

Comparative alternation in Mauritian: Using experimental methods for understudied languages

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Introduction

Experimental linguistics for Creole languages

- We will show in this presentation
 - in which way experimental linguistics is central to study linguistic hypotheses
 - in particular for languages where large corpora are unavailable
 - and where paradigms have to be adapted to the cultural environment

Introduction

The phenomenon: Degree adverbs

completely, too, very...

Semantics :

- modify a value on a scale
 - an intensity scale for properties or
 - a quantity scale for objects and events (Kennedy & McNally 2005)

Syntax :

- modify any of the major categories
 - nouns, verbs, adjectives, adverbs (Abeillé & Godard 2003).
 - *trop peur* (too much fear), *trop boire* (too much drinking), *trop grand* (too big), *trop vite* (too quickly)

Introduction

Mauritian: a quick overview

- French-based creole, with 90% of the lexicon inherited from French.
- Recent standardised written form (Hookoomsing 2004)
- Few written corpora (Lalit, Virahsawmy...)

Comparative adverbs in Mauritian

Comparative adverbs belong to the larger class of degree adverbs, comparing two values on one or more degree scales.

We will focus on:

- Inequality adverbs, and particularly
 - Superiority comparative: *pli / plis* 'more'

Research question

- Two questions are motivating this research:
 - What are the constraints for superiority comparatives in Mauritian?
 - Are these constraints different from the distribution in French?

Superiority comparatives in Mauritian

	Nouns		Verbs		Adjectives		Adverbs
	Intensity	Quantity	Intensity	Quantity	Intensity	Quantity	
Pli 'more'	Mo pe gagn pli fin.	-	-	-	Mo pli gran.	-	Mo roul pli vit.
Plis 'more'	Mo pe gagn plis fin.	Mo ena plis pom.	Mo'nn grosi plis.	Mo al sinema plis.	-	Mo plis absan.	

Table 1: Distribution of *pli* and *plis* in Mauritian (from corpora)

Experimental study in Mauritian

Question

→ Which factors determine the distribution of *pli* and *plis* in Mauritian?

Adaptation of the experimental paradigm to Mauritian:

- essentially a spoken language with a recent standardised written form
 - there is a difference in the written form : *pli* and *plis* (contrary to French where it is only phonological: /ply/ and /plys/)
- Production task with visual and audio stimuli

Experimental study in Mauritian: Participants

- 26 native Mauritian speakers (tested in Mauritius).
- 17 women & 9 men
- Aged between 24 and 66 years old
- From different regions of the island and with different levels of education
- They all filled an adapted version of the PennState University Language History Questionnaire
- They were paid Rs. 100 (approximately 2.5€)

Experimental study in Mauritian: Materials

7 conditions:

- Nouns:
 - associated with an intensity scale (*fin* 'hunger').
 - associated with a quantity scale (*kilomet* 'kilometre')
- Verbs:
 - associated with an intensity scale (*grosi* 'to become fat')
 - associated with a quantity scale (*al sinema* 'to go to the cinema')
- Adjectives:
 - associated with an intensity scale (*long* 'tall')
 - associated with a quantity scale (*absan* 'absent')
- Adverbs (*vit* 'fast') (no semantic distinction)

28 experimental items (4 items of each condition) and 28 fillers

Duration : approx. 30 minutes

Experimental study in Mauritian: Procedure

We used E-prime to set up the experiment

Presentation was randomised individually for each participant.

Unfolding of the experiment ...

Step 1: The participant sees a pair of images and hears a description (8a).

Step 2: The participant presses any key to proceed to the next screen. The participant sees the same pair of images, with another voice message (this time incomplete) (8b).

- (8) a. *Rita ek Sunil kondir vit.*
'Rita and Sunil drive fast.'
- b. *Me Sunil kondir ___ vit ki Rita.*
'But Sunil drives ___ fast than Rita.'

