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# Romance Conjugation Class Features could be Syntactic (and on certain assumptions must be)

#### 0. The Point

- Bermúdez-Otero (2013:21) formulates the following question associated with Theme Vowels:
  - o **The Coupling Question**: How are stems correctly coupled with their corresponding Theme Vowels?
- This talk focuses on the Coupling Question as it arises in Latin and Romance verb morphology. I will argue for the following conclusions:
  - If you're committed to the idea that the lexicon contains simple pieces only,<sup>1</sup> then conjugation class features remain the best answer to the Coupling Question in Latin and Romance verbs.
  - Although standard versions of Distributed Morphology are associated with the claim that conjugation class features cannot be syntactic, the traditional arguments for this position don't go through in versions of DM with "Late Insertion at Both Interfaces".
- This much establishes that conjugation class features *could be* syntactic.
- For a while now I've been working on a version of DM which adheres to Strict (Fodor+) Modularity of the kind advocated by Newell and Sailor (2023).
  - o I've come to the conclusion that, if this version of DM is correct, then Romance conjugation class features *must be* syntactic.
  - o If there's time, I'll tell you why.
- Talk Roadmap:

1

- 1. Why conjugation class features?
- 2. Conjugation class features could be syntactic
- 3. Strict (Fodor+) Modularity
- 4. An argument that conjugation class features must be syntactic in a certain version of Strictly Modular DM
- 5. Conclusion

1

<sup>&</sup>lt;sup>1</sup> This stricture rules out the solution to the Coupling Question in Bermúdez-Otero (2013) et seq., which requires permitting the narrow lexicon to contain complex structures made up of more than one piece. In a different sense of "lexicon", it also rules out Nanosyntactic approaches in terms of the structural size of the verb stem's lexical entry, such as Cortiula (2023) and Fábregas (2022, 2023a, 2023b). These perspectives deserve a lot more engagement than they will receive in this handout.

- NB—alongside the **Coupling Question**, Theme Vowels also raise:
  - The Identity Question: Do Theme Vowels correspond to one (or more) syntactic terminal(s)? If so, which one(s)?
- The Identity Question will mostly float around in the background today, never quite coming into focus.
  - But one's answer to the Coupling Question constrains one's answer to the Identity Question.

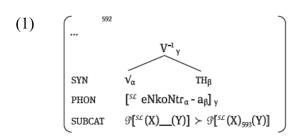
## 1. Why Conjugation Class Features?

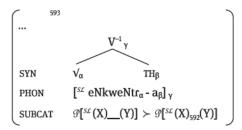
## 1.1 Conjugation Class Features and their Alternatives

- I take it to be uncontroversial that conjugation class membership in Latin and Romance is not plausibly reducible to any *independent* semantic, morphosyntactic, or phonological factor (Calabrese and Petrosino 2023; Oltra-Massuet 1999, 2020, many others).<sup>2</sup>
- In the earliest generative works on Romance morphophonology, accounts of this appealed to bespoke conjugation class features (e.g. Harris 1969:98-100; Saltarelli 1966:102-112; implicitly also Schane 1968:124).
- Later, Davis (1991:Ch 4, for Spanish; independently also Arregi 2000) and Oltra-Massuet (1999, for Catalan) proposed that conjugation class features should be broken down and the conjugations themselves cross-classified according to a feature geometry over which markedness relationships could be defined.
  - This allowed for a way of dealing with cases of morphological neutralization in conjugation classes—an important point to which we return.
- Nevertheless, there has been persistent unease about these features, and an accompanying desire to do away with them. At the root of this unease:
  - The apparent ad-hocness of the features
  - The perception that they commit one to morphology-specific mechanisms (including perhaps a Morphomic level along the lines of Aronoff 1994)

