending on the verb)\(^4\) and a lexical verb. In the perfective, the lexical verb is headed by the morpheme -\(tu/-i/-n\) (as in *etorr-i* (6)). For simplicity, I will refer to this morpheme as the -\(tu\) morpheme. This morpheme acts in some contexts as a participle (6), and, in others, as an infinitive (7). Furthermore, it is also used in the citation form of the verbs and, in western varieties of the language, as the imperative (8).

(6) \(\text{Neska-k} \quad \text{etorr-i} \quad \text{dira} \)

\[\text{Neska-k} \quad \text{etorr-i} \quad \text{dira} \]

\(\text{girl-pl.ABS} \quad \text{come-TU} \quad \text{aux.3plABS} \)

‘The girls have come’

(7) \(\text{Nesk-ek} \quad \text{etorr-i} \quad \text{nahi dute} \)

\[\text{Nesk-ek} \quad \text{etorr-i} \quad \text{nahi dute} \]

\(\text{girl-pl.ERG} \quad \text{come-TU} \quad \text{want} \quad \text{aux.3plERG} \)

‘The girls want to come’

(8) \(\text{Etorr-i} \quad \text{hona!} \)

\[\text{Etorr-i} \quad \text{hona!} \quad \text{aux.3pl} \]

‘Come-TU here.ALL’

---

\(^4\) Note that the presence of an allocutive argument can also trigger auxiliary alternation (see Albizu 2001, Arregi 2004, Arregi & Nevins 2012).
When followed by the auxiliary verb, the verb headed by -\textit{tu} takes the role of a participle (6). When followed by a modal verb like \textit{nahi izan} ‘want’, on the other hand, it behaves as an infinitive (7). Haddican an Tsoulas (2012) have argued that the -\textit{tu} morpheme represents a nominalizing head, which in the case of participial verbal forms, is selected by an Aspectual head contributing a perfective meaning (see also Berro 2015, where it is argued that -\textit{tu} has nominal category).

Except for the subjunctive, the potential and the imperative forms of eastern varieties of Basque, verbs cannot appear bare in the analytic form. They always need to be headed by a bound morpheme. In the imperfective (9), instead of the morpheme -\textit{tu}, -\textit{tzen} is attached, the same suffix used when the \textit{ari} progressive selects for the predicate. Many works (Mateu & Amadas 1999, Demirdache & Uribe-Etxebarria 2000, Laka 2004 2006) have argued that -\textit{tzen} consists of a nominalizing head (-\textit{t(z)e}) and a inessive head (-\textit{n}).

\begin{tabular}{l}
\textbf{9} \textit{Neska-k astelehen-etan etor-tzen dira} \\
\textit{girl-pl.abs monday-pl.ine come-tzen aux.3plabs} \\
‘The girls come on Monday’
\end{tabular}

In order to convey future events (10), the morphemes -\textit{ko} or -\textit{(r)en} (depending on the dialect and on the predicate) are added to -\textit{tu}. Note that -\textit{ko} and -\textit{(r)en} are subsequently homophonous with the relational suffix (10) and with the genitive.

\begin{tabular}{l}
\textbf{10} \textit{Neska-k astelehen-ean etorr-i-ko dira Bilbo-ko} \\
\textit{girl-pl.abs monday-ine come-tu-ko aux.3plabs Bilbo-ko} \\
\textit{antzoki-ra} \\
\textit{theatre-all} \\
‘The girls will come on Monday to the theatre of Bilbao’
\end{tabular}

The lexical verb headed by -\textit{tu}, -\textit{tzen} or -\textit{tuko} does not agree in number and/or person with the arguments. All agreement morphemes appear in the auxiliary.
2 Location Verbs

2.1 Location Verbs in Basque
Location verbs formed on the basis of the allative morpheme (-ra) are very productive in Basque. Below (11), there is a list of some of these verbs taken from the corpus Contemporary Reference Prose (Sarasola et al. 2011) — using the Corsintax browser (Landa 2008) and the Dictionary of Contemporary Basque (Sarasola in progress) — and Mujika (2008). In (12), there are examples for the verb etxe-ra-tu [etxe-ALL-TU] ‘go/take home’ and argi-tara-tu [light-ALL-TU] ‘publish, lit. bring to light’.

