Crosslinguistic Variation in the Morphosyntax of Deadjectival Verbs: Spanish -ear vs. Catalan -ejar

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1. Introduction
• **Goal:** structural derivation, semantic interpretation and morphological representation of -ejar / -ear deadjectival verbs [EDV] within the configurational model of syntactic argument structure proposed in Hale and Keyser (1993, 1998, 2002) as developed in e.g. Mateu 2002; Harley 2005; Acedo-Matellán 2010; Acedo-Matellán and Mateu 2011, 2013, which assumes a single generative mechanism for all structure-building (e.g. Distributed Morphology or Borer’s 2005 framework).
• **Questions:** 1. Detailed empirical description of an as yet unnoticed crosslinguistic variation between Catalan and Spanish EDV. 2. Grammatical difference between inchoative degree achievements [DA], which show variable telicity, and EDV that can never entail the final endstate that A expresses.
• **In a nutshell:** Cat. -ejar consistently expresses a stative attribution of a property and cannot be causativized; Sp. -ear are change of state [COS] verbs that may license an external causer and show variable telicity (like regular DA). Configurational difference: whereas Sp. -ear is structurally analyzed as an unaccusative event of change of state that expresses a transition, Cat. -ejar establishes a stative predicative relation that includes a central coincidence Place(NEAR).

2. Empirical overview
Crosslinguistic morphological variation.
(1) a. sord\textsubscript{A} - ensordir, sordejar
   
   deaf    deafen    go.deaf
   
   b. groc\textsubscript{A} - engroguir, esgrogueir, groguejar
   
   yellow   to.yellow   turn.yellow    go.yellow

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2.1. **EDV in Catalan and Spanish**

- They behave differently: (i) base selection, (ii) causation and morphological realization, (iii) telicity and result entailment, and (iv) sensitivity to perfective aspect.

2.1.1. **Base selection**

- Catalan EDV can take adjectives denoting colors or other A, which can be interpreted as the result of internal causation. Spanish EDV can only take color A as bases.

<table>
<thead>
<tr>
<th>A-base</th>
<th>Catalan</th>
<th>Spanish</th>
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<tbody>
<tr>
<td></td>
<td>COS EDV</td>
<td>COS EDV</td>
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<tr>
<td>‘clear’</td>
<td>aclarir</td>
<td>clarear</td>
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<tr>
<td>‘sour’</td>
<td>agir</td>
<td>agrar</td>
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<td>‘long’</td>
<td>allargar</td>
<td>llargar</td>
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<td>‘bitter’</td>
<td>amargar</td>
<td>amargar</td>
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<tr>
<td>‘wide’</td>
<td>ampliar/eixamplar</td>
<td>ampliar/ensanchar</td>
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<td>‘raw’</td>
<td>---</td>
<td>cruejar</td>
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<tr>
<td>‘rough’</td>
<td>enasprir</td>
<td>asprejar</td>
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<td>‘bald’</td>
<td>enealbir</td>
<td>calbejar</td>
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<td>‘sick’</td>
<td>emmalaltir</td>
<td>malaltejar</td>
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<td>‘high’</td>
<td>enaltir</td>
<td>altejar</td>
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<td>‘sweet’</td>
<td>endolcir</td>
<td>dolcejar</td>
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<td>‘dark’</td>
<td>enfosquir</td>
<td>fosquejar</td>
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<td>‘brilliant’</td>
<td>enllevantar/enllevantir</td>
<td>lluentejar</td>
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<td>‘rancid’</td>
<td>enrancir</td>
<td>ranciejar</td>
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<td>‘blond’</td>
<td>enrossir</td>
<td>rossejar</td>
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<td>‘deaf’</td>
<td>ensordir</td>
<td>sordejar</td>
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<td>‘short’</td>
<td>escurçar</td>
<td>curtejar</td>
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<td>A-base</td>
<td>Catalan</td>
<td>Spanish</td>
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<td></td>
<td>COS - DA</td>
<td>EDV</td>
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<tr>
<td><em>grey</em></td>
<td>agrisar</td>
<td>grisejar</td>
</tr>
<tr>
<td><em>white</em></td>
<td>emblanquir/blanquejar</td>
<td>blanquejar</td>
</tr>
<tr>
<td><em>blue</em></td>
<td>emblavir</td>
<td>blavejar</td>
</tr>
<tr>
<td><em>black</em></td>
<td>ennegrir</td>
<td>negrejar</td>
</tr>
<tr>
<td><em>green</em></td>
<td>enverdir</td>
<td>verdejar</td>
</tr>
<tr>
<td><em>red</em></td>
<td>envermellir</td>
<td>vermellejar</td>
</tr>
<tr>
<td><em>yellow</em></td>
<td>esgrogueir/engroguir</td>
<td>groguejar</td>
</tr>
</tbody>
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Table 1. Non-color verbs

