

# Defectivity as stem suppletion in French and Spanish verbs<sup>1</sup>

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## Outline

- We examine a type of defectivity in French and Spanish verbs where the gaps in the paradigm cover the exact same space as the stem suppletion patterns.
  - Following Aronoff (1994, ch2., pp 54-55), we propose to analyse this phenomenon as a case of suppletion.
  - More precisely, we propose that these cases of suppletion are the lexicalisation of a gap in the stem space.

## 1 Three types of defective verbs

- Distinguish three types of defectivity:
  - (1) a. historically motivated:  
isolated forms that are vestiges of verbs that have disappeared as lexemes with a full paradigm
  - b. semantically motivated:  
1/2 person of impersonal verbs (*I rain*, imperatives of verbs equivalent to CAN)
  - c. morphologically motivated (verbs who lost part of their paradigms or whose paradigms were never fleshed out (Baerman, 2008))

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- Examples:

(2) Examples of historically motivated defectivity:

- Spanish *descolorido* "discolored" only appears in past participle form<sup>2</sup>
- French APPAROIR "to appear" is only used in the 3sg present (*il appert*).

• This type of paradigm can be understood as the trace of disappearing lexemes where some forms remain used either in one category (participle/adjective) or in idiomatic expressions.

(3) Examples of semantically motivated defectivity

- French FALLOIR "to be compulsory that ..." only appears in 3sg finite forms, in the past participle and the infinitive because its subject can only be expletive *il*: *il faut, il aurait fallu, il va falloir* "it is necessary, it would have been necessary, it will be necessary".

(4) Examples of morphologically motivated defectivity

- French CLORE "to close" lacks present tense indicative 1pl and 2pl forms and the imperative is completely absent.
- Spanish ABOLIR "to abolish" lacks present tense indicative sg and 3pl forms, the whole present subjunctive and sg form of imperative while the rest of its paradigm is full.

- In what follows we will concentrate on morphologically motivated defectivity.

## 2 Morphologically defective verbs in French and Spanish

- Examples of morphologically defective verbs (Morin (1987, pp. 33–35))

- (5) a. je fris, tu fris, il frit, nous ???, vous ???, ils ???  
I fry, you.sg fry, he fries, we ???, you.pl ???, they ???
- b. je clos, tu clos, il clôt, nous ???, vous ???, ils closent  
I close, you.sg close, he closes, we ???, you.pl ???, they close

- As pointed out by Morin, this defectivity is structured:

(6) *Il n'y a pas de verbes qui sont défectifs pour la 3pl mais non pour la 1pl, ni pour la 3sg mais non pour la 3pl de l'Ind. prés. Ceci peut s'interpréter comme la conséquence d'une règle générale de distribution des radicaux qui étend automatiquement à la 3pl le radical de la 1pl et à la 3sg celui de la 3pl.*

There are no verbs that are defective for the 3pl but not for the 1pl, nor verbs that are defective for the 3sg but not for the 3pl of the present indicative. This can be interpreted as a consequence of a general rule of stem distribution that automatically extends the stem of the 1pl to the 3pl and the stem of the 3pl to the 3sg.

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<sup>2</sup>The infinitive *descolorir* "to discolor" is listed in some dictionaries since the infinitive is the traditional citation form, but this form is not acceptable to the informants we consulted, i.e. it would not be used in a sentence requiring an infinitive.

- In the list of French defective verbs given by (Arrivé, 1997), the morphologically defective ones are the following:

- (7)
- ABSOUUDRE, DISSOUUDRE, TRAIRES, EXTRAIRE, DISTRAIRE, SOUSTRAIRE: lack simple past, subjunctive imperfective
  - PAÎTRE, SEOIR: lacks simple past, subjunctive imperfective, past participle
  - CLORE: lacks present 1pl, 2pl, imperfective, simple past, subjunctive imperfective, imperative pl
  - MESSEOIR: lacks past participle, simple past, subjunctive imperfective, gerund
  - DÉCHOIR: lacks imperfective, imperative, gerund<sup>3</sup>
  - BRAIRE: lacks present 1pl, 2pl, imperfective, simple past, subjunctive imperfective, imperative pl, present participle, subjunctif present 1pl, 2pl
  - FRIRE: only has present sg, future, conditional, infinitive, past participle
  - GÉSIR: only has present, imperfective, present participle
  - DÉPOURVOIR: only has infinitive, past participle, simple past, subjunctive imperfective
  - CHOIR: only has infinitive, past participle