(11) List of some location verbs

<table>
<thead>
<tr>
<th>Verb(s)</th>
<th>Meaning</th>
<th>From</th>
</tr>
</thead>
<tbody>
<tr>
<td>aberriratu</td>
<td>repatriate, return home</td>
<td>aberri ‘homeland’</td>
</tr>
<tr>
<td>adineratu</td>
<td>come to an age</td>
<td>adin ‘age’</td>
</tr>
<tr>
<td>argitaratu</td>
<td>publish, lit. bring to the light</td>
<td>argi ‘light’</td>
</tr>
<tr>
<td>ahalbide(ra)tu</td>
<td>make possible</td>
<td>ahalbide ‘possibility’</td>
</tr>
<tr>
<td>aurreratu</td>
<td>go/bring forward, advance</td>
<td>aurre ‘front’</td>
</tr>
<tr>
<td>aitzinatu</td>
<td>go/bring forward</td>
<td>aitzin ‘front’</td>
</tr>
<tr>
<td>alboratu</td>
<td>approach, go/move aside</td>
<td>albo ‘side’</td>
</tr>
<tr>
<td>aldaratu/aleratu</td>
<td>approach, compare</td>
<td>alde ‘side, part’</td>
</tr>
<tr>
<td>araupetu</td>
<td>regulate</td>
<td>arau ‘rule’, pe ‘under’</td>
</tr>
<tr>
<td>atzeratu</td>
<td>put/set back, delay, postpone</td>
<td>atze ‘back’</td>
</tr>
<tr>
<td>atzeriratu</td>
<td>emigrate, exile</td>
<td>atzerri ‘abroad’</td>
</tr>
<tr>
<td>aurpegiratu</td>
<td>reproach, blame</td>
<td>aurpegi ‘face’</td>
</tr>
<tr>
<td>auzipe(ra)tu</td>
<td>prosecute</td>
<td>auzi ‘trial’, pe ‘under’</td>
</tr>
<tr>
<td>azaleratu</td>
<td>emerge, surface</td>
<td>azal ‘skin, surface’</td>
</tr>
<tr>
<td>azpiratu</td>
<td>subdue, defeat</td>
<td>azpi ‘downside’</td>
</tr>
</tbody>
</table>

5 The allative morpheme -ra occurs accompanied by other morphemes when the Ground is plural (-e-ta-ra), indefinite (-ta-ra), animate singular (-ren-gan-a) or animate plural (-en-gan-a). This scheme also applies for the inessive, the ablative and the approximative adpositions. In this study about location predicates, I am only going to focus on the allative ra, the inessive -n, the ablative -tik and the approximative -rantz, without addressing the rest of the morphemes.

6 The Contemporary Reference Prose corpus comprises 287 Basque written books and the texts of the newspapers Berria and Herria, all printed from 2000 to 2006. In sum, the corpus has 25.1 million words (http://www.ehu.eus/en/web/eins/ereduzko-prosa-gaur-epg-).

7 The Dictionary of Contemporary Basque (Sarasola in progress) is based on the corpus Contemporary Reference Prose (Sarasola et al. 2011) and aims at reflecting Basque as it is used today (http://www.ehu.eus/en/web/eins/egungo-euskararen-hiztegia-eeh-).
barneratu ‘enter, go/put sth in/into’ barne ‘inside’
barruratu ‘enter, go/put sth in/into’ barru ‘inside’
basoratu ‘go/bring to the woods’ baso ‘woods’
bateratu ‘unite, unify’ bat ‘one’
bazterr(era)tu ‘put sth aside, move towards the side’ bazter ‘side’
begienataratu ‘come/bring to the eyes’ begi ‘eye’
belarrietaratu ‘listen, realize’ belarri ‘ear’
bereganatu ‘appropriate, seize’ bere ‘his/her/hers’
bururatu ‘occur to sb, think of sth’ buru ‘head’
elizaratu ‘go/bring to the church’ eliz ‘church’
elkarganatu ‘meet, come together’ elkar ‘each other’
eskuratu ‘get, achieve’ esku ‘hand’
etxeratu ‘go/bring home’ etxe ‘house’
giltzape(ra)tu ‘lock’ giltza ‘key’ pe ‘under’
gogoratu ‘remember’ gogo ‘mind’
honatu ‘come/bring here’ hona ‘here-all’
horratu ‘go/bring there’ horra ‘there-all’
itasoratu ‘put out to sea, flow into’ itsaso ‘sea’
kaleratu ‘go out, expel, publish’ kale ‘street’
konturatu ‘realize, notice’ kontu ‘care’
lehorreratu ‘go/put ashore’ lehor ‘land’
menderatu ‘subdue, defeat’ mende ‘under the control’
munduratu ‘be born, come/bring to the world’ mundu ‘world’
noratu ‘go/bring somewhere’ nora ‘where-all’
oheratu ‘go/put to bed’ ohe ‘bed’
zeruratru ‘take off, go/bring to heaven’ zeru ‘sky, heaven’

(12) a. Neska-k goiz etxe-ra-tu dira
girl-pl.abs early home-all-tu aux.3pl.abs
‘The girls have gone home early’

b. Idazle hon-ek beste liburu bat argi-tara-tu du
writer this-erg other book a.abs light-all-tu aux.3erg
‘This writer has published another book’

These verbs appear to have a very transparent internal structure. Most of them are formed from the allative adposition -ra plus its complement ground, such as aberri-ra-tu [homeland-all-tu] ‘repatriate’ and argi-tara-tu [light-all-tu] ‘publish’. Some of them also include the Region or Axial Part of the comple-
ment, as in *mahai-gain-era-tu* [table-top-ALL-TU] ‘pose, lit. put on top of the table’ and *auzi-pe-ratu* [trial-under-ALL-TU] ‘prosecute’. There are some verbs which can optionally drop the allative morpheme, as in *auzi-pe-(ra)-tu* (mentioned above) and *giltza-pe-(ra)-tu*8 [key-under-(ALL)-TU] ‘lock, lit. put under key’. Finally, some verbs do not take the allative morpheme and just contain the Axial Part head, for example, *arau-pe-tu* [rule-under-TU] ‘regulate, lit. put under rule’.