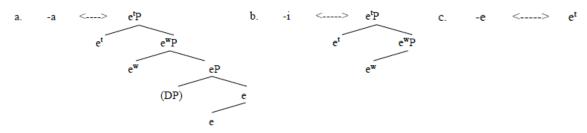
 $^2$  Kastner and Martin (2021) show experimentally that French speakers are aware that change of state predicates are statistically over-represented in the French -ir verbs (often called the  $2^{nd}$  conjugation), and that new change-of-state predicates can be assigned to that (otherwise unproductive-looking) conjugation class. They argue on this basis that the -i(s) element usually taken to be this conjugation's theme suffix actually has at least one substantive alloseme. Nevertheless, French is not a counterexample to the statement in the main text, since Kastner and Martin also show that there are change of state verbs in other conjugations and non-change of state verbs in the  $2^{nd}$  conjugation. Hence, conjugation class membership is not *reducible* to any independent semantic factor even on Kastner and Martin's analysis of French.

- Some alternatives to conjugation class features that have been proposed:
  - Complex stems as the input to the grammar (Bermúdez-Otero 2013 on Spanish; the examples below are from pp.72-73)

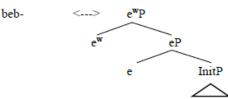




- Stem size interacts with theme vowel size in a Nanosyntactic framework (Cortiula 2023 on Friulian; Fábregas 2023 on Spanish)
- (2) Spanish Theme Vowel Lexical Entries (Fábregas 2023, his (22))



(3) A Sample Spanish 2<sup>nd</sup> Conjugation Verb Lexical Entry (Fábregas 2023, his (30))



- Deny that Theme Vowels are separate morphemes—have them be part of the phonological UR of the verb root (entertained in passing by Ulfsbjornnin 2024 for Italian; cf. also Spaelti 2004, Emonds and Spaelti 2005, who argue in favor of this approach for Latin declension markers).
- The first two approaches may be viable, and I won't argue explicitly against them here—my reasons for not adopting them have more to do with broader architectural matters than with their account of Theme Vowels per se.
- The third approach doesn't raise such broader architectural issues, but it is unacceptable (to me and to many others working on Romance Theme Vowels).
- The next section makes explicit some reasons why.

## 1.2 Conjugation Class Features > Not Segmenting Out Romance Theme Vowels

- Two arguments:
  - o Harris' Argument
  - The Argument from Syncretism

## 1.2.1 Harris' Argument

- This argument is stated for Spanish by Harris (1969:99-100): "There are just three conjugational classes and hence three different theme vowels. This fact is not captured if each theme vowel is fully specified in the lexicon. That is, if theme vowels are fully specified lexically, then it is a lexical idiosyncracy of each verb stem that its theme vowel is not /u/ or /o/. This is simply wrong."
- While the number of conjugation classes and of theme vowels varies across Romance languages, the force of Harris's argument holds just as well for all of them, as far as I can see. (Better, given that the others usually have larger vowel inventories than Spanish!)
- A version of Harris' objection also applies to the analysis of Latin nominal declension in Spaelti (2004), Emonds and Spaelti (2005), et seq.
  - Spaelti's claim that "Latin noun stems can end in any of the phonemes of the language" (2004:133) is not true; it neglects the fact that vowel length is phonemic in the language.
  - Once phonemic vowel length is properly accounted for, one finds that noun stems, once shorn of their case and number endings, never end in  $\bar{a}$ , e,  $\bar{i}$ ,  $\bar{o}$ , or  $\bar{u}$  underlyingly. That is, half the phonemic vowel inventory is missing from the relevant environment.
  - o If one were tempted to extend the Spaelti/Emonds tradition to Latin verb conjugation, one would run into the question of why no verb stem shorn of its inflectional suffixes ends in underlying a, i, e,  $\bar{o}$ , or (with the possible exception of the verb fu-/fore mentioned by Cser 2020:150) o, u; and of why stem-final  $\bar{u}$  is found only in certain perfectum and 'third' stems.

#### 1.2.2 The Argument from Syncretism

- In many Romance languages, Theme Vowel distinctions (most commonly, but not only, between -er(e) and -ir(e) verbs) collapse in certain tense/aspect/mood combinations.
- In many such cases, this neutralization doesn't seem to be statable in phonological terms, but a description in terms of morphological *syncretism* does work.

