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Handling language: The gestures of future foreign language teachers

Gale Stam

National Louis University

Marion Tellier

(2) LPL, UMR 7309, Université d'Aix-Marseille, France

Brigitte Bigi

(3) LPL, UMR 7309, France

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Handling Language: The Gestures of Future Foreign Language Teachers

Gale Stam, National Louis University

Marion Tellier, Aix-Marseille University, Laboratoire Parole et Langage

Brigitte Bigi, CNRS, Laboratoire Parole et Langage



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Gestures and SLA

- Learner's gestures (Gullberg, 2006, 2010; Gullberg & McCafferty, 2008; Stam & McCafferty, 2008; Stam, 2013)
- Teacher's gestures (Tellier, 2006, 2008a).
- Teacher's gestures effect on L2 comprehension (Kellerman, 1992; Tellier, 2006, 2008a; Sime 2006, 2008).
- Teacher's gestures effect on L2 memorisation (Allen, 1995; Tellier, 2008b)

Foreigner Talk

- “Foreigner talk” (Ferguson, 1975)
 - Modifications in speech to facilitate comprehension
 - more basic terms, shorter sentences, present tense
 - articulate more, speak more slowly, talk more loudly, use gestures
 - Instinctive
 - More or less effective
- Positive effect of foreigner talk on learners (Wesche & Ready, 1985 ; Long, 1980)

Gesture in Foreigner Talk

- Study by T.Adams (1998)
- Narration task(Canary Row)
 - English speakers => native speakers vs. non native speakers (Koreans)
- Hypotheses with non-natives:
 - More iconics and deictics
 - Fewer metaphorics and emblems
- No significant differences except for deictics

Gestures in Teacher Talk

- **Questions**
 - What about future language teachers?
 - Do they naturally use more “helpful” gestures ?
- **Hypotheses for the non-native condition:**
 - More gestures
 - More iconics and deictics
 - Fewer metaphorics and emblems
 - Use of a larger gesture space

Participants and Task

- Participants: 3 types from Aix-Marseille University (France)
 - 10 future French teachers (Master I FLE/S)*
 - 10 non-native-speaking students (level B1/B2)
 - 10 native French-speaking Geography students
- Experimental material
 - 12 words (concrete & abstract)
 - Make the other participants (native and non native) guess the words

*Data collected twice before and after teacher training.

Procedures

- Words randomly pulled out of the box
- Instructions
 - no words from the same family
 - no translation from another language
 - no time restriction
- Order
 - Counter-balanced:
 - native/non-native (5); non-native/native (5)

Coding

- 240 explanations
(10 subjects x 12 words X 2 conditions)
- Coded on Elan
 - Verbal
 - Strategies
 - Dimensions of gestures
 - Gesture meaning
 - Gesture space

Gesture Dimensions

- Deictic – pointing gesture
- Iconic – gesture illustrating a concrete object or action
- Metaphoric – gesture illustrating an abstract concept
- Beat – small rhythmic movement of hand
- Emblem – culturally specific gesture
- Butterworth – lexical search gesture
- Interactive – gesture addressed to interlocutor
- Aborted – gesture begun and then abandoned

Gesture Space (McNeill, 1992, p. 85)