Outside denominal locative verbs, the allative adposition is used in Goal complements, usually in combination with inherent motion verbs, as it can be seen in (13) or (14):

(13) Neska-*k* mendi-*ra* joa-*n* dira
    girl-pl.abs mountain-ALL go-TU aux.3plABS
    ‘The girls have gone to the mountain’

(14) Neska-*k* etxe-aurre-*ra* irits-*i* dira
    girl-plABS house-front-ALL arrive-TU aux.3plABS
    ‘The girls have arrived to the front of the house’

In (13), the allative morpheme appears attached to the Ground complement *mendi* ‘mountain’. In (14), it occurs following the Axial Part *aurre* ‘front’, which takes *etxe* ‘house’ as its complement. It seems clear that the verbs listed in (11) are built on PPs similar to those in (13) and (14). Hale & Keyser (1993 2002 2005) provide an analysis along this lines. They claim that location verbs of the *shelve* type (15) are syntactically structured on the basis of a PP.

(15) I shelved the books

In their 1993 work, Hale and Keyser (H&K onwards) argued that denominal verbs such as *shelve*, *saddle* and *dance* are formed in a level of the lexicon ruled by syntactic principles. This level is called *(lexical)-syntax* or *Lexical Relational Structure*. This way, they claimed that argument structure is syntactic and that arguments’ theta roles are defined in terms of structural relations. In the case of location and locatum verbs and deadjectival transitive verbs, they suggest that

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8 In the case of *giltza-pe-(ra)-tu*, the Dictionary of the Royal Academy of Basque (Euskaltzaindia 2012) only lists the verb without the allative morpheme, as *giltza-pe-tu*. Nevertheless, both versions are accepted and used by Basque speakers, as reflected in the corpus *Contemporary Reference Prose* (Sarasola et al. 2011).
the verbal phrase has different structural layers (following Larson 1988) and that each syntactic head represents a building block of the event configuration. More precisely, in location and locatum verbs, they propose that the inner V, an empty head, takes a PP as a complement, which is headed by an empty P. The example in (16) represents the l-syntax structure of the verb *shelve*.

(16) **L-syntax structure of *shelve*: incorporation analysis**

According to H&K (1993), the complement of P, *shelf*, undergoes successive *Head Incorporation*, first to the empty P and then onto the empty V, in accordance to the *Empty Category Principle* (Chomsky 1981).

In a more recent account (H&K 2002), the process of incorporation is replaced by that of *conflation*, which involves copying the phonological content of the complement into the head. Departing from incorporation, conflation is purely phonologic, rather than syntactic. 9 Both accounts are finally abandoned in favor of a *selection* analysis (H&K 2002 2005): H&K argue that the phonological content of denominal verbs is base-generated in V. In other words, it is not copied from the complement of V, but is directly inserted in V. 10 Crucially, they suggest that, in these cases, the *selectional* features of the root inserted in V are

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9 Note that this conception of conflation is different from that of Haugen (2009). Haugen (2009) proposes that conflation is a process of external merge, where the root has no source in the argument structure of the verb. This way, it contrasts with incorporation, which is a process of head movement, triggered by the syntactic operation of copy.

10 The incorporation analysis is still considered for deadjectival verbs (*redden, thicken*) and transitive verbs such as *break*, where the unaccusative *break* is argued to incorporate onto the transitive *break*.
rich enough to license an empty complement.\textsuperscript{11} That can be schematized as in (17). The root is base-generated in \( v \) and not incorporated or conflated from its PP complement.

\begin{align*}
\text{(17) L-syntax structure of shelf; selection analysis}
\end{align*}

\begin{grammar}
\begin{tikzpicture}
  \node[primary] {VP} [clockwise from=0]
  \node[nonprimary] {V} [below=0.5cm]
  \node[nonprimary] {PP} [below=0.5cm]
  \node[nonprimary] {shelf} [below=0.5cm]
  \node[nonprimary] {DP} [below=0.5cm]
  \node[nonprimary] {P} [below=0.5cm]
  \node[nonprimary] {N} [below=0.5cm]
\end{tikzpicture}
\end{grammar}

Let us leave the incorporation/selection discussion aside for a moment and come back to the PP component of location verbs of Basque. As I will explain later, in my analysis, I also adopt a syntactic approach for the decomposition of predicates. For instance, by means of the syntactic decomposition of predicates like shelf and dance we can account for verbal regularities and verbal alternation contrasts, such as the distribution of these predicates in the causative construction: shelf and similar verbs occur in the causative construction, whereas dance and similar predicates do not (see Hale & Keyser 1993: 74–77).

However, I depart from Hale & Keyser’s (1993 2002 2005) proposal of location predicates in several aspects. As I have mentioned, Hale & Keyser argue that in location predicates, \( v \) selects for a PP (see also Oyharçabal 2003). In this paper, I will show that the type of PP that is involved in location predicates is actually very restricted, and thus, I will claim that the formation of location predicates cannot be explained in those terms.