<sup>&</sup>lt;sup>3</sup>  $3^{rd}$  declension noun stems that end in surface  $-\bar{o}$  in the nominative singular are not counterexamples to this generalization—they always involve an underlying -n deleted word-finally (e.g.  $serm\bar{o}$ ,  $serm\bar{o}nis$  'speech'), sometimes with compensatory lengthening and quality alternation when the preceding vowel is underlyingly short (e.g.  $hom\bar{o}$ , hominis 'person', from underlying /homon/, following Oniga 2014:74).

- But a description in terms of syncretism, of course, presupposes that Theme Vowels are separate morphological pieces rather than being part of the root.
- Spanish exhibits an especially dramatic instance of this.<sup>4</sup>
- (4) a. 2<sup>nd</sup> conjugation verb *comer* 'to eat'

b. 3<sup>rd</sup> conjugation verb *vivir* 'to live'

INDICATIVE:				INDICATIVE:	
PRESENT	IMPERFECT	PRETERITE	FUTURE	PRESENT	IMI
como	comía	comí	comeré	vivo	vivi
comes	comías	comiste	comerás	vives	viv
come	comía	comió	comerá	vive	viv
comemos	comíamos	comimos	comeremos	vivimos	viv
coméis	comíais	comisteis	comeréis	vivís	vivi
comen	comían	comieron	comerán	viven	vivi
CONDITIONAL	:			CONDITIONAL	J:
comería				viviría	
comerías				vivirías	
comería				viviría	
comeríamos				viviríamos	
comeríais				viviríais	
comerían				vivirían	
SUBJUNCTIVE				SUBJUNCTIVE	l:
PRESENT	IMPERFECT-1	IMPERFECT-2	FUTURE	PRESENT	IM
coma	comiera	comiese	comiere	viva	viv
comas	comieras	comieses	comieres	vivas	viv
coma	comiera	comiese	comiere	viva	viv
comamos	comiéramos	comiésemos	comiéremos	vivamos	viv
comáis	comierais	comieseis	comiereis	viváis	vivi
coman	comieran	comiesen	comieren	vivan	viv
IMPERATIVE:				IMPERATIVE:	
come				vive	
comed				vivid	
INFINITIVE:	GERUND:	PAST PARTICIPLE:		INFINITIVE:	GE
comer	comiendo	comido		vivir	viv

INDICATIVE:				
PRESENT	IMPERFECT	PRETERITE	FUTURE	
vivo	vivía	viví	viviré	
vives	vivías	viviste	vivirás	
vive	vivía	vivió	vivirá	
vivimos	vivíamos	vivimos	viviremos	
vivís	vivíais	vivisteis	viviréis	
viven	vivían	vivieron	vivirán	
CONDITIONAL				
viviría				
vivirías				
viviría				
viviríamos				
viviríais				
vivirían				
SUBJUNCTIVE:				
PRESENT	IMPERFECT-1	IMPERFECT-2	FUTURE	
viva	viviera	viviese	viviere	
vivas	vivieras	vivieses	vivieres	
viva	viviera	viviese	viviere	
vivamos	viviéramos	viviésemos	viviéremos	
viváis	vivierais	vivieseis	viviereis	
vivan	vivieran	viviesen	vivieren	
IMPERATIVE:				
vive				
vivid				
INFINITIVE:	GERUND:	PAST PARTICIPLE:		
vivir	viviendo	vivido		

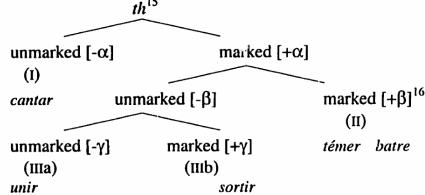
- The highlighted cells illustrate cases of Theme Vowel syncretism which do not seem statable in phonological terms.
- [Sidenote 1: The 3<sup>rd</sup> conjugation Theme Vowel -i- lowers to -e- systematically when it is post-tonic. This is easier to handle phonologically, which is why I have conservatively not counted it as a syncretism.]
- [Sidenote 2: Another alternative to describing this as syncretism would have a readjustment rule apply specifically to the 2<sup>nd</sup> declension theme vowel in certain tenses, raising it from /e/ to [i], as in Harris (1969:183, the first subcase of his rule (1)). But Harris's analysis, too, presupposes conjugation class features and a segmentation of the Theme Vowel as a separate piece.]