2.1.2. Causation and morpho-syntactic realization

- Catalan EDV: attribution of a property (with exceptions); cannot be causativized.

(6) a. fosca- enfosquir, fosquejar
   dark darken go.dark
b. El día {s’ha enfosquit / fosqueja}. 
the day SE-has darkened / goes dark
   c. Els núvols {han enfosquit / *fosquegen} el dia.
      the clouds have darkened go.dark the day

- Spanish EDV: can have an external causer.

(7) a. claroA- clarear, aclarar
b. El día ya clareaba. / El día aclaraba por detrás de la sierra.
c. Este tratamiento clarea/aclara la piel de forma natural.

(8) a. dulceA- endulzar, *dulcear
b. Este vino {*dulcea / tiene un sabor dulce}.
c. Las bodegas {endulzan / *dulcean} el vino con azúcar.

(9) a. oscuroA- oscurecer, *oscurear
b. El día ha {oscurecido / *oscureado}.
c. Las nubes {han oscurecido / *oscurean} el día.

(10) Causative amarillear/*groguejar ‘to make/become yellow’
    a. Un sol africano, cenital, amarilleaba las fachadas modernistas de la avenida.
       (A. Pérez-Reverte, La reina del Sur, Alfaguara, 2002) [CREA]
b. … y grandes manchas amarilleaban el papel de la pared
       (A. Pérez-Reverte, El maestro de esgrima, Alfaguara, 1995) [CREA]
2.1.3. Telicity and result entailment

- Catalan EDV are always atelic, Spanish EDV show variable telicity (Krifka 1998).
- DA with variable telicity. Atelicity described as the lack of entailment that coolness has been reached.

(12) a. The soup cooled in 10 minutes. \[\text{TELIC}\]
    b. The soup cooled for 10 minutes. \[\text{ATELIC}\]

- Catalan EDV: lack of culmination is not an entailment, but part of the denotation of EDV.

(13) Aquesta samarreta grogueja. \[\text{Catalan}\]
    this t-shirt goes.yellow

- Yellowness as the natural endpoint of a transition, though not linguistically encoded.

(14) La camisa amarilleó \{en / durante\} dos minutos. \[\text{Spanish}\]

(15) a. A l’hivern el dia fosqueja \{*en / durant\} mitja hora, mentre que … \[\text{Catalan}\]
    at the-winter the day goes.dark in during half hour while that
    b. A Mart, el dia s’enfosqueix \{en / durant\} dos minuts.
    at Mars the day SE-goes.dark in during two minutes

- Result entailment: only Spanish EDV can entail that the result has been achieved.

(16) Las hojas basales están amarilleadas. \[\text{Spanish}\]
    (Junta de Andalucía, Boletín oficial de información agraria, 2013, 1168:9)

(17) a. El dia està \{enfosquit / *fosquejat\}. \[\text{Catalan}\]
    the day is darkened gone.dark
    b. El vi està \{enrancit / *ranciejat\}.
    the wine is become.rancid gone.rancid

- Ambiguity of ‘two days’ in Spanish EDV (time it takes for the event to culminate, or time before event initiates (Kearns, 2007, 2011)).
(18) Telicity *amarillear /*groguejar
   a. Las hojas del arce amarillean en dos días.  \textit{Spanish}
      the leaves of the-maple go.yellow in two days

2.1.4. \textit{Sensitivity to perfective aspect}

- Catalan EDV show incompatibility with perfective viewpoint aspect.

