

# Clitics in a parallel architecture

Joost Kremers

University of Göttingen, Germany

`joost.kremers@phil.uni-goettingen.de`

Clitics and beyond

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## What's 'ə clitic?

- ▶ The term *clitic* is notoriously difficult to define.
- ▶ A clitic somehow sits between words and affixes.
- ▶ But:
  - ▶ Romance object clitics
  - ▶ English reduced auxiliaries
  - ▶ English possessive 's
  - ▶ Second-place clitics
  - ▶ ...

## What's'ə word?

- ▶ The same holds true for the term *word*.
- ▶ Solution: to distinguish between different sets of properties.
  - ▶ Phonological word
  - ▶ Morphosyntactic word
  - ▶ Lexeme

# Different sets'f properties

Goal: to analyse clitics in three different sets of properties:

- ▶ Phonological
- ▶ Syntactic
- ▶ Semantic (though not in this talk)

And to do this in a grammar framework that treats these properties as part of a *single* structural object.

## ə'Parallel architecture

- ▶ Jackendoff (1997, 2002) proposes a parallel grammar architecture. (Cf. also Sadock 1992, 2012, HPSG, etc.)
- ▶ Representation of a lexical item:

(1) MAN  $\leftrightarrow$   $\begin{bmatrix} \text{N, sg} \\ \text{count} \end{bmatrix}$   $\leftrightarrow$  mæn

## ə'Parallel architecture

- ▶ We can represent affixes in the same way:

$$(2) \text{ GERUND} \leftrightarrow \begin{bmatrix} \text{N, sg} \\ uV \end{bmatrix} \leftrightarrow \text{ɪŋ}|_{\omega}$$

- ▶ The affix in (2) has a prosodic *alignment* requirement.
- ▶ In other words: the fact that *ing* is a suffix is encoded in its phonology.

## Poss-*ing* 'n' *Ing-of*

- ▶ Syntactically, *ing* attaches to V or VP (cf. Abney 1987).
- ▶ In syntax, this is all we need:
  - ▶ V° and *ing* do *not* need to combine in syntax.
  - ▶ The semantics can be read off the tree.

# Syntax-Phonology mapping

The main question for us:

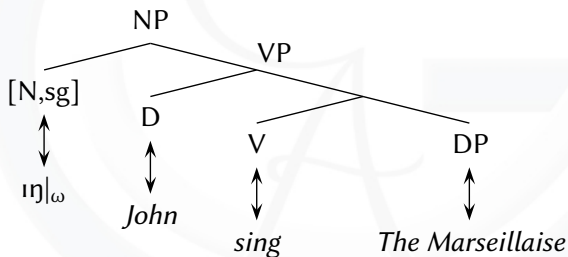
- ▶ How does the system combine the verb and *ing*?



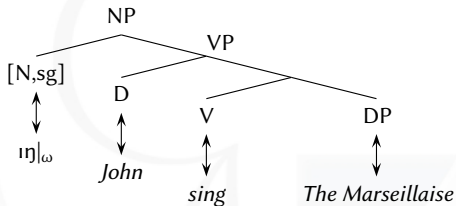
## an'Example tree

Consider the following tree:

(3)



## an'Example tree



- ▶ The VP is linearised as *John sing the Marseillaise*.
- ▶ *Ing* is in the wrong place and must “move”.
- ▶ Proposal: nothing actually moves in the traditional sense.
- ▶ Instead, the phonology takes care of placement of *ing*.

# Syntax-phonology mapping

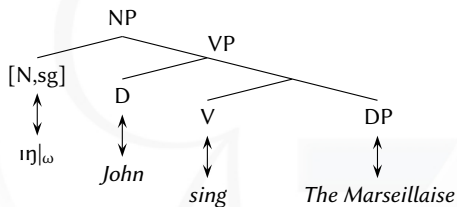
The mapping from syntax to phonology is governed by rules:

- ▶ Prosodic constituency (Selkirk 1981, Nespor & Vogel 1986, Truckenbrodt 1995)
- ▶ Mapping principles (Sadock 1992, Ackema & Neeleman 2004)
  - ▶ Input & Linear Correspondence

## Mapping principles

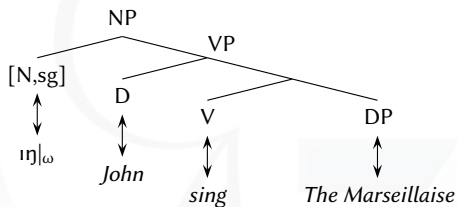
- (4) a. *Input Correspondence:*  
If A selects (a projection of) B,  $\Phi(A)$  selects  $\Phi(B)$ .
- b. *Linear Correspondence:*  
If a node A is structurally external to B, then  $\Phi(A)$  is linearly external to  $\Phi(B)$ .