Classification, Transcription, and Distribution

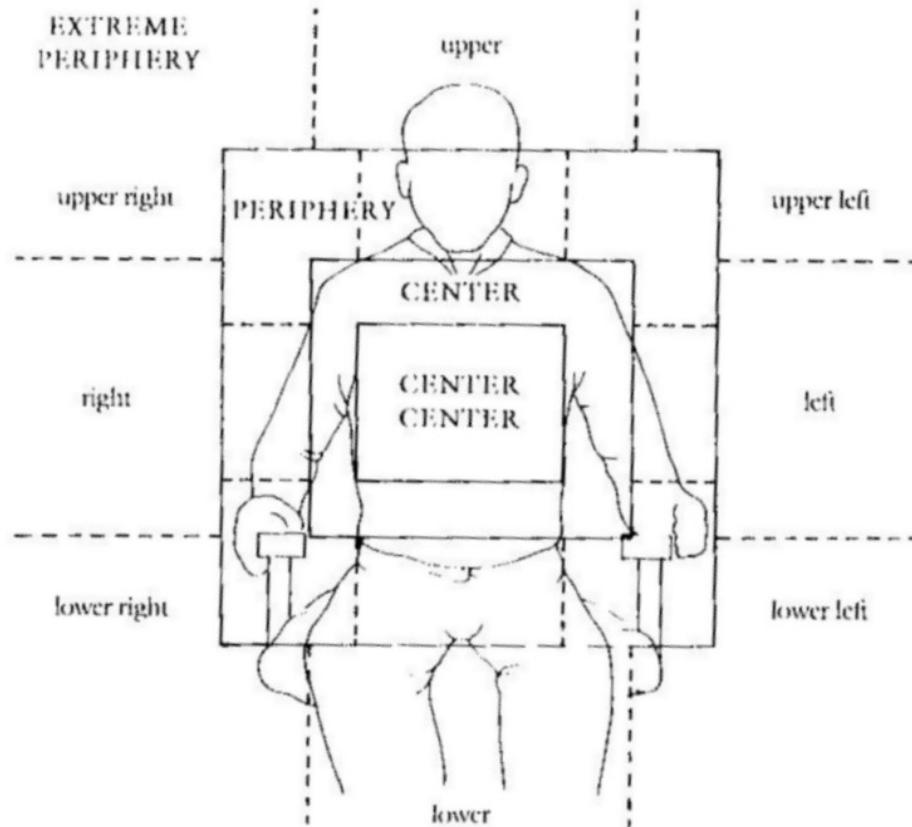


Figure 3.1. Drawing of the typical gesture space of an adult speaker.

ELAN Coding Sample

Screenshot of the ELAN video annotation software interface showing a coding sample.

Top Panel:

- Menu bar: Fichier, Edition, Annotation, Acteur, Type, Rechercher, Affichage, Options, Fenêtre, Aide.
- Tab bar: Grille, Texte, Sous-titres, Lexicon, Audio Recognizer, Video Recognizer, Metadata, Contrôles.
- Text area: MFLE AL. Transcription: alors - quand - tu - marches - dans - la - rue - (il) y a - une - voie - pour - les - voitures - et - une - voie - pour - euh - les - piétons - et - euh - ces - piétons - i(s) - marchent - sur - un - petit - euh - ça - s'appelle - c'est - c'est - un - peu - au - dessus - de - la - voie - pour - les - voitures - marcher - c'est - ça - un - trottoir -

Bottom Panel:

- Video preview window showing two women sitting and gesturing.
- Timeline: 00:00:06.000 to 00:00:23.000. Selection: 00:00:08.720 - 00:00:11.380 (2680).
- Control buttons: play, stop, forward, backward, zoom, etc.
- Annotation grid (Grille) showing various tracks and their corresponding time intervals and descriptions.

Annotation Type	Start Time	End Time	Description
Global speech	00:00:06.000	00:00:07.000	alors
Global speech liste	00:00:07.000	00:00:08.000	quand tu marches da
MFLE AL	00:00:08.720	00:00:09.000	(il) y a une voie pour les voitures
Verbal Strategies	00:00:09.000	00:00:10.000	definition
Main Gesture Type	00:00:10.000	00:00:11.000	Iconic
Secondary Gesture	00:00:11.000	00:00:12.000	stroke
Gesture phrase	00:00:12.000	00:00:13.000	center
Gesture space	00:00:13.000	00:00:14.000	extended arm in front
Gesture meaning	00:00:14.000	00:00:15.000	place
notes	00:00:15.000	00:00:16.000	walking down the street
	00:00:16.000	00:00:17.000	possibly the top of the paveme
	00:00:17.000	00:00:18.000	extreme periphery
	00:00:18.000	00:00:19.000	extreme periphery
	00:00:19.000	00:00:20.000	extreme periphery
	00:00:20.000	00:00:21.000	extreme periphery
	00:00:21.000	00:00:22.000	extreme periphery
	00:00:22.000	00:00:23.000	extreme periphery

Gesture Space

- Gestures affected by discourse situation (Kendon 1997; Wilkin & Holler, 2011)
- Direction of gesture affected by location of speaker/interlocutor (Özyürek, 2002)
- Use of gesture space affected by identity of interlocutor (Tellier & Stam, 2010)

How to Code Gesture Space

- Location of the hand in gesture space
(and fingers when relevant)
- When a gesture crosses several spaces → choose the largest one
- When both hands are in 2 different spaces → choose the largest one
- McNeill's diagram (1992) has only 2 dimensions = PROBLEM
 - Movement is 3 dimensional.