In contrast, what I propose is that, in order to understand better the restriction in the formation of location verbs, we need to consider the inner structure of adpositions. In all location verbs, at least a Path head and a Place head are projected. Jackendoff (1983) proposes that the conceptual structure of Path consists of two ingredients: Path and Place. van Riemsdijk and Huijbregts (2002) and Svenonius (2006 2008) have claimed that each of these elements project a syntactic head. The Basque allative would be a portmanteau

\textsuperscript{11} The base generated root can, alternatively, license an overt complement that would fit as a hyponym of the root (e.g. He shelved the books on the windowsill) (Hale & Keyser 2002: 88).
morpheme lexicalizing both these heads (see Etxepare & Oyharçabal 2012, Etxepare 2013). The fact that a single lexical item can be the exponent of more than one syntactic head has been formulated in late insertion frameworks like Nanosyntax (e.g. Starke 2009 2014), where phonological material is proposed to be inserted post-syntactically. Some works have suggested that lexical insertion can target non-terminals (by means of Phrasal Spell Out, as in Starke 2009 2014, Caha 2010 and Pantcheva 2011, or through Spanning, in Svenonius 2012). For instance, the Spanning approach advocated in Svenonius (2012) is able to account for irregular portmanteau morphemes like French *au*, *du* and *en*, where the allomorphy of the preposition cannot be explained only on a syntactic basis, but needs also to consider the phonology of the noun phrase. In this study, I suggest that Path and Place are spelled out by a single lexical item—the allative -ra—, without positing any syntactic operation such as head movement. Thus, the approach adopted here is similar to those mentioned above, where portmanteau morphemes are considered to be the result of spelling out more than one terminal by means of the same lexical item.

As a matter of fact, many location verbs can be paraphrased with predicates containing a verb and a PP headed by the inessive morpheme (-n). For example, a possible way to paraphrase the verb *aurre-ra-tu* [front-all-tu] ‘move forward’ (18a) is using *aurre-an jarri* ‘lit. put in the front’ (18b).

(18) a. *Irakaslea-k neska-k aurre-ra-tu ditu*
    teacher-ERG girl-pl.abs front-all-tu aux.3plABS.3ERG
    ‘The teacher has put the girls in the front’

    b. *Irakaslea-k neska-k aurre-an jarr-i ditu*
    teacher-ERG girl-pl.abs front-ine put-tu aux.3plABS.3ERG
    ‘The teacher has put the girls in the front’

The inessive is the morpheme lexicalizing Place. Therefore, Place is lexicalized by means of the PP in (18b) and Path is realized in the verb *jarri* ‘put’. The location verb *aurre-ra-tu* (18a), on the other hand, lexicalizes both Path and Place, as shown in (19).

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12 The sentence in (18a) is ambiguous, so that there is more than one way to translate it. The two possible readings of (18a) are: (i) the teacher has put the girls in the front, the one in (18b); and (ii) the teacher has gone past the girls/has gone to the front of the girls. In the second possible interpretation—which is not considered in the analysis—, it seems that the DP neskak ‘the girls’ does not correspond to the Figure of the adposition, but to the Ground.
In certain verbs, an additional head occurs between the Ground complement and the allative adposition, as in giltza-pe-(ra)-tu [key-under-(ALL)-TU] 'lock, lit. put under key', auzzi-pe-(ra)-tu [trial-under-(ALL)-TU] 'prosecute', mahai-gain-era-tu [table-top-(ALL)-TU] 'pose, lit. put on the table'. These elements have been called locational nouns (Euskaltzaindia 1991[1985], de Rijk 2008, Eguzt-itza 1997, Hualde 2002, Etxepare 2013). Following Etxepare (2013), I consider that, in this projective use of the locational nouns, they represent the syntactic head Axial Part.\textsuperscript{13} According to Svenonius (2006), Place can further embed Axial Part and KP. In the case of Basque, the Ground can combine with the Axial Part in two ways (Etxepare 2013): (i) bearing genitive case (20a); or (ii) forming a compound with the Axial Part (20b).\textsuperscript{14}

(20) a. 

\textit{Etxea-ren} \textit{aurre-an} \\
\textit{house-GEN front-INE} \\

b. 

\textit{Etxe-aurre-an} \\
\textit{house-front-INE} \\

‘In front of the house’ (Etxepare 2013: 19)

As it can be seen, in location verbs, it is combined by means of compounding. Thus, a given location verb like auzzi-pe-(ra)-tu 'prosecute, lit. put under trial'

\textsuperscript{13} As an anonymous reviewer notes, these elements have apparently nominal category, both in Basque and in Romance. As a matter of fact, these elements can behave as regular referential nouns in Basque (de Rijk 1990). Nevertheless, as Etxepare (2013) points out, locational nouns have a different semantic interpretation and syntactic distribution in the referential and in the projective use. He argues that the locational noun rises to the functional head Axial Part which provides it with the respective projective properties. In this paper, I will assume that in the projective reading, locational nouns represent Axial Parts.

\textsuperscript{14} See Etxepare (2013) for an analysis of the syntactic and interpretative differences between both forms of combining the ground with the Axial Part.
consists of the allative (representing both Path and Place), the Axial Part *-pe*-‘under’ and its ground complement auzi ‘trial’.