Experimental study in Mauritian: Materials

Fillers had the same format:

- (9) a. *Rita so labous inn brile.*
'Rita burnt her mouth.'
- b. *Li'nn bril so labous parski lasoup la _____ so.*
'She burnt her mouth because the soup was ____ hot.'

Participant's task:

- repeat the second (incomplete) descriptions (8b, 9b) and complete the short sentence by filling in the blank from a list of degree words:

pli, plis, mwin, mwins, tro, mari, osi, otan

The participants were recorded using Audacity.

(8) Rita ek Sunil kondir vit.
'Rita and Sunil drive fast.'



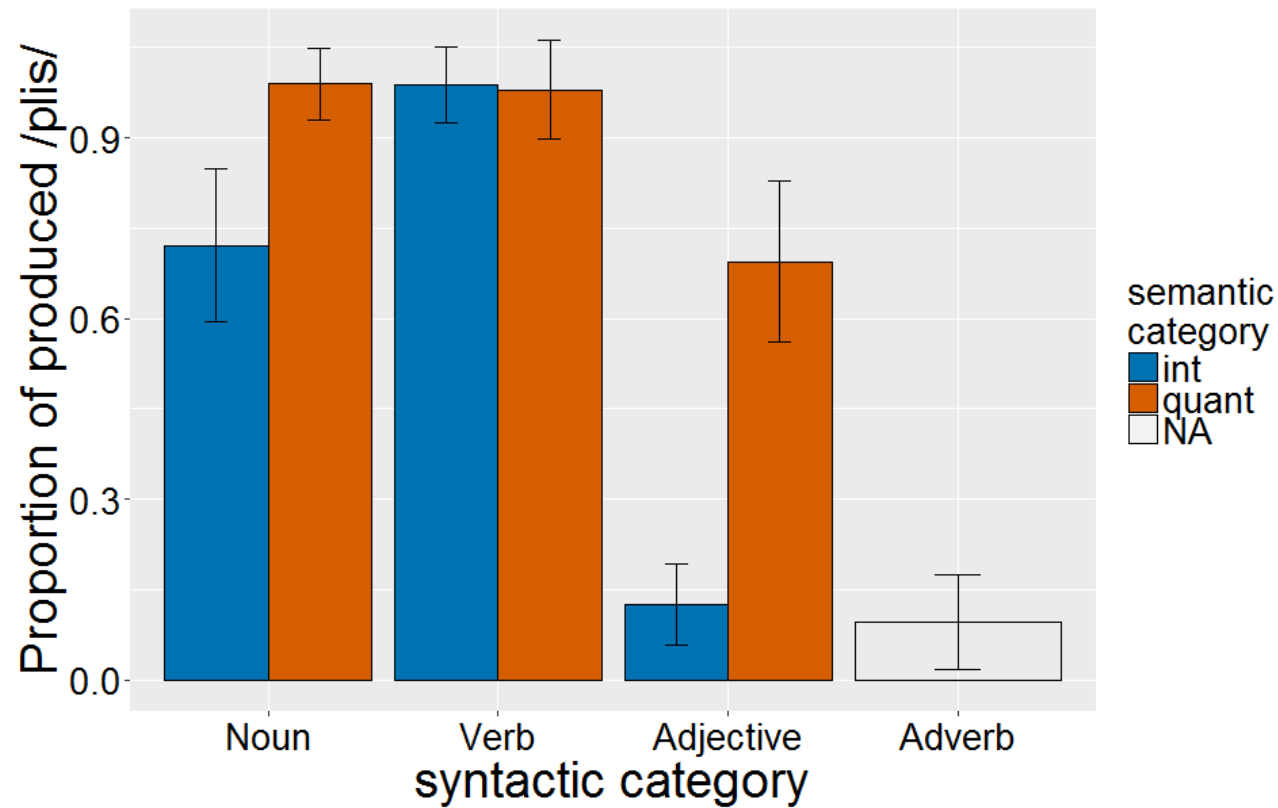
Me Sunil kondir ___ vit ki Rita.