Classification, Transcription, and Distribution

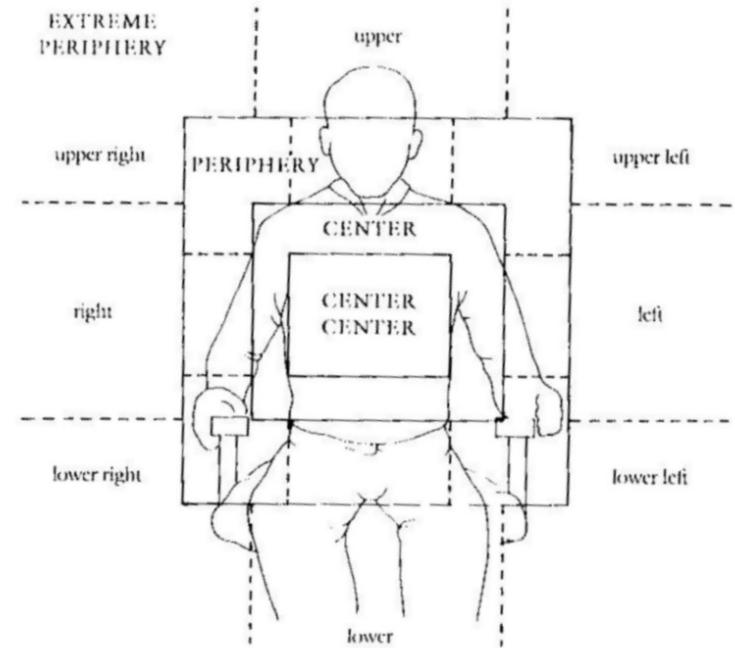


Figure 3.1. Drawing of the typical gesture space of an adult speaker.



Wilga Rivers Colloquium on Foreign Language Pedagogy AAAL 2012

New category:
Extended arm in front

Results

- For 4 words (grimper, trottoir, râpé approximativement) = 80 explanations
 - Mean Number of Words
 - Native condition – 127.6
 - Non-native condition – 351
 - paired sample *t*-test, $t(1,9)=-7.645, p = .000$
 - Mean Number of Gestures
 - Native condition – 16.4
 - Non-native condition – 53.8
 - paired sample *t*-test, $t(1,9)=-4.882, p = .001$