(21) Auzi-pe-(ra)-tu [trial-under-(ALL)-TU]

It is interesting to note that the Axial Part head *-pe*- can occur in some verbs without the allative morpheme (auzi-pe-tu ‘judge, send to trial’, arau-pe-tu ‘rule, lit. put under rule’, giltza-pe-tu ‘lock’). This is not a feature of all Axial Part heads of Basque. As a matter of fact, the Axial Part head *-gain*- ‘top’ cannot occur on its own, since with *-gain*- the allative is obligatory: mahai-gain-era-tu [table-top-ALL-TU] but *mahai-gain-du [table-top-TU]. Like with *-gain*- ‘top’, the same happens with the Axial Part head aurre ‘front’ and atze ‘back’: aurre-ra-tu [front-all-tu] ‘move/set back’, but *aurre-tu [front-tu], *atze-tu [back-tu]. I will briefly deal with this exceptional pattern in the next section.

2.2 Impossible Location Verbs

In the previous section I have analyzed the structure of possible location verbs in Basque. I have concluded that location verbs consist of a PP containing at least Path, Place and Axial Part. In this section, I am going to analyze impossible location verbs, in order to understand better the internal configuration of location predicates in Basque. I am going to show that Basque location verbs cannot be built on a bare PlaceP, a SourceP or a ScaleP.

Firstly, I am going to show that bare PlacePs cannot become location verbs. Basque location verbs cannot consist of a PP complement realized with the inessive morpheme (*-n*) (Mujika 2008):\(^\text{15}\)

\(^{15}\) There are some rare exceptions where location predicates seem to take inessive adpositions. See Berro (2015: 193).
Impossible location verbs with the inessive morpheme

(22) Impossible location verbs with the inessive morpheme

*etxe-an\textsubscript{INE} -tu but etxe-ra\textsubscript{ALL} -tu ‘go/take home’
*ohe-an\textsubscript{INE} -tu but ohe-ra\textsubscript{ALL} -tu ‘go/take to bed’
*esk\textsubscript{U} -an\textsubscript{INE} -tu but esku-ra\textsubscript{ALL} -tu ‘take, get, lit. come to hand’
*esk\textsubscript{U} -etan\textsubscript{INE} -tu but esku-etara\textsubscript{ALL} -tu ‘adquire, give, lit. come to the hands’
*bere-gan\textsubscript{INE} -tu but bere-gana\textsubscript{ALL} -tu ‘appropriate, lit. come to oneself’
*gogo-an\textsubscript{INE} -tu but gogo-ra\textsubscript{ALL} -tu ‘remember, lit. come to mind’

I argue this is due to Exhaustive Lexicalization (Fábregas 2007, Ramchand 2008b).

Exhaustive Lexicalization

Every node in the syntactic representation must be identified by lexical content.

(23) Exhaustive Lexicalization

The structure of location verbs involves a Path head and this must be realized lexically, due to Exhaustive Lexicalization. The inessive morpheme of Basque only lexicalizes Place, so that a location verb lexicalized with just the inessive morpheme plus its complement (22) would not be grammatical, since Path gets no lexical content in such a structure. Another implication of Exhaustive Lexicalization is that there are no silent verbs like the ones proposed in H&K (1993). This is an issue I will discuss at the end of this section.

Regarding the distribution of bare PlaceP in location verbs, someone can argue that it is possible to have a bare Axial Part head without the need of the Path head, since as I have mentioned in the previous section, some verbs can only consist of the Axial Part morpheme -pe- and its Ground complement: giltza-pe-tu ‘lock’, auzi-pe-tu ‘prosecute’, arau-pe-tu ‘rule’. This is a challenging case. Within Exhaustive Lexicalization, there are two ways to account for that: (i) the morpheme -pe- ‘under’ is lexicalizing all Path, Place and Axial Part together; or (ii) -tu lexicalizes the dynamic portion of the structure, as in other derived change of state verbs (e.g. gorri-tu [red-tu] ‘redden’, ama-tu [mother-tu] ‘become a mother’). I will remain agnostic about these possibilities, although the second seems to me a better explanation regarding Basque data.\footnote{Nevertheless, adopting the second hypothesis, I would have to answer another question: why -tu can lexicalize the dynamic portion of the structure in giltza-pe-tu [key-under-tu] ‘lock’ and not in *etxe-an-tu [house-INE-TU] ‘go home’ consisting of the inessive? It may depend on the categorial status of the complement of -tu. I leave this issue for further research.}

\footnote{In this respect, there is an interesting contrast with Spanish location verbs. In Spanish,}
It is interesting to note that the inessive adposition can be part of certain verbs in Basque such as those in (24):

(24) a. falta- n izan [lack-INE be] ‘lack, lit. be in lack’
    b. sober- a n egon [excess-INE be] ‘be not needed, lit. be in excess’
    c. gogo- a n izan [mind-INE be] ‘remember, be in mind’
    d. gustu- a n ükan¹⁸ [pleasure-INE have] ‘like, lit. have in pleasure’
    e. begi- ta n izan [eyes-INE be] ‘dislike, lit. have in the eyes’

This kind of predicates, which I term bare analytic,¹⁹ differ crucially from location verbs listed above in that: (i) they are stative (non dynamic and non-eventive),²⁰ and (ii) they cannot be selected by the -tu morpheme. In order for the verb to be cited (25a) or to be modified by aspectual morphemes such as the imperfect -tzen (25c), it needs a support verb (the auxiliary be or, in the case of north-eastern varieties, the lexical verb ükan ‘have’).

(25) a. Citation form
    Gogoan izan aditza
    ‘The verb gogoan izan’

¹⁸ The verb gustuan ükan has been taken from Etxegorri (2013). It is a verb used in Souletin Basque (a north-eastern variety).