'But Sunil drives ___ fast than Rita.'



Experimental study Mauritian: Results

Production of *plis* per condition:



Experimental study in Mauritian: Results

Logistic regressions for choices of *pli* and *plis* show that:

- Overall *plis* is significantly more frequent for nouns and verbs than for adjectives and adverbs
- Overall, *plis* is significantly more frequent for a quantity scale than for an intensity scale.
- Syntactic and semantic factors interact significantly:
 - While there is no significant difference for verbs per semantic scale, there is such a difference for adjectives (with a marginal difference for nouns).
 - *Pli* prefers adjectives that are associated with an intensity scale
 - *Plis* prefers adjectives that are associated with a quantity scale

Experimental study in French

Question:

→ Does this alternation come from French?

Spoken French :

-3 forms for *plus* : /ply/ , /plys/ and /plyz/ (liaison) (Léon, Bonami & Delais Roussarie)

Experimental study in French: Participants

- 29 French speakers
- 18 women & 11 men
- Aged between 21 and 62 years old
- All live in Paris and were recruited from the RISC
- They all completed a language history questionnaire
- They were paid 4€

Experimental study in French: Materials

7 conditions:

- Nouns
 - associated with an intensity scale (*faim* 'hunger').
 - associated with a quantity scale (*kilomètre* 'kilometre')
- Verbs
 - associated with an intensity scale (*grossir* 'to become fat')
 - associated with a quantity scale (*aller au cinéma* 'to go to the cinema')
- Adjectives
 - associated with an intensity scale (*grand* 'tall')
 - associated with a quantity scale (*absent* 'absent')
- Adverbs (*vite* 'fast')

(We do not differentiate between semantic types of adverbs)

28 experimental items (4 items of each condition) and 28 fillers

Duration : approx. 20 minutes

Experimental study in French: Procedure

We used E-prime to set up the experiment
Presentation was randomised individually for each participant.

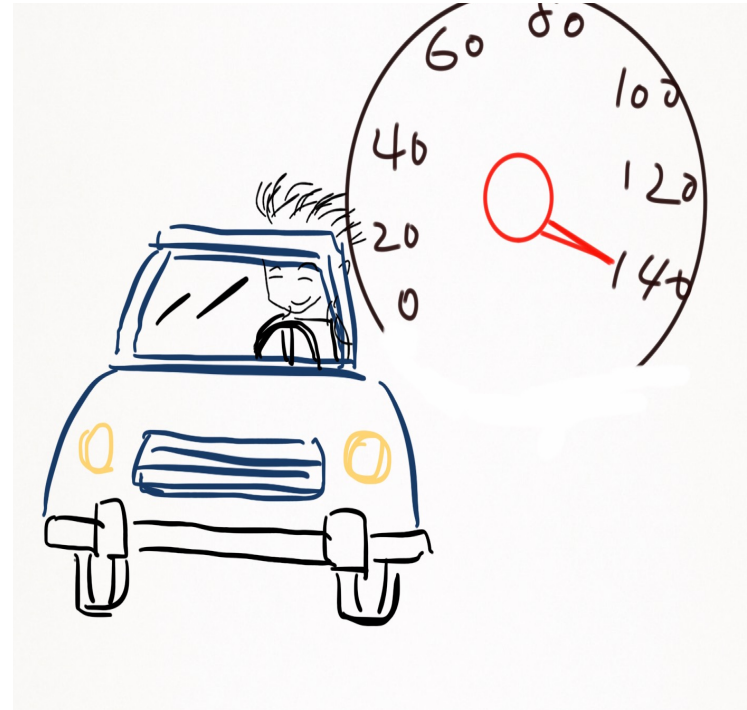
Unfolding of the experiment ...

Step 1: The participant sees a pair of images and hears a description (10a).

Step 2: The participant presses any key to proceed to the next screen. The participant sees the same pair of images, with another voice message (this time incomplete) (10b).