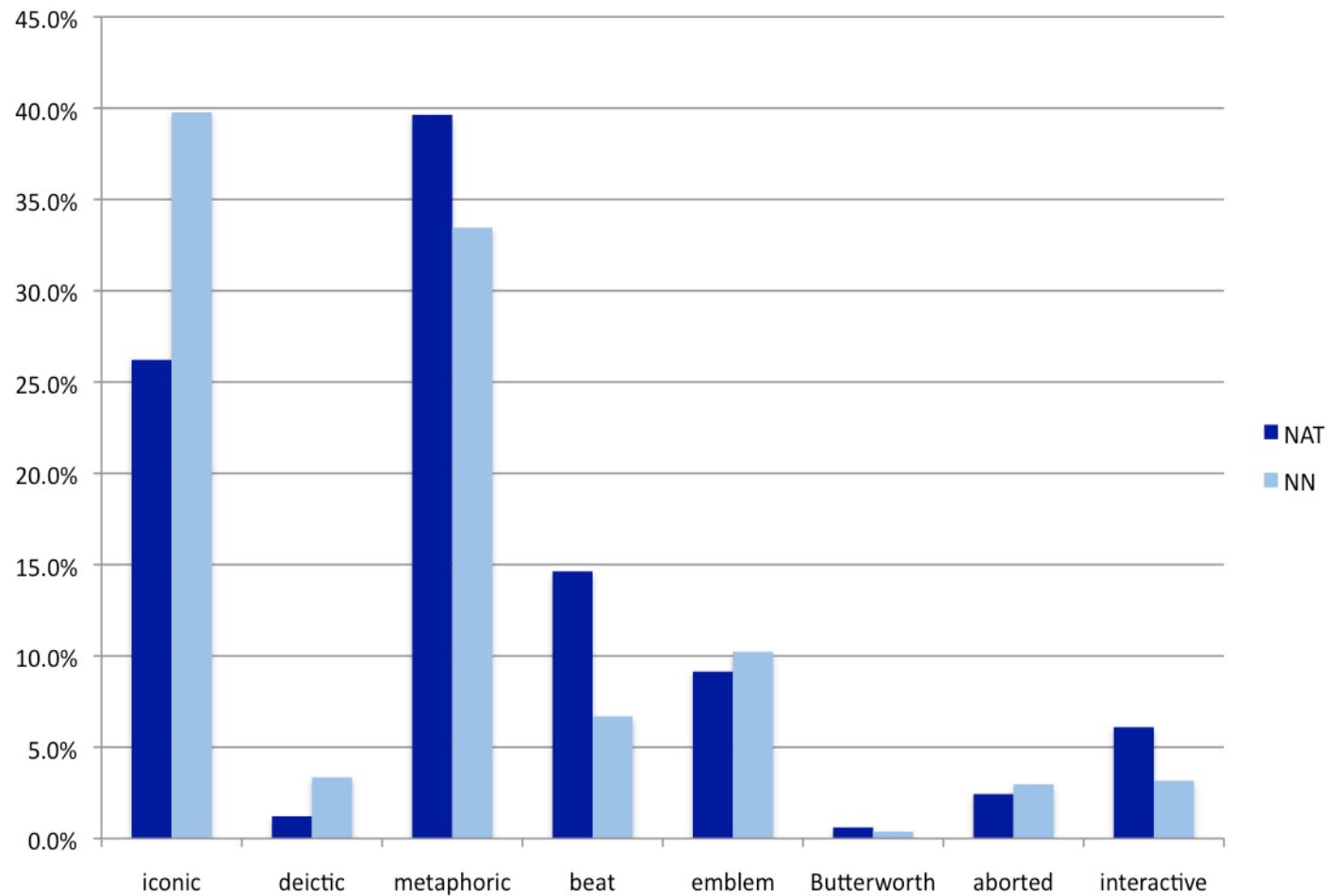
Results

- Mean Number of Gestures per Word
 - Native condition – .131300
 - Non-native condition – .155600
 - paired sample *t*-test, $t(1,9)=-1.016, p = .336$
- Mean Gesture Duration
 - Native condition – 4.38 sec.
 - Non-native condition – 8.58 sec.
 - paired sample *t*-test, $t(1,9)=-4.844, p = .001$

Results

- **Types of Gestures**
 - Non-native condition: more iconics, deictics, emblems, and aborted gestures
 - Differences statistically significant for iconics, deictics, metaphorics, emblems
- **Use of gesture space**
 - Non-native condition: more use of periphery, extreme periphery, and extended arm
 - Differences statistically significant for all gesture spaces

Dimensions of Gesture



Gesture Differences – *Trottoir*



Gesture Differences – Grimper



native cond.

c'est un verbe / synonyme de / de [escalader]

metaphoric

it's a verb / synonym of / of [rock climbing]



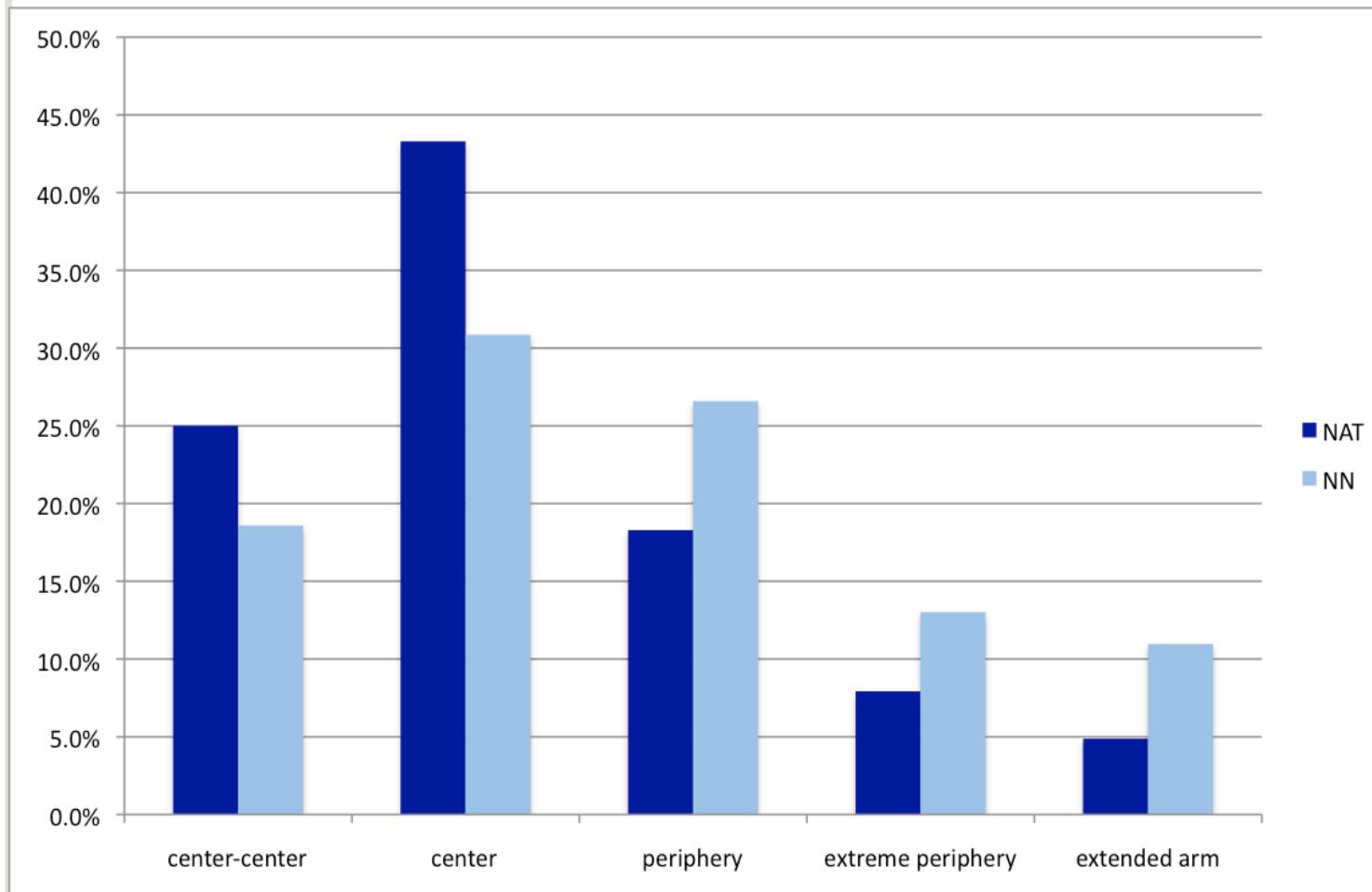
Non native cond.