<sup>4</sup> The future subjunctive is now obsolete in spoken Spanish; it appears only in legalistic and otherwise archaic written registers. I have included it in the tables because this form *was* in productive use a few centuries ago. Spanish-with-the-future-subjunctive is therefore clearly a possible state of the language faculty, which grammatical theory must confront.

- Other instances of Theme Vowel neutralization/conjugation class syncretism:
  - **Portuguese:** 2<sup>nd</sup> conjugation (-*e*-) collapses with the 3<sup>rd</sup> conjugation (-*i*-) in the past participle and the imperfect indicative; in the present subjunctive both have -*a* (Nitti and Ferreira 2005:x-xiv).
  - o **Italian:** The 3<sup>rd</sup> conjugation (-*i*-) collapses with the 2<sup>nd</sup> conjugation (-*e*-) in the gerund; in the present subjunctive both have -*a* or -*ia* (Colaneri and Luciani 2007:xiii-xxvii).
  - Catalan:  $2^{nd}$  conjugation (-*e*-) collapses with the  $3^{rd}$  conjugation (-*i*-) in the imperfect indicative; Both the  $1^{st}$  conjugation (-*a*-) and the  $2^{nd}$  conjugation have - $\varepsilon$  in the present subjunctive  $1^{st}$  and  $2^{nd}$  person plural forms (Oltra-Massuet 1999:39; 48).
- (5) Neutralization of 2<sup>nd</sup> and 3<sup>rd</sup> Conjugation in the Catalan Imperfect (Oltra-Massuet 1999:39, her (58))

	I Conjugation	II Conjugation III Conjugation		jugation
	'cantar'	'témer'	'sortir'	'unir'
Impf.	kənt-'a-b-ə-Ø	təm-'i-Ø-ə-Ø	surt-'i-Ø-ə-Ø	un-'i-Ø-ə-Ø
Ind.	kənt-'a-b-ə-z	təm-'i-Ø-ə-z	surt-'i-Ø-ə-z	un-'i-Ø-ə-z
[+Past] [-Perf] [-Subj]	kənt-'a-b-ə-Ø	təm-'i-Ø-ə-Ø	surt-'i-Ø-ə-Ø	un-'i-Ø-ə-Ø
	kənt-'a-b-ə-m	təm-'i-Ø-ə-m	surt-'i-Ø-ə-m	un-'i-Ø-ə-m
	kənt-'a-b-ə-w	təm-'i-Ø-ə-w	surt-'i-Ø-ə-w	un-'i-Ø-ə-w
	kənt-'a-b-ə-n	təm-'i-Ø-ə-n	surt-'i-Ø-ə-n	un-'i-Ø-ə-n

- As foreshadowed in Section 1.1, this type of pattern, like other syncretism patterns, can be captured if conjugation classes are cross-classified by more primitive features.
- (6) Oltra-Massuet (1999:10, her (9)) Theme Vowel Feature Hierarchy for Catalan



(7) Oltra-Massuet (1999:11, her (10)) VIs for Catalan Theme Vowels

(a) /u/ 
$$\leftrightarrow$$
 [+ $\beta$ ] / \_ [+Participle, +Past]  
/ $\emptyset$ /  $\leftrightarrow$  [+ $\beta$ ] / \_ [+Future]  
/e/  $\leftrightarrow$  [+ $\beta$ ] / 