## Mapping principles



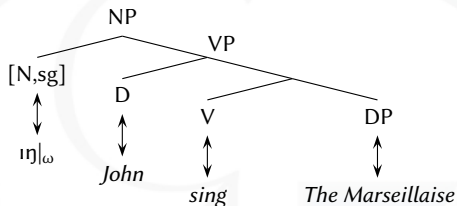
- ▶ LC forces the linearisation *John sing the Marseillaise*.
- ▶ Elements with prosodic requirements are not subject to LC.
- ▶ They *are* subject to IC (Kremers 2012).

## Mapping principles



- ▶ *Ing* selects the category V, so  $\Phi(\textit{ing})$  must attach to  $\Phi(V)=/sɪŋ/$ .
- ▶ *Ing*'s prosodic requirement is a right-alignment requirement.
- ▶ /ɪŋ/ therefore attaches to the right of /sɪŋ/.

# Autosegmental phonology



Another way to look at it:

- ▶  $\Phi(\textit{ing})$  has a prosodic requirement and therefore maps onto an autosegmental tier (hence it is exempt from LC).
- ▶ Left-to-Right Association associates  $\Phi(\textit{ing})$  with the first element it can associate with.
- ▶ Input Correspondence tells us what the “*ing*-bearing units” are.

## Latin *que*

(5) bon+ī      puer+ī      bon+ae-que      puell+ae  
good+.pl.f   boy+pl.m   good+pl.f-and   girl+pl.f  
'good boys and good girls'

- ▶ Embick & Noyer (2001): *que* attaches after the first MWd.
- ▶ Problem: MWd cannot be defined in their (and my) framework (*bare phrase structure*).
- ▶ Besides, it is demonstrably wrong.



## Latin *que*

- (6) a. circum-que ea loca (7) a. in rēbus-que  
around-and those places in things-and  
'and around those places' 'and in things'
- b. contrā-que lēgem b. dē prōvinciā-que  
against-and law from province-and  
'and against the law' 'and from the province'

- ▶ *Que* attaches to multisyllabic prepositions, but not to monosyllabic prepositions.
- ▶ *Que* attaches to the first *prosodic word* (Agbayani & Golston 2010).

## Latin *que*

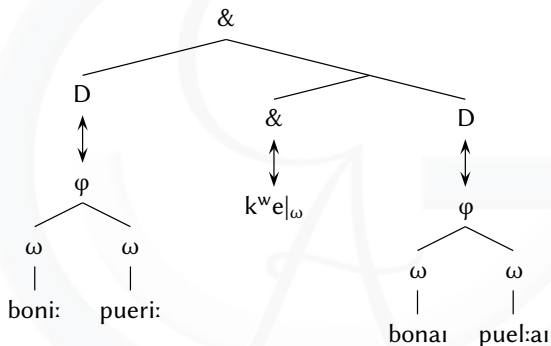
- ▶ The lexical entry for *que* is (8):

$$(8) \text{ AND} \leftrightarrow \&^\circ \leftrightarrow k^w e|_\omega$$

- ▶ *Que* resembles *ing* in having a prosodic requirement.
- ▶ At the same time it differs from *ing*, because it has no syntactic selectional restriction.
- ▶ As a result, it attaches to any category.

## Latin *que*

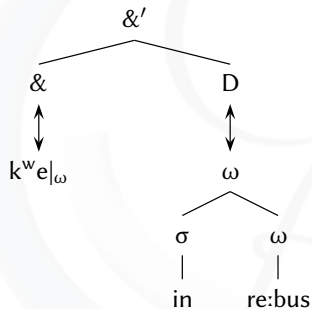
(9)



- ▶ If *que* forms a prosodic domain with its second conjunct, Left-to-Right Association assures its placement.

## Latin *que*

(10)



- ▶ The first p-word with which  $\Phi(&)$  can associate with is /in re:bus/.