²⁰ Many authors have termed this kind of stative verbs Kimian states (K-states) in contrast to Davidsonian states (D-states) (Maienborn 2004, Rothmayer 2009, Fábregas & Marín 2012). K-states are non-eventive and non-dynamic, while D-states are eventive but non-dynamic.
b. **Present**  
(Ni-k) gogo-an dut zer esa-n duen  
I-erg mind-INE aux.3ERG what say-TU aux.3ERG.Comp  
‘I remember what she/he has said’

c. **Habitual**  
(Gu-k) gogo-an iza-ten ditugu  
we-erg mind-INE be-TZEN aux.3plABS.1plERG  
‘We (usually) remember them’

I argue that these two aspects are the consequences of a single fact: location verbs project a Process subevent, while stative verbs such as *gogo-an izan* [mind-INE be] ‘remember’ do not. I assume that events can be decomposed into more basic building blocks and that these blocks are structurally represented (e.g. Hale & Keyser 1993) in a syntactic event configuration called First Phase Syntax (Ramchand 2008a). The subevents forming the predicate can be of two types: processes and states (Ramchand 2008a, Berro 2015) (cf. Pustejovsky 1991). State subevents can be characterized as a central coincidence heads, whereas the process subevent is the locus of eventivity (Berro 2015, see also Fábregas and Marín 2012). I propose that, in location predicates, both a process and a state are involved, whereas stative predicates like the ones mentioned above, only consist of a state. The relation between the allative adposition and the process subevent, on the one hand, and the inessive and the state subevent, on the other, will be discussed in section 3.

I have shown that PathP is the minimal structural layer that has to be present in the PPS of location verbs. Now, I am going to show that it is a specific type of Path, GoalP, which is the minimal and also the maximal layer that these PPS can have. Location verbs cannot be built on ablative PPS or approximative PPS. Location verbs which take the ablative morpheme (-tik) (Mujika 2008) or the approximative allative (-rantz) do not exist:

(26) a. **Impossible location verbs with the ablative morpheme**  
*etxe-tikABL-tu ‘come/take from home’  
*itsaso-tikABL-tu ‘come from the sea’  
*oh-e-tikABL-tu ‘come/take from the bed’  
*esku-tikABL-tu ‘take from the hand’  
*esku-etatikABL-tu ‘take from the hands’  
*bere-gandikABL-tu ‘take from oneself’  
*gogo-tikABL-tu ‘come from mind’
b. Impossible location verbs with the approximative allative morpheme

<table>
<thead>
<tr>
<th>Morpheme</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>*etxe-rantz&lt;sub&gt;APPR&lt;/sub&gt;-tu</td>
<td>‘go towards home’</td>
</tr>
<tr>
<td>*itsaso-rantz&lt;sub&gt;APPR&lt;/sub&gt;-tu</td>
<td>‘go towards the sea’</td>
</tr>
<tr>
<td>*ohe-rantz&lt;sub&gt;APPR&lt;/sub&gt;-tu</td>
<td>‘go/take towards the bed’</td>
</tr>
<tr>
<td>*esku-rantz&lt;sub&gt;APPR&lt;/sub&gt;-tu</td>
<td>‘take towards the hand’</td>
</tr>
<tr>
<td>*esku-etarantz&lt;sub&gt;APPR&lt;/sub&gt;-tu</td>
<td>‘take towards the hands’</td>
</tr>
<tr>
<td>*bere-ganantz&lt;sub&gt;APPR&lt;/sub&gt;-tu</td>
<td>‘take towards oneself’</td>
</tr>
<tr>
<td>*gogo-rantz&lt;sub&gt;APPR&lt;/sub&gt;-tu</td>
<td>‘come towards mind’</td>
</tr>
</tbody>
</table>

Both the ablative and the approximative PPs can be considered Path heads. If PathP were the minimal phrase that has to be present in location verbs, then, we would not be able to explain why Source and approximative PPs cannot be part of them. This contrast can be related to what is usually referred to as the Goal-Source asymmetry. For instance, it has been noted in the literature that Goals and Sources (as well as Routes) are not symmetrically organized cross-linguistically. Sources are usually more marked than Goals (Ikegami 1982, Pantcheva 2011). For example, the unmarked expressions here and there can have a Goal meaning, while in order to denote Source, they need to be accompanied by from; from here, from there (Pantcheva 2011: 73). On the other hand, with certain predicates Sources are only available if Goal expressions are also present (Levin 1993: 177):

(27) a. The witch turned him from a prince into a frog
    b. The witch turned him into a frog
    c. *The witch turned him from a prince

Similarly, as Gehrke (2008: 229) notes, in a sentence like the frog turned green, which lacks the overt expression of the preposition, green can only have a Goal meaning, conveying the ending color of the frog, and not the starting one. The fact that location verbs can only be built on Goal paths and not on Source or Scale paths is another example of this asymmetry. My suggestion is that this morphosyntactic contrast can be accounted positing different semantic and syntactic structures to the different types of paths, as done in Pantcheva (2011).