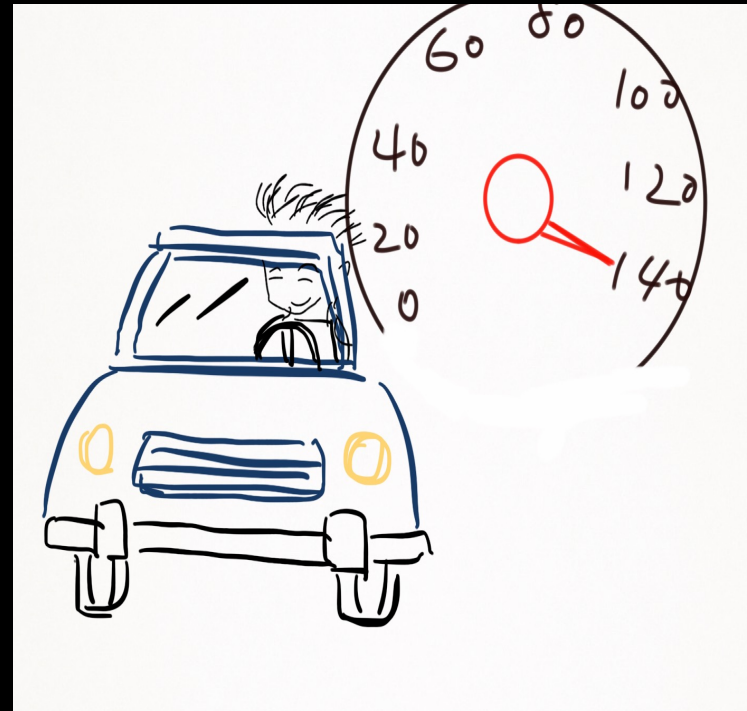
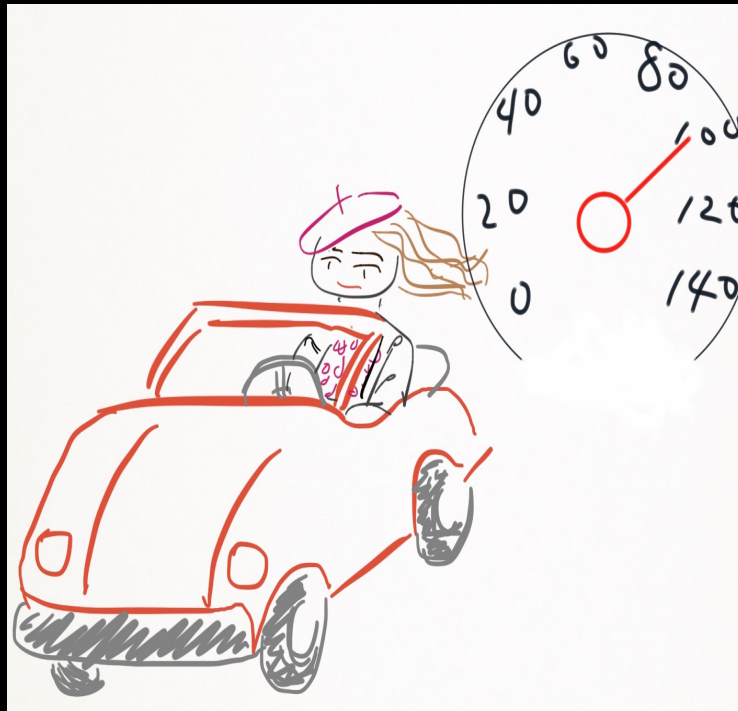
- (10) a. Marie et Pierre conduisent vite.
‘Marie and Pierre drive fast.’
b. Mais Pierre conduit ____ vite que Marie.
‘But Pierre drives ____ fast than Marie.’

(10) *Marie et Pierre conduisent vite.*
'Marie and Pierre drive fast.'