C'est un verbe / euh synonyme de [escalader]

iconic

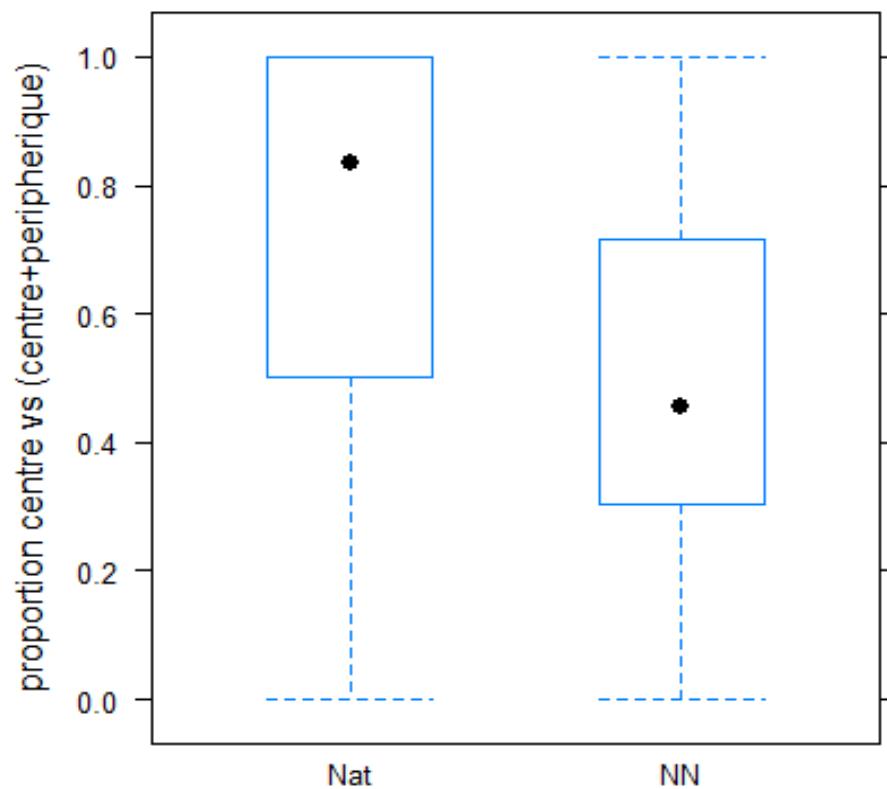
It's a verb / hum synonym of [rock climbing]

Gesture Space



Gesture space

(center vs periphery + extended arm)