Pantcheva (2011) shows that Path can be decomposed into a more fine grained structure: RouteP, SourceP and GoalP.
According to her, each type of Path corresponds to a unique syntactic structure:

Crucially, Pantcheva considers Source paths more complex than Goals. This greater complexity can explain the Goal bias (Lakusta 2005, Lakusta & Landau 2005, Gehrke 2008) attested also in the psycholinguistic domain, which points out that there is a natural bias for encoding Goals over Sources in the representation of events.

Following Etxepare (2013), I claim that the ablative morpheme of Basque (-tik for simplicity) lexicalizes three features, namely, [Source], [Goal] and [Place], as in the structure in (30), so that it represents a bigger structure than the allative. Since *etxe-tik-tu ‘go/take from home’ is an impossible location verb, but etxe-ra-tu ‘go/take home’ is totally possible, I argue that the GoalP projection delimits the domain of possible location verbs.
(30) The ablative pp of Basque\textsuperscript{21}

\[
\begin{aligned}
&\text{SourceP} \\
&\quad \text{Source} \quad \text{GoalP} \\
&\quad \quad \text{Goal} \quad \text{PlaceP} \\
&\quad \quad \quad \text{-tik} \\
&\quad \quad \quad \text{Place} \quad \text{AxialPartP}
\end{aligned}
\]

According to Pantcheva (2011), non-transitional Paths like the approximative PP are formed when a head Scale selects any transitional path. The approximative would be the result of the selection of GoalP by Scale (31a). The structure for the Basque approximative allative morpheme would be like in (31b).

(31) Approximative Paths

a. Approximative Path 

\[
\begin{aligned}
&\text{ScaleP} \\
&\quad \text{Scale} \quad \text{GoalP} \\
&\quad \quad \text{Goal} \quad \text{PlaceP}
\end{aligned}
\]

b. Approximative allative in Basque

\[
\begin{aligned}
&\text{ScaleP} \\
&\quad \text{Scale} \quad \text{GoalP} \\
&\quad \quad \text{Goal} \quad \text{PlaceP} \\
&\quad \quad \quad \text{-ntz} \\
&\quad \quad \quad \text{ra}
\end{aligned}
\]

\textsuperscript{21} Note that the fact that the Source path is built on a Goal path does not mean that every time there is a SourceP, a GoalP is not able to occur with it. Think on a sentence such as (i):

(i) \textit{Mikel Bilbo-tik Gasteiz-era joaten da egunero}

MikelABS Bilbo-ABL Gasteiz-all go-tzen aux.3SABS every day

‘Michel goes every day from Bilbao to Gasteiz’

For those cases, I assume that another adpositional phrase is projected, so that there are two adpositional phrases, one for each location: the first one involves a reversed Goal path (Pancheva 2011), that is, the Source, and the second involves a simple Goal path.
Again, the impossibility of location verbs consisting of the approximative allative morpheme indicates that GoalP delimits the domain of possible location verbs (32). The more complex structure that can be built on a PP, like SourceP or Approximate ScaleP, cannot be part of location verbs.

(32) Decomposed structure ofpps

On the basis of the ungrammaticality of Source-based and Scale-based location predicates, I suggest that there cannot be a silent V selecting for a PP in location verbs, like H&K argued in their 1993 paper. If such a head existed, nothing would prevent SourcePs or Approximate ScalePs from becoming location verbs. A verb like *joan ‘go’ can take a SourceP or an Approximate ScaleP as complement:

(33) a. Neska-k etxe-tik joa-n dira
girl.plABS home-ABL go-TU aux.3plABS
‘The girls have gone out of the house’

b. Neska-k bere-ganantz joa-n dira
girl.plABS his/her-APPR go-TU aux.3plABS
‘The girls have gone towards him/her’

If an overt verb like *joan ‘go’ can take a SourceP (33a) or an Approximate ScaleP (33b) as complement, we do not have an explanation of why its silent counterpart is not able to do that. Similarly, within the selection analysis made in H&K (2002 2005), where it is claimed that the selectional features of the root associated with the verb license a silent PP complement, it cannot be explained why etxe-ra-tu [house-ALL-TU] is a good location predicate while *etxe-tik-tu
[house-ABL-TU] is not. If the bundle of lexical items etxe-ra is rich enough to license a non-overt $v_{PP}[P \ NP]$ complement, etxe-tik would also be rich enough to license a non-overt $v_{PP}[P \ NP]$ complement. Nevertheless, etxe-tik is not a good lexical candidate to form a location predicate, whereas etxe-ra is.

3 Events and Adpositions

I have shown that location verbs can only be built on a GoalP. The -tu suffix can only be attached to the allative adposition and not to the ablative or the approximative. Consider now the parallelism between the inner structure of events (First Phase Syntax) (34a) and the inner structure of adpositions (Svenonius 2006, Pantcheva 2011) (34b). In First Phase Syntax, three subevents are projected: Initiation, Process and Result. Both initiation and result are state subevents, which acquire their specific meaning as initiation or as a result on the basis of their relation with process. Interestingly, Ramchand (2008a: 41) notes that if the core dynamic event is viewed as paralleling the topological properties of a path, the dynamic portion would be the Process, the initiation point or source would be the Initiation subevent, and the end point would be the Result.

(34) a. Event decomposition (Ramchand 2004, 2008a et seq.)