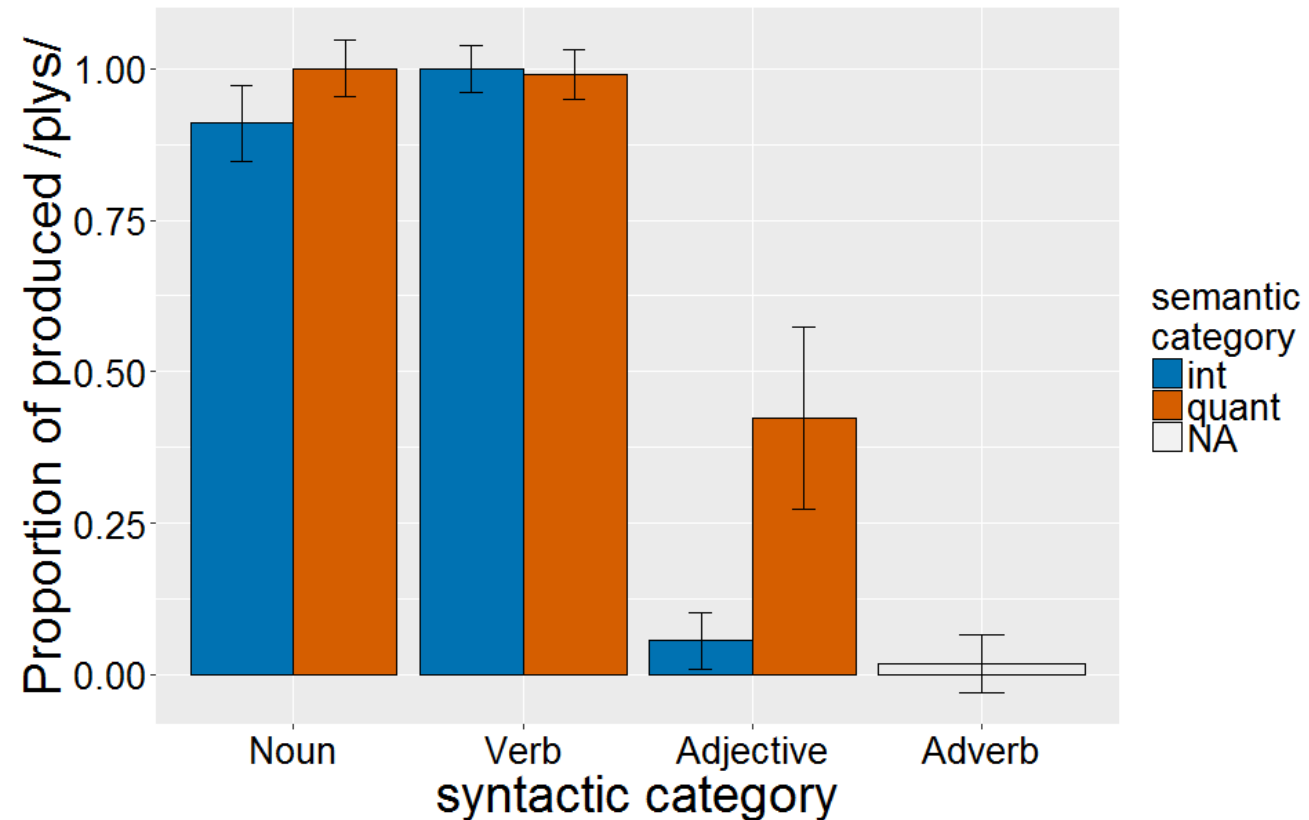
Mais Pierre conduit ___ vite que Marie.

'But Pierre drives ___ fast than Marie.'