(b) 
$$/\epsilon \int / \leftrightarrow [-\gamma] / [-Past]$$
  
 $/i/ \leftrightarrow [+\alpha] / < elsewhere >$ 

(c) 
$$/\varepsilon/ \leftrightarrow [-\alpha]/$$
 [+Part, +Plural]  
/a/  $\leftrightarrow [-\alpha]/$  

Morphologically-conditioned neutralizations, such as that between the 2<sup>nd</sup> and 3<sup>rd</sup> conjugation in the imperfect indicative, can then be captured as cases of Impoverishment (like Rule 12a in Oltra-Massuet 1999:11):

(8) 
$$[+\beta] \rightarrow \emptyset / \_ [+Past, -Perf, -Subj]$$

#### 1.3 Interim Summary

- If you're working within a DM-like architecture (one where non-trivial treelets cannot occur as part of the narrow lexicon or the vocabulary), then conjugation class features remain the best approach to Latin and Romance Theme Vowels.
- This is because Romance Theme Vowel allomorphy exhibits neutralization/syncretism patterns.
  - With conjugation class features, the normal DM tools for dealing with such patterns (underspecification, the Elsewhere Condition, and Impoverishment) can go to work.
  - o Without conjugation class features, they can't.
- If we must live with conjugation class features, then we must also confront the question of their status.
- Traditional DM, starting with Oltra-Massuet (1999), takes them to be *dissociated* in the sense of Embick (1997)—that is, not part of syntactic representations, but introduced in the PF component. The next section revisits that idea.

#### 2. Conjugation Class Features could be Syntactic

- The reason for treating conjugation class features (and theme vowels themselves) as dissociated is stated by Oltra-Massuet (2020:5) as follows: "For constructionist theories like Distributed Morphology (DM) (Halle & Marantz 1993, 1994), conjugations and theme vowels cannot be present in the syntax, as they are arbitrary properties of vocabulary items that do not contribute any syntactic or semantic information (Embick 2000, p.188)."
- Embick (2000:188) formulates the principle of *Feature Disjointness*, and goes on to say "Conjugation and declension class features, which are simply memorized with particular nouns or verbs, are clear examples of features of this kind; although they are required for morphological well-formedness in languages like Latin, they have no syntactic status."
- (9) Feature Disjointness (Embick 2000:188, his (2))
  Features that are phonological, or purely morphological, or arbitrary properties of vocabulary items, are not present in the syntax; syntacticosemantic features are not inserted in morphology.

- The reference to "syntacticosemantic" features suggests that having a non-trivial semantic interpretation is criterial for being present in the syntax.
  - o [Sidenote: it should be remembered that Embick 2000:208-211 ultimately suggests an analysis of Latin deponents which departs from this principle, and from (9), which is thus assigned the status of a strong preference of the Language Faculty, rather than an exceptionless principle.]
- This is made even clearer in Embick and Noyer (2007:310), who have the following to say:
  - "The alternative [to the notion of dissociated morphemes—NM]—requiring that all pieces be syntactic—is a stronger position since it admits no non-syntactic pieces at all. However, this alternative would require the presence of functional heads in the syntax that possess no semantic content, an undesirable move inasmuch as it complicates the syntactic derivation with objects that play (by hypothesis) no role in syntax or semantics."
- In a footnote immediately after this passage, Embick and Noyer cite a remark in Chomsky (2001:43, n12) that "Functional categories lacking semantic features require complication of phrase structure theory...a departure from good design to be avoided unless forced." Compare also the reasoning leading to the abolition of Agr nodes in Chomsky (1995:349-355).
- **But:** these conceptual arguments, along with the coherency of the notion of "syntacticosemantic feature", dissolve completely in an architecture with Late Insertion at Both Interfaces (see especially Preminger 2021).
- In such a theory, there are Rules of Semantic Interpretation (allosemy) and there are Rules of Exponence (Vocabulary Insertion) which each apply independently to the output of syntax.
- The prediction is that allosemy and allomorphy can't see each other, don't care about each other, and can in principle be orthogonal to each other. This is the correct prediction (examples based on ones from Marantz 1984; the use of indices to represent root identifiers is from Harley 2014).
- (10) The boxer threw up.
- (11) The boxer threw her mouthguard at the referee.
- (12) The boxer threw the fight.
- (13) The boxer throws up (whenever she gets nervous).
- (14) The boxer throws her mouthguard at the referee (when she's frustrated).
- (15) The boxer throws the fight (when instructed to do so by her paymasters).
- (16) The boxer has thrown up.
- (17) The boxer has <u>thrown</u> her mouthguard at the referee.
- (18) The boxer has thrown the fight.