- Some of these verbs have complete counterparts inflecting the same way for all existing forms and having complete paradigms:

- (8)
- |                                       |                            |
|---------------------------------------|----------------------------|
| a. RÉSOUDRE for ABSOUUDRE, DISSOUUDRE | f. POURVOIR for DÉCHOIR    |
| b. REPAÎTRE for PAÎTRE                | g. RIRE for FRIRE          |
| c. LIRE for GÉSIR                     | h. POURVOIR for DÉPOURVOIR |
| d. ENCLORE for CLORE                  | i. VOIR for CHOIR          |
| e. ASSEOIR for SEOIR, MESSEOIR        |                            |

- The morphologically defective verbs of Spanish listed in (Mateo and Sastre, 1995) are the following<sup>4</sup>:

- (9) ABOLIR, AGREDIR, AGUERRIR, ARRECIR, ATERIR, BALBUCIR, BLANDIR, COLORIR, DESPAVORIR, EMBAÍR, EMPEDERNIR, GARANTIR, GUARNIR, MANIR, PRETERIR, PULIR, TRANSGREDIR, TRASGREDIR: lack subjunctive present, present sg, 3pl, imperative sg

### 3 The analysis

- For both French and Spanish, the gap patterns for this type of defectivity parallel the patterns observed in previous analyses of stem suppletion in French (Bonami and Boyé, 2002) and Spanish (Boyé and Cabredo Hofherr, 2006).

- To describe the distribution of suppletion, Bonami and Boyé (2002) and Boyé and Cabredo Hofherr (2006) introduce the notion of stem space

<sup>3</sup>DÉCHOIR is not listed as defective for present 12pl by Arrivé (1997) but attested *déchoyons* and *déchoyez* forms are predominantly imperative forms.

<sup>4</sup>SOLER is listed as defective but the absence of future forms is semantically motivated and the other forms are attested.

- (10) The stem space has two components:
- A partition of the paradigm where forms belonging to the same part always pattern together in relation to suppletion (cf. the pioneering work in Pirrelli and Battista, 2000). Each part of the partition shares a *stem*.
  - Default-relationships between the different stems (the *stem-graph*).

- Suppletion is modeled as lexicalisation of a stem, which blocks the application of the default-relationships between stems.

- Defectivity systematically targets the same sets of forms as suppletion, we therefore propose that the morphological defectivity observed in Spanish and French is in fact the suppletion of a gap in the stem space.

### 3.1 The modelisation

- Observation: In Romance, certain forms in the verbal paradigm show morphological changes as a whole ("as a family") (Maiden, 1992; Pirrelli and Battista, 2000).

- (11) Example: the forms of the *conditionnel* and the *futur* in French have the same stem for all verbs.

- Assumptions underlying the stem-space adopted here (from Bonami and Boyé, 2002)

- (12) a. Assume a **single set of affixes** for all verbs (excluding only isolates such as *nous sommes*, *vous êtes*, *vous dites*, *vous faites*).
- b. Assume a decomposition of the forms into **stem + affix**.

- Claims of the stem-space analysis:

- (13) a. The stem of a regular verb in French and Spanish is not constant across the paradigm.
- b. There are implicational relations between stems that are only overridden by suppletion: stems are organised into a graph.
- c. Regular verbs respect default relations between stems.

- Affixes, organisation of forms into stems in the paradigm, stem-graph (Spanish, taken from Boyé and Cabredo Hofherr, 2006).

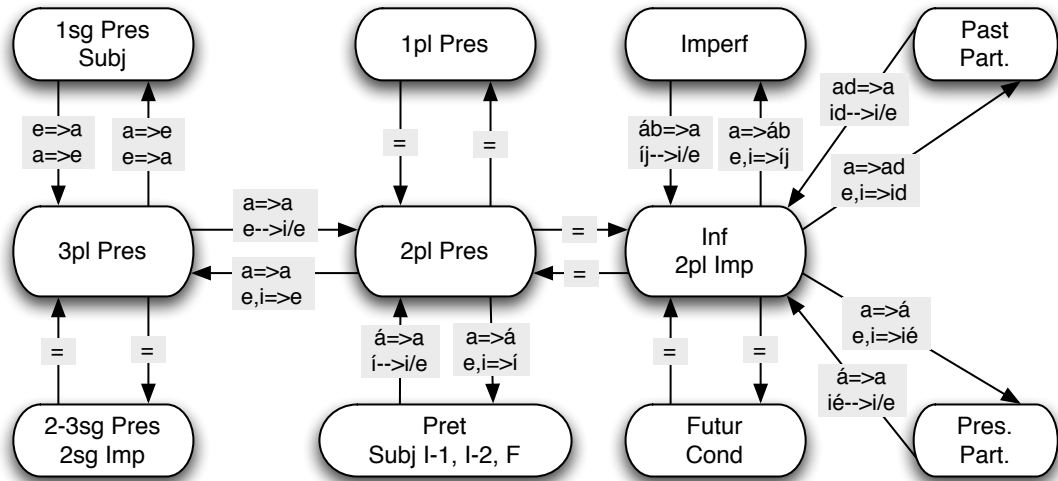
(14)