## English 'll

- ▶ English 'll (*will*) has the following lexical entry:

(11) FUT  $\leftrightarrow$  [T,uV]  $\leftrightarrow$  l

- ▶ 'll resembles *ing* in selecting for a specific category (V).
- ▶ It differs from *ing* because  $\Phi('ll)$  does not have any lexically specified prosodic requirements.
- ▶ Therefore it does not attach to  $\Phi(V)$  but is linearised in the normal way.
- ▶ Because  $\Phi('ll)$  is not a p-word, it seeks a phonological host.

## ə'Parallel architecture

- ▶ The advantages of a parallel grammar for the analysis of clitics seem obvious.
- ▶ Their phonological and syntactic properties can be separated out.
- ▶ At the same time, their coherence can be maintained.

## ə'Parallel architecture

- ▶ The result is that terms such as *affix*, *clitic* and *word* are in a way meaningless.
- ▶ The universe of elementary particles is more complex.

# What about morphology?

- ▶ Well, what *about* morphology?
- ▶ Of Aikhenvald's (2002) 15 clitic parameters, only one makes mention of morphology:
  - (M) possibilities of lexicalisation, and semantic and morphological idiosyncrasies
- ▶ ... in combination with the word *idiosyncrasies*.



# Morphology

My take on morphology:

- ▶ Language users store associations between form and meaning; cf. (1).
- ▶ It is immaterial whether the phonological component of such stored associations is a p-word, a syllable, or a segment; cf. (2), (8), (11).
- ▶ In this sense, morphology and syntax form a single system.

## As a side note

- ▶ This may be a more plausible candidate for UG than “merge” or “recursion”: children expect form-meaning pairs in their environment.
- ▶ The brain then constructs generalisations over these form-meaning pairs (since that is what the brain does).
- ▶ And then generalisations over those generalisations (cf. O'Reilly et al. 2012)
- ▶ “Morphology” is the body of lower-order generalisations, often still with references to lexical items.
- ▶ “Syntax” is the body of higher-order generalisations, often with any reference to specific lexical items generalised away.

## Morphology by itself

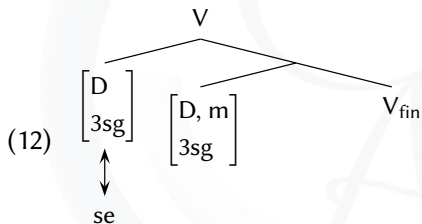
- ▶ On the other hand, there is such a thing as *Morphology by itself* (Aronoff 1994).
- ▶ Importantly, however, such morphology is *not* linked to meaning.
- ▶ Relevant phenomena are generalisations over forms alone.
- ▶ Obviously, they may involve clitics as well.

## Romance object clitics

- ▶ Romance object clitics have properties that are difficult to capture in the current analysis.
- ▶ They can appear before or after the verb, depending on the verb's modality.
  - ▶ No obvious alignment requirement.
- ▶ They show person-case constraints.
  - ▶ No straightforward lexical entries imaginable.

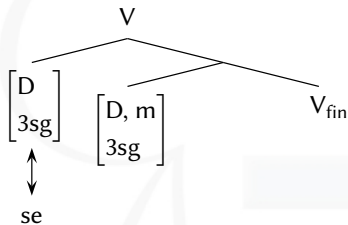
## Romance object clitics

- ▶ To capture this, we need some form of construction grammar:



- ▶ This construction triggers the realisation of a 3rd person object clitics as /se/ in the context of another 3rd person object clitic.

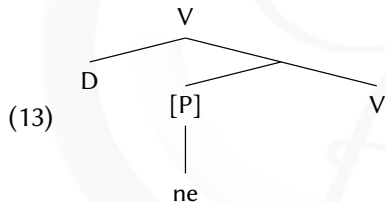
## Romance object clitics



- ▶ Linearisation and proximity to  $\Phi(V)$  are not part of this construction. They must follow from other rules.
- ▶ Crucially, however, phonology cannot refer to morphosyntactic categories, so placement must be syntactic.

## Romance object clitics

- ▶ For cases where one clitic obligatorily requires another (C. Poletto, this workshop), we would need a construction such as (13):



- ▶ Such an approach does not *explain* these phenomena, but it does suggest they must be explained diachronically, not synchronically.

## Summary 'n' conclusions

- ▶ A parallel grammar offers a good way to deal with clitics.
- ▶ We can separate a clitic's syntactic and phonological features.
- ▶ We can thus achieve a classification of clitic types.
- ▶ There is no strict separation between affixes, clitics, and words.
- ▶ Some elements traditionally regarded as clitics do not fill well into this pattern and need a treatment in terms of *morphology by itself*.



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