(19) Toy Rules of Exponence (Allomorphy)
$$\sqrt{147} \leftrightarrow /\theta.\text{nuw} / \underline{\qquad} [T:Past]$$

$$\sqrt{147} \leftrightarrow /\theta.\text{now} / \underline{\qquad} [T:Past]$$

$$T:PAST \leftrightarrow \emptyset / \{\sqrt{147}, ...\} \underline{\qquad} PARTICIPLE:PAST \leftrightarrow /n//\{\sqrt{147}, ...\} \underline{\qquad} (X:PAST \leftrightarrow /d/ \text{Rule for regular past tense/past participles})$$

(20) Toy Rules of Interpretation (Allosemy)
$$\sqrt{147} \iff \sqrt{147} \iff \sqrt$$

- Once you're in such a theory, you are already committed to the idea that there are root-specific features in the syntax, like  $\sqrt{147}$ . Given the Y model, these have to be in the syntax to be visible to both kinds of rule in (19) and (20).
- For empirical reasons, you're also committed to the idea that such features don't always have non-trivial semantic contributions associated with them (see also Marantz and Myler forthcoming and references cited there for numerous examples of expletive allosemy):
- (21) Form without (independent) meaning (Aronoff 1976:12-13)

(5)	X=fer refer	X=mit remit	X=sume resume	X=duce reduce
	defer	demit	resume	deduce
	prefer		presume	
	infer			induce
	confer	commit	consume	conduce
	transfer	transmit		transduce
		submit	subsume	
		admit	assume	adduce
		permit		

			t.
(6)	permit	permission	permissive
	remit	remission	remissory
	excrete	excretion	excretive
	assert	assertion	assertive
	digest	digestion	digestive
	prohibit	prohibition	prohibitive

<sup>&</sup>lt;sup>5</sup> This squiggly arrow notation for Rules of Semantic Interpretation is adapted from Champollion and Coppock (2023; they use only the single, rightward-facing squiggly arrow). It is meant to emphasize how similar in format such rules are to Rules of Exponence.

9

- The *mit~miss* alternation has different conditioning than the alternations involving *crete*, *sert*, *gest*, *hibit*.
- Aronoff's point: the grammar must be able to refer to *mit* as a unit (speakers know at least one idiosyncratic thing about it), despite its lack of a consistent meaning. In our terms, this means that *mit* has to correspond to a piece in the syntax.
- Heidi Harley (2014 and elsewhere) has pointed out the existence of cases like this involving free morphemes; the underlined expressions in <u>kith</u> and kin, the whole kit and <u>caboodle</u> and similar have no meaning in isolation.
- Given all this, I see no conceptual barrier to the notion that features like Oltra-Massuet's  $[+/-\alpha]$ ,  $[+/-\beta]$ , and  $[+/-\gamma]$  could be present in the syntax:
  - There's no way to enforce a requirement that all morphosyntactic features have a non-trivial semantic contribution in such an architecture.
  - No complications of the theory of phrase structure of the kind Chomsky was worried about arise either—there's no deletion of uninterpretable features; there are just features, some of which occur as part of the structural description of particular Rules of Semantic Interpretation, some of which don't. The syntax proper has no way of knowing which is which, and no reason to care about it even if it had.
  - The notion that such features "play no role in syntax" has no obvious force either. Pieces don't have "roles in syntax", they have distributions regulated by (operations triggered by) features. And there's no *conceptual* barrier to stating distributions in terms of inflectional class features.<sup>6</sup>
- Possible empirical issues with the idea that inflectional class features could be present in syntax do not seem insurmountable:
  - o Alexiadou and Müller (2008:136-137): No verb c-selects for only a certain declension class of nouns.
    - No verb c-selects for \*any\* aspect of nominal functional structure. We don't conclude that e.g., determiners are not in the syntax (although we could conclude that they aren't heads, as Bruening 2009, 2020 does).
  - Alexiadou and Müller (2008:137): Inflectional class features never spread to dependents under concord—e.g., there's no declension class agreement on adjectives, unlike for gender and number.
    - But adjectives themselves have declension classes, so perhaps this
      is a matter of locality (the piece that spells out declension class
      features will be nearest to the declension class features on the Adj).
    - Likewise, if every 'v' head in Latin and Romance had at least one conjugation class feature, locality would ensure that theme vowel allomorphy is only ever sensitive to the nearest 'v'.