Stem+Affix	1sg	2sg	3sg	1pl	2pl	3pl
Present Ind.	S1+o	S2+s	S2	S3+mos	S4+js	S5+n
Present Subj.	S1	S1+s	S1	S1+mos	S1+js	S1+n
Preterite	S6	S6+ste	S6+o	S6+mos	S6+stejs	S6+ron
Imperfective Ind.	S7+a	S7+as	S7+a	S7+amos	S7+ajs	S7+an
Imperfective1 Subj.	S6+ra	S6+ras	S6+ra	S6+ramos	S6+rajs	S6+ran
Imperfective2 Subj.	S6+se	S6+ses	S6+se	S6+semos	S6+sejs	S6+sen
Future Ind.	S8+re	S8+ras	S8+ra	S8+remos	S8+rejs	S8+ran
Future Subj.	S6+re	S6+res	S6+re	S6+remos	S6+rejs	S6+ren
Conditional.	S8+rija	S8+rijas	S8+rija	S8+rijamos	S8+rijajs	S8+rijan
Imperative	–	S2	–	–	S9+d	–
Infinitive				S9+r		
Present Part.				S10+ndo		
Past Part.				S11+o		

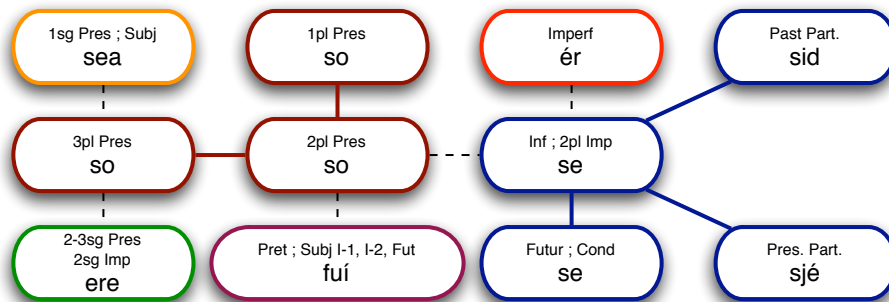
(15) Stem indices

Present Ind. 1sg, Present Subj.	S1	Imperfective Ind.	S7
Present Ind. 23sg, Imperative 2sg	S2	Future Ind., Conditional	S8
Present Ind. 1pl	S3	Infinitive, Imperative 2pl	S9
Present Ind. 2pl	S4	Present Part.	S10
Present Ind. 3pl	S5	Past Part.	S11
Preterite, Imperfective 12 Subj., Future Subj.	S6		

(16) Stem graph<sup>5</sup>



(17) Stem graph for SER



• The analysis of French

(18) Stem+Affix

	1sg	2sg	3sg	1pl	2pl	3pl
Present Ind.	S3	S3	S3	S1+õ	S1+e	S2
Present Subj.	S7	S7	S7	S8+jõ	S8+je	S7
Preterite	S11+I	S11	S11	S11+m	S11+t	S11+Ir
Imperfective Ind.	S1+ε	S1+ε	S1+ε	S1+jõ	S1+je	S1+ε
Imperfective Subj.	S11+s	S11+s	S11	S11+s+jõ	S11+sje	S11+s
Future Ind.	S10+re	S10+ra	S10+ra	S10+rõ	S10+re	S10+rõ
Conditional.	S10+rε	S10+rε	S10+rε	S10+rjõ	S10+rje	S10+rε
Imperative	-	S2	-	S6+õ	S6+e	-
Infinitive				S9+r		
Present Part.				S4+ã		
Past Part.				S12		

<sup>5</sup>As discussed in (Boyé and Cabredo Hofherr, 2006), the information available does not uniquely determine a single graph. The graph shown here is one of the possibilities compatible with the evidence.

(19) Stem indices

Present Ind. 12pl, Imperfective Ind.	S1	Present Subj. sg, 3pl	S7
Present Ind. 3pl	S2	Present Subj. 12pl	S8
Present Ind. sg	S3	Infinitive	S9
Present Part.	S4	Future, Conditional	S10
Imperative 2sg	S5	Simple past, Imperfective Subj.	S11
Imperative 12pl	S6	Past Part.	S12

### 3.2 Defective stem spaces

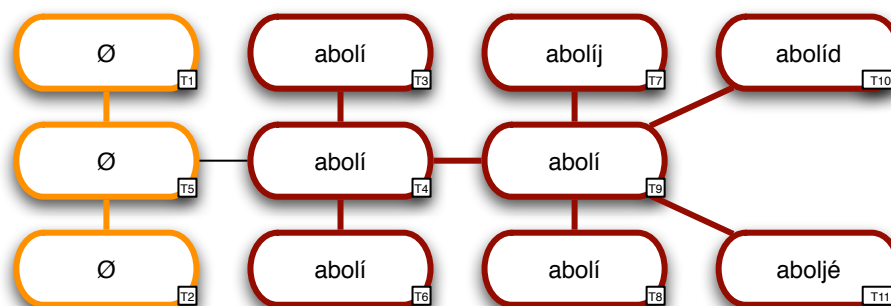
- The defective verbs of French can now be analysed as follows:

(20) Defective verbs : gaps in the stem space

- a. ABSOUDRE, DISSOUDRE, TRAIRE, EXTRAIRE, DISTRAIRE, SOUSTRAIRE: S11=∅
- b. PAÎTRE, SEOIR: S11=S12=∅
- c. CLORE: S1=S6=S11=∅
- d. MESSEOIR: S4=S11=S12=∅
- e. DÉCHOIR: S1=S4=S5=S6=∅
- f. BRAIRE: S1=S4=S6=S8=S11=∅
- g. FRIRE: S1=S2=S4=S5=S6=S7=S8=S11=∅
- h. GÉSIR: S4=S5=S6=S7=S8=S9=S10=S11=∅
- i. DÉPOURVOIR: S1=S2=S3=S4=S5=S6=S7=S8=S10=∅
- j. CHOIR: S1=S2=S3=S4=S5=S6=S7=S8=S10=S11=∅

- For Spanish we can give the following graph for abolir-type defective verbs:

(21) Stem-graph for ABOLIR



### 3.3 Learning gaps

- If morphologically defective verbs in French and Spanish supplete gaps, the question arises, how gaps can be learned.

- We propose that learners are sensitive to the fact that certain forms that seem possible are used by speakers with a frequency far below their expectance (Daland et al., 2007) allowing them to identify existing gaps.

- We propose to distinguish this type of defectivity from that described by (Albright, 2003) which we call *form avoidance*. This phenomenon can create a suppletive gap for the following generations of learners. Form avoidance can arise from different factors:

(22) Morphological ill-formedness: Spanish ABOLIR.

a. Two possible 1sg present indicative forms *abolo/ abuelo*.

b. If the form were *abolo*, the verb would violate a regularity observed for the language: 1sg present tense is part of the 16 forms in the paradigm that have a morphological well-formedness requirement requiring vocalic harmony between the prethematic vowel and the thematic vowel (Boyé and Cabredo Hofherr, 2004).

c. If the form were *abuelo*, then *abolir* would have to have a lexical entry with a diphthongising vowel, which does not seem to agree with the speakers' intuitions.

(23) Sociolinguistic conflict: French adjectives NASAL, LABIAL, PALATAL, TONAL, "nasal, labial, palatal, tonal"

a. Two possible forms for the mpl *nasals/nasaux, labials/labiaux, palatal/palataux*

b. *Nasals* [nazal], is a regularisation of the pattern *normal/normaux* [nɔʁmo], which is perceived to be inappropriate for a word belonging to specialist jargon.

c. *Nasaux* [nazo] follows the pattern *normal/normaux*, but since the word is not part of the frequent vocabulary, the irregular pattern is perceived as pretentious.

## 4 Conclusion

- We have argued that morphological defectivity in French and Spanish should be analysed as suppletion of a gap in the stem space.

- A structured representation of defectivity is motivated by the fact that this type of defectivity follows the same patterns that are observed for suppletion.

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