Experimental study in French: Results

Production of /plys/ per condition:



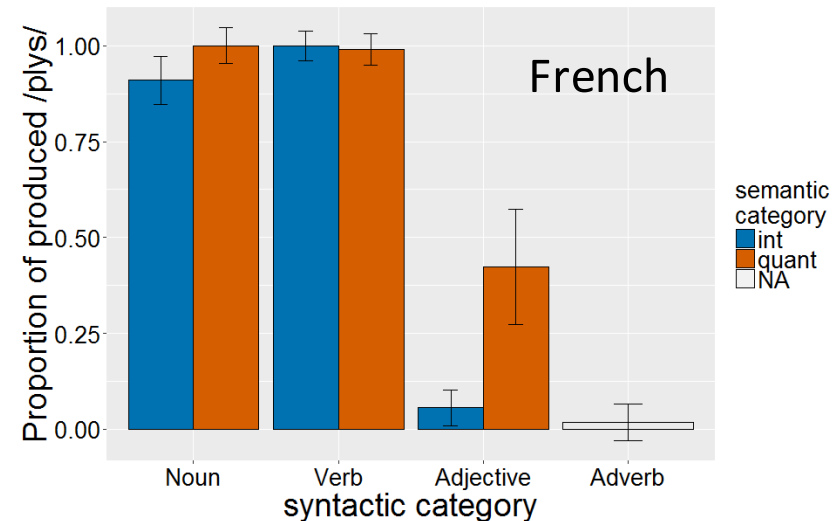
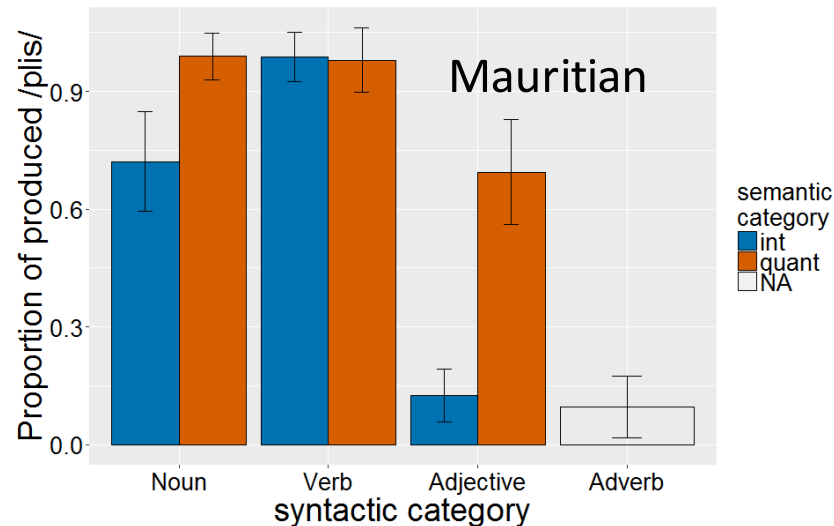
Experimental study in French: Results

Logistic regressions for choices of /ply/ and /plys/ show that:

- Overall /plys/ is significantly more frequent for a quantity scale than for an intensity scale.
- Syntactic and semantic factors interact significantly:
 - While there is no significant difference for verbs for semantic scale, there is such a difference for adjectives.
- Results from this study are corroborated by a reading aloud study.

Conclusions: Comparing Mauritian and French

- Mauritian and French show very similar patterns
- However, numerically, the semantic factor seems stronger in Mauritian
 - Two way interactions are not significant for semantics*language neither for nouns nor for adjectives
- We had less and more heterogeneous Mauritian participants
 - Current studies look into interindividual differences: The semantic factors seem to be stronger depending on
 - Education (less strong for higher education)
 - And linguistic background (stronger for participants who speak French less frequently)



Conclusions

- **New fieldwork methods**
 - Mauritian : new methodology for experimental syntax and semantics
 - visual and oral stimuli & visual and oral distractors
 - French : same methods can be applied.

→ Is there a French influence on Mauritian comparative alternation?

Probably: Similar factors are at work for comparative alternations.

But: Interindividual variation may play a role as well for Mauritian

- Language background
- Education
- More detailed studies are planned and currently running

Thank you !