10

<sup>&</sup>lt;sup>6</sup> See Myler 2024 for an analysis which employs Latin nominal declension class features as syntactic features which regulate distribution (by triggering Merge).

- Different suppletive allomorphs of the same root sometimes appear to belong to different conjugation classes (e.g. *fer-ē<sub>II(I)</sub>-ba-t* "(s)he was carrying.", *tūl-i<sub>III</sub>-t* "(s)he has carried", *l-ā<sub>I</sub>-t-us* "carried (participle)")
  - This is potentially a very serious problem, since it would seem to indicate that the conjugation class features are really a property of the Vocabulary Item, rather than the syntactic piece.
  - But: Apparent cases of this I'm familiar with are actually better analyzed in terms of lexical decomposition and/or Impoverishment (IOU a paper showing this), in particular because such changes of conjugation class across different TAM combinations are often also found in the absence of root suppletion.
- I conclude that conjugation class features could be syntactic after all.
- Given that they could be, how do we decide whether they *are* syntactic or not?
- I'd like to address this issue too if there's time, but first we need a digression to talk about modularity.

# 3. Strict (Fodor+) Modularity

- Grammar consists of subsystems which trade in representations of rather different sorts:
  - O Morphosyntax: n, v, a, p, +/-Finite,  $\sqrt{\ }$ , indices like 147...
  - Phonology: [Nasal], [+/-Back], ... (spoken languages)
     [Crossed], [Ulnar], ... (signed languages per Brentari 2019)
  - Semantics: x, e, w,  $\lambda$ ,  $\forall$ ,  $\exists$ , predicates, relations,...
- These are obviously pretty different animals. A plausible and strong hypothesis is that each of these subsystems is a module in the sense of Fodor (1983). A Fodorian module exhibits a number of properties, including:
  - Domain Specificity (its representational vocabulary is specific to that module).
  - Informational Encapsulation (while other parts of the mind, modules or not, may access the output of a module, they cannot interfere with the module's internal computations).
- Any theory of grammar in terms of Fodorian modules has to confront the question of how the relationship between modules is governed.
- Obviously, at the very least we need to state correspondences across these different representational alphabets—call these Rules of Transduction.
- In versions of DM with Late Insertion at Both Interfaces, there are two types of Rules of Transduction, both of which apply to syntactic structure.

(22) 
$$\sqrt{147} \leftarrow \rightarrow /0 \text{ ruw} / \boxed{\text{[T:Past]}}$$
 (Rule of Exponence)  $\sqrt{147} \leftrightarrow \lambda e_s.\text{vomit(e)}$  / up (Rule of Semantic Interpretation)