22 More precisely, if a state subevent selects for a process, the state is interpreted as initiation. On the other hand, if a process selects for a state, then, the state is interpreted as a result.
b. ADPOSITION DECOMPOSITION (Svenonius 2006, Pantcheva 2011)

I argue that the decomposition of events and the decomposition of adpositions is structurally isomorphic: the Source head can be paralleled to the Initiation head; the Goal head to the Process head; and the Place head to the Result head.

Both state subevents and Place adpositions are central coincidence heads. For instance, in section 2.2, I have shown that several stative predicates in Basque involve the spell out of the inessive adposition. When process is projected above a state subevent, the state becomes a result and the whole predicate is interpreted as dynamic, since it involves a transition, i.e. a change of state or position. In a similar fashion, a Place adposition is non-transitional, non-dynamic, but when Goal is projected above, the PP becomes transitional.

The ontological resemblance between the allative and process subevent, on the one hand, and the inessive and the state (result) subevent, on the other, finds a further correlate in cross-linguistic patterns of grammaticalization. As noted in Yamaguchi (2004), Place adpositions are usually grammaticalized to stative predicates, whereas Path adpositions like the allative are usually involved in motion predicates or predicates of seeing implying a directed gaze.

With this parallelism in mind, we can understand the restriction of location verbs on GoalPs. If Goal is parallel to Process, the fact that location predicates can only be built on the allative can be explained. The lexical item -ra, corresponding to the Basque allative adposition, is optionally lexically associated with a Goal or with a Process, because these two heads are topologically and structurally equivalent.²³

²³ The piece of the structure that -tu lexicalizes is still unclear. The lexicalization of -tu is undoubtedly the consequence of the interaction between outer and inner aspect but which head it is exactly spelling out is still to be determined. See Berro (2015) for an approximation.
(35) a. *Neska-k etxe-ra-tu dira
girl-pl.abs home-ALL-TU aux.3plabs
‘The girls have gone home’

b. **Structure of the verb etxe-ra-tu ‘go/take home’**

Thus, the allative *ra* is the only path head that can be associated with Process. The inessive *-n*, the ablative *-tik* and the approximative *-rantz* cannot, since Place, Source or Scale are not topologically and structurally equivalent to Process.

4 Conclusions

In this paper I have described and analyzed the structure of possible and impossible location verbs in Basque, giving evidence in favor of the original idea advocated by Hale & Keyser (1993) which states that they are built on a PP. More specifically, I show that Basque location verbs can only be formed by a PP consisting of a GoalP, a PlaceP and an Axial PartP together, like in *auzi-pe-ra-tu* [trial-under-ALL-TU] ‘prosecute’, *mahai-gain-era-tu* [table-top-ALL-TU] ‘pose, lit. put on top of the table’ etc. A simpler PP like a PlaceP and a more complex PP like a SourceP or an Approximative ScaleP (Pantcheva 2011) cannot be the base for location verbs, as proved by the impossibility of *etxe-an-tu* [house-INE-TU] ‘be at home’, *etxe-tik-tu* [house-ABL-TU] ‘go from home’ and *etxe-rantz-tu* [house-APPR-TU] ‘go towards home’.

Additionally, I have also discussed the implication of positing zero morphs in the lexicalization of location verbs. The fact that there is a restriction on GoalP to form location verbs has led me to the conclusion that there cannot be an
empty verb of motion to which P has incorporated, as originally proposed in H&K (1993). A verb like *joan* ‘go’ can combine with allative (GoalP), ablative (SourceP) and approximative (ScaleP) adpositional phrases, and if, in derived location predicates, there was a silent counterpart of *joan* ‘go’, we would expect it to combine also with all of them. Nevertheless, since location verbs can only be built on GoalPs, a silent counterpart of *joan* ‘go’ cannot be present in these configurations. This implies that the Process head might not be necessarily of verbal category after all, since *ra*, which usually spells out an adposition, can lexicalize it (see Berro 2015).

In this paper, I have accounted for the restriction of location verbs on GoalPs arguing that: (i) different types of adpositions—Place, Goal, Source and Scale—are syntactically represented as independent but related heads, following particularly Pantcheva’s (2011) analysis; and (ii) the vocabulary item *ra*, corresponding to the Basque allative adposition, can be associated with the Process head, because Goal and Process are topologically and structurally equivalent. Location verbs cannot be built on other kinds of adpositions such as the inessive -*n*, the ablative -*tik* or the approximative -*rantz*, since Place, Source and Scale are not equivalent to Process. This way, this paper gives evidence in favor of the isomorphism between the event configuration (i.e. vP) and PP, in the spirit of previous proposals such as Koopman (2000) and Den Dikken (2010). Additionally, I have shown that location verbs represent another instance of the Goal/Source asymmetry (Levin 1993, Lakusta 2005, Landau & Lakusta 2005, Gehrke 2008, Pantcheva 2011) attested cross-linguistically and in the psycholinguistic domain. It is worth pointing out that English location predicates pose the same Goal/Source asymmetry. To my knowledge, all derived location predicates involve a Goal path, rather than a Source (i.e. *shelve* means to put sth on a shelf, rather than take sth from a shelf) a fact which may suggest that the limit of possible location predicates claimed in this section is not restricted to Basque, but that it may also hold in other languages. Whether this asymmetry holds cross-linguistically is an interesting issue which I leave for further research.

5 References

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