(19) a. *L’an\textsuperscript{y} passat en Joan va calbejar. / ?En Joan va calbejar des
      the.year past the Joan \textit{AUX} go.bald the Joan \textit{AUX} go.bald from
      dels 30 anys. \textit{Catalan}
      of.the 30 years
   b. La camisa ha groguejat una mica #(des de la primera rentada).
      the shirt has gone.yellow a bit from of the first wash
      (cf. s’ha esgrogueït)
      \textit{SE}-has turned.yellow

(20) a. La camisa ha amarilleado por zonas. \textit{Spanish}
   b. Las mimosas hace ya mucho que verdearon.

2.1.5. \textit{Catalan EDV vs. Spanish EDV: The general pattern}

<table>
<thead>
<tr>
<th>Catalan EDV</th>
<th>Spanish EDV</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Can have color bases and other adjectives expressing a property that is interpreted as internally-caused.</td>
<td>Can have color bases and are constrained to a few other adjectives that are interpreted as internally-caused (although judgments vary with respect to the latter).</td>
</tr>
<tr>
<td>2. Cannot be causative (with some exceptions).</td>
<td>Are causative (with some exceptions).</td>
</tr>
<tr>
<td>3. Are atelic.</td>
<td>Show variable teliccity.</td>
</tr>
<tr>
<td>4. Do not involve a final state.</td>
<td>May involve a final state.</td>
</tr>
<tr>
<td>5. Restricted to imperfective tenses.</td>
<td>Show no aspectual constraints.</td>
</tr>
</tbody>
</table>

Table 3. \textit{Crosslinguistic variation Catalan - Spanish with EDV}

2.2. \textit{Exceptions to the general pattern}

- Sp. \textit{redondear}, \textit{saneear}; Cat. \textit{netejar} (‘clean/wipe’), \textit{sanejar} (‘clean up/drain’).
- Cat. \textit{blanquejar} (‘whiten’) and \textit{humitejar} (‘dampen/wet’); Sp. \textit{calvear} (‘go bald’), \textit{flaquear} (‘weaken’), \textit{flojear} (‘weaken’)
  \textsuperscript{1} and \textit{sordear} (‘go deaf’).

\textsuperscript{1} As pointed out in Gumiel, Nieto & P\textael{e}rez-Jim\textael{e}nez (1999), the adjective \textit{flojo} has a stage-level meaning ‘loose’ and an individual-level meaning ‘poor’. Whereas the COS verb \textit{aflojar} takes the former as a base, the EDV verb \textit{flojear} takes the latter.
3. Previous approaches

- Spanish: descriptive and mainly lexicographic (e.g. Pena 1993, Rifón 1997, Serrano Dolader 1999, Gràcia et al. 2000); deadjectival change of state verbs (e.g. Gumiel, Nieto & Pérez-Jiménez 1999).

- Catalan: descriptive works (Gràcia et al.’s 2000 and Bernal’s 2000); or Padrosa’s (2005) analysis of denominal and deadjectival *en-* verbs within Reinhart’s theta system model.


(21) -ear1: redondear, sanear, simultaneear [+telic]  
  \[ \text{event CAUSE ([thing x], [event BEGIN ([thing y]) ([state base])])] \]

(22) -ejar1: blanquejar, sanelar, verdejar [atelic]  
  \[ \text{event CAUSE ([thing x], [event BECOME ([thing y]) ([property base])])] \]

(23) -ear3: escasear, sordear, cojeear, vaguear [-telic]  
  \[ \text{event DO ([thing x], [event MOVE ([thing y], [path TO ([property base])])]) e.g. banquetear, bordear} \]

(24) -ejar3: negrejar, sordejar, llunyejar [-telic]  
  \[ \text{event BECOME ([thing x], [property base]) e.g. martillear, telefonear, parpadear} \]

- Fábregas and Varela (2006) on denominal *-ear* verbs that may contain an infix or not.

(25) comisquear / besuquear  
  \[ v \{r, \text{O-a(r)}\} [pp \{v \text{-isk-e / -uk-e}\} [x{\text{com- / bes-}}]]][]

(26) comisquear, burbujear  
  \[ v \{r, x \text{com- / burbuj-}\} [p \{v \text{-isk-e / O-e}\}] [\text{O-a(r)}]]

- Martín (2007) on denominal *-ear*. Variation depends on N and the ways in which they incorporate into the structure.

(27) a. [event DO ([thing x], [entity Nbase])]

  b. [event MOVE ([thing x], THROUGH ([entity Nbase]))] e.g. banquetear, bordear

  c. [event DO (CON ([thing x], ([entity y], ([entity Nbase])))] e.g. martillar, telefonear, parpadear

- Cano (2011) on denominal motion verbs.

(28) [event DO ([thing x])] e.g. rumbear, serpentear, balancearse, cabecear, taconear
4. Theoretical background

4.1. Argument structure


(29) The screen cleared.

\[
[\text{VP} [\text{NP} [\text{N screen}]] [\text{V'} \text{V} [\text{AP} [\text{A clear}]]]]
\]

- Gumiel, Nieto & Pérez-Jiménez (1999): causative-inchoative deadjectival verbs as locative and location verbs, and resultative constructions. Deadjectival verbs and resultatives differ from EDV in that the former are always clearly resultative.

(30) \[\text{Juan engordó los pollos.} \quad [\text{VP} [\text{Juan} [\text{v'} [\text{v} \text{Ø}]] [\text{VP} [\text{V} \text{pounded}] [\text{PP} [\text{the metal}]] [\text{DegP/QP} [\text{AP} \text{flat}]]]]\]

(31) John pounded the metal flat.

\[
[\text{VP} \text{John} [\text{v'} [\text{v} \text{Ø}]] [\text{VP} [\text{V} \text{pounded}]] [\text{PP} [\text{the metal}]] [\text{DegP/QP} [\text{AP} \text{flat}]]]]
\]

- Recent work on P (e.g. Koopman, 2000; Zwarts 2005; Gehrke 2008; den Dikken 2010; Svenonius 2010, \textit{inter alia}): terminal coincidence P as PathP and PlaceP.
- Jackendoff’s (1973, and subsequent work) PATH, PLACE, TO, VIA, ON, etc.
- Talmy’s (1975, and subsequent work): Figure as the entity that moves with respect to a potential Ground.
- Acedo-Matellán (2010): PathP introduces a transition that encodes the change, and a PlaceP introduces a Figure/Ground configuration that establishes a location or state.
- Acedo-Matellán (2010) or Acedo-Matellán and Mateu (2013): the combination of different ‘flavors’ of eventive v and adpositional p (PlaceP and PathP) give rise to a set of possible argument structure configurations.
  - a single pP corresponds to a PlaceP that establishes a predicative relation that expresses a state (H&K’s central coincidence relation).
  - if a second p is added, a PathP establishes a transition that expresses a change, (H&K’s terminal coincidence relation).
  - if v takes a specifier, causative configuration; if not, unaccusative configuration.
  - 5 basic argument structure configurations: (i) unergative and transitive verbs of creation and consumption; (ii) atelic transitive events; (iii) transitive events of
change of state or location; (iv) atelic unaccusative events; and (v) unaccusative events of change of state or location.

(33) Atelic unaccusative event: Dinosaurs existed.

\[ v [\text{PlaceP} [\text{DP Dinosaurs}] [\text{Place'} \text{Place} \sqrt{\text{EXIST}}]] \]

(34) Unaccusative event of change of state: The sky cleared.

\[ v [\text{PathP} [\text{DP The sky}] [\text{Path'} \text{Path} [\text{PlaceP} [\text{DP The sky}] [\text{Place'} \text{Place} \sqrt{\text{CLEAR}}]]]] \]

- Terminal Ground as “a DP or root at Compl-Place when PathP is projected”.
- Central Ground as “a DP or root at Compl-Place when no PathP is projected”.

4.2. Word formation: Distributed Morphology

- DM model (Halle and Marantz 1993, 1994, and related work) as a syntactic theory with Late Insertion. Structural vs. conceptual semantics. Category-neutral roots that must merge with categorizing heads.

(35) redden

\[ v \sqrt{\text{AMARRILL}} \]

- Oltra-Massuet’s (1999, 2000) analysis of theme vowels as dissociated morphemes introduced at PF as a result of a well-formedness condition on functional heads.

5. Syntax - semantics mapping

5.1. Spanish COS -ear verbs

- Spanish EDV: variable telicity, can license an external causer, entail a result, and show no restrictions with respect to perfective aspect.

(36) Unaccusative event of COS: The plane landed. (Acedo-Matellán and Mateu 2013)

\[ v [\text{PathP} [\text{DP The plane}] [\text{Place'} \text{Place} \sqrt{\text{LAND}}]] \]

(37) The sky cleared (Acedo-Matellán 2010:54)

\[ v [\text{PathP} [\text{DP The sky}] [\text{Path'} \text{Path} [\text{PlaceP} [\text{DP The sky}] [\text{Place'} \text{Place} \sqrt{\text{CLEAR}}]]]] \]

(38) Las hojas amarilean. ‘The leaves are turning/going yellow.’

\[ v [\text{PathP} [\text{DP Las hojas}] [\text{Path'} \text{Path} [\text{PlaceP} [\text{DP Las hojas}] [\text{Place'} \text{Place} \sqrt{\text{AMARRILL}}]]]] \]


5.2. Catalan stative EDV

- Catalan EDV: not resultative, they do not denote transitions, they cannot be inflected in the perfective, and they do not admit a causer expressed as an external argument.
(39) a. \[ vP [DP Dinosaurs] [Place \sqrt{EXIST}] \] ‘Dinosaurs existed (for a long time).’

b. \[ PlaceP [DP Sue] [Place \sqrt{\Theta}] [IN] [DP Barcelona] \] ‘Sue is in Barcelona.’

- Catalan EDV denote states that are eventualities.
  - Catalan EDV pattern with states with respect to their subinterval properties (Dowty 1979): in The wheat field is going yellow, each of the subintervals are states of the wheat field having properties of yellowness, no change involved.
  - Like states, Catalan EDV are marginal with parar de (‘stop’).

(40) ?? Els camps de blat han parat de groguejar.
the fields of wheat have stopped of go.yellow

- Like states, they do not receive a habitual reading in the present tense.

(41) Aquest vi agreja / aspreja.
this wine goes.bitter goes.rough

- Catalan EDV have properties of D(avidsonian)-states.²
  - D-states can be located in time and space.

(42) a. He vist fosquejar el dia.
have seen go.dark the day

b. He vist verdejar els camps.
have seen go.green the fields

- Catalan EDV can license locative and temporal modification.

(43) a. El dia fosqueja a les 5.
the day goes.dark at the 5

b. Aquest vi agreja / aspreja en el paladar.
this wine goes.bitter sharp in the palate

- Catalan EDV can combine with manner adverbials.

²There are apparent counterexamples to this classification. There is speaker variation with respect to examples like (i), which seem to behave rather like (ii), thus showing properties of K-states. As pointed out by an anonymous reviewer, this cannot be due to a structural difference, but to the kind of relation established between the specific Figure and the Ground, witness the existence of examples like (iii).

(i) a. Aquest verd grogueja.
this green goes.yellow

b. *He vist groguejar el verd.
have seen go.yellow the green
c. Aquest verd grogueja *a les 5 / *fàcilment.
this green goes.yellow at the 5 easily

(ii) Aquest verd és grogós.
this green is yellowish

(iii) El verd de les fulles grogueja al començament de la tardor.
the green of the leaves goes.yellow at the beginning of the fall
(44) a. La camisa nova gрогueja a clapes.
    the shirt new goes.yellow at patches
b. El dia fosquejava desagradablement.
    the day went.dark unpleasantly
• Catalan EDV have a stative structure, but with PlaceP(NEAR).

(45) a. El camp de blat gрогueja.
    the field of wheat goes.yellow
b. El camp de blat és proper al groc.
    the field of wheat is close to.the yellow
• NEAR yellow denotes a set of vectors whose origin is a state of yellowness and whose length is a pragmatically determined number $r$ (cf. Zwarts’s 1995 notion of near), i.e. the abstract P NEAR establishes a relation between an origin and a pragmatically determined number $r$ such that the distance between the origin and the subject of the predication is $r$.
• This abstract preposition NEAR is thus responsible for the fact that in Catalan EDV, the RESULT cannot be achieved.
• Cat. groguejar as a stative configuration.3

(46) Les fulles groguegen. ‘The leaves are going yellow.’

Catalan 
[\text{vP} v [\text{PlaceP} \ [\text{DP Les fulles} ] \ [\text{Place'} P(\text{NEAR}) \ \text{\check{GROC}}]]]
• The apparent verbal motion, ‘go-A’, derives from P(NEAR), a P that expresses a formal approaching relation.
• -ejar as a decomposed Ø-e-j-a(r) (Fábregas and Varela 2006) (but amarguejar (‘go sour/bitter’) - amargotejar (‘go a bit sour/bitter’), parlar (‘to talk’) - parlotejar (‘to chat’).

6. Conclusions and directions for further research
• Crucial difference between Catalan and Spanish EDV in the syntactic configuration.
• Sp. -ear involves an unaccusative event of COS and can appear in a configuration of a transitive event of COS, contains a terminal coincidence relational structure.
• Cat. -ejar is inserted in a stative predicative configuration, it involves the abstract preposition P(NEAR).
• Open issues:
  o Whether the deadjectival verb is formed on a root or on an already categorized root.

3 As suggested to us by J. Mateu (p.c.) and an anonymous reviewer, there is an alternative analysis, namely that -ejar predicates be unergative. Tests are inconclusive. We leave this issue open for further research.
Well-supported and detailed morphosyntactic internal structure of -ear-/ejar.

Incorporate A/N -ear-/ejar verbs into the analysis (Oltra-Massuet & Castroviejo, submitted).

(47) a. *benefit*<sub>A/N</sub> - *beneitejar*<sup>Catalan</sup>
dumb dumb.EJAR

b. *dropo*<sub>A/N</sub> - *dropejar*<sup>Spanish</sup>
iddle iddle.EJAR

(48) a. *bobo*<sub>A/N</sub> - *bobear*<sup>Spanish</sup>
b. *holgazán*<sub>A/N</sub> - *holgazanear*

Establish a more explicit analogy between -ejar and -ós/-enc (English -ish), and provide a morpho-semantic analysis of the latter (cf. Morris 2009, Sugawara 2012).

(49) a. *roig/ vermell* vs. *rog-enc/ vermell-ós*<sup>Catalan</sup>
red red reddish reddish

b. *red* vs. *red(d)-ish*

References


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4 For an analysis of French denominal verbs in -er like *robinsonner* (lit. Robinson.ER ‘to live like a Robinson’) or -iser like *diplomatiser* (lit. diplomat.ISER ‘to behave as a diplomat’), see Martin and Piñón (2013).


Oltra-Massuet, Isabel; Castroviejo, Elena (submitted). A syntactic approach to the morpho-semantic variation of -ear. Ms. URV & ILLA, CCHS-CSIC.