- The strongest and simplest hypothesis about the Architecture of the Grammar from the point of view of modularity would be that this is all we need: that is, there are no rules which mix and match the representational vocabularies of Morphosyntax, Semantics, and Phonology, *except* the rules of transduction.
- This is the hypothesis which Newell and Sailor (2023), following Scheer (2011, 2012, 2020), urge us to pursue. For reasons I'm happy to reveal if challenged, I have taken to calling this hypothesis "Strict (Fodor+) Modularity".
- A version of Distributed Morphology which adheres to Strict (Fodor+) Modularity would have the following properties:
  - Readjustment Rules would have to be abandoned (they make reference to phonological and morphosyntactic primitives simultaneously, but are not transductive), and the slack taken up either by the Rules of Exponence or by phonology (as in recent work by Heather Newell, Shanti Ufsbjorninn, their co-authors, and their students, e.g. Pérez Herrera 2023).
  - Operations which manipulate morphosyntactic tree structures, like Fission, Fusion, Impoverishment, Node Sprouting, Lowering, and Generalized Reduplication as it appears in Arregi and Nevins 2018, would have to be either (a.) reconstrued as part of the morphosyntax module (i.e., as syntactic operations), or (b.) abandoned entirely.
- As you can see, adhering to Strict (Fodor+) Modularity has interesting and wideranging consequences for DM as a framework.
- A surprising instance of this, which I've been teasing you with since the beginning of this talk, concerns (Romance) conjugation class features.

- 4. An argument that conjugation class features must be syntactic in a certain version of Strictly Modular DM
- (I) Syntax is a module in the Strict (Fodor+) sense, meaning that it obeys Domain Specificity. In concrete terms, this means that there is a representational alphabet (the syntactic features) which satisfies the following conditions: (a.) it is the only representational alphabet that syntax can read, (b.) no other Fodorian module can read it.
- (II) The Y model is true.
- (III) Phonology and Semantics are also modules in the Strict (Fodor+) sense. (Rules of Exponence and Rules of Semantic Interpretation are transducers, rather than modules.)
- (IV) Impoverishment Rules exist.
- (V) Impoverishment Rules have the format  $X \rightarrow \emptyset / Y_Z$ , where Y and Z may be empty. X, (and when non-empty) Y and Z in this schema are syntactic features.
- (VI) By (I) through (V), Impoverishment rules are part of the syntax (see also Keine 2010; Doliana 2013).
- (VII) Romance conjugation class features sometimes undergo Impoverishment (Oltra-Massuet 1999 et seq; section 1.2.2 above).
- (VIII) By (VI) and (VII), Romance conjugation class features are part of the syntax.

#### Some (perhaps unnecessary) clarification of the status of the steps in this argument:

- Premises (I)-(III) are just the definition of a Strictly Modular version of DM.
- Premise (IV) makes this a version of DM with Impoverishment (as standard).
- Premise (V) is just the standard characterization of Impoverishment itself.
- Step (VI) is a lemma—in a Strictly Modular version of DM, Impoverishment is syntactic by definition, because of the features it manipulates.
- Premise (VII) is received opinion in the broader DM literature.
- Step (VIII) is of course the conclusion, and the headline of this section.

#### 5. Conclusion

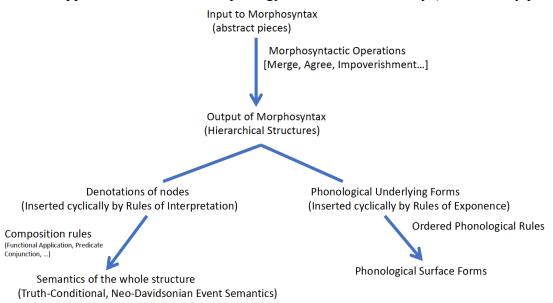
- I disagree with Collins and Kayne (2023) about a lot of things, but I agree with their point (Collins and Kayne 2023:11-12) that the possibility that Theme Vowels and conjugation class features are part of syntax has been dismissed too hastily in the DM literature.
- The traditional theoretical and empirical arguments for keeping these things out of syntax all either (i) fail to be convincing on the merits, or (ii) lose coherency in the context of a theory with "Late Insertion at both interfaces".

- The conclusion that Romance conjugation class features could be (or perhaps must be) syntactic might disturb you.
- But it shouldn't, if you believe in the Autonomy of Syntax (as I do).

Thanks for listening!

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# Appendix: Distributed Morphology with Strict Modularity (as I currently practice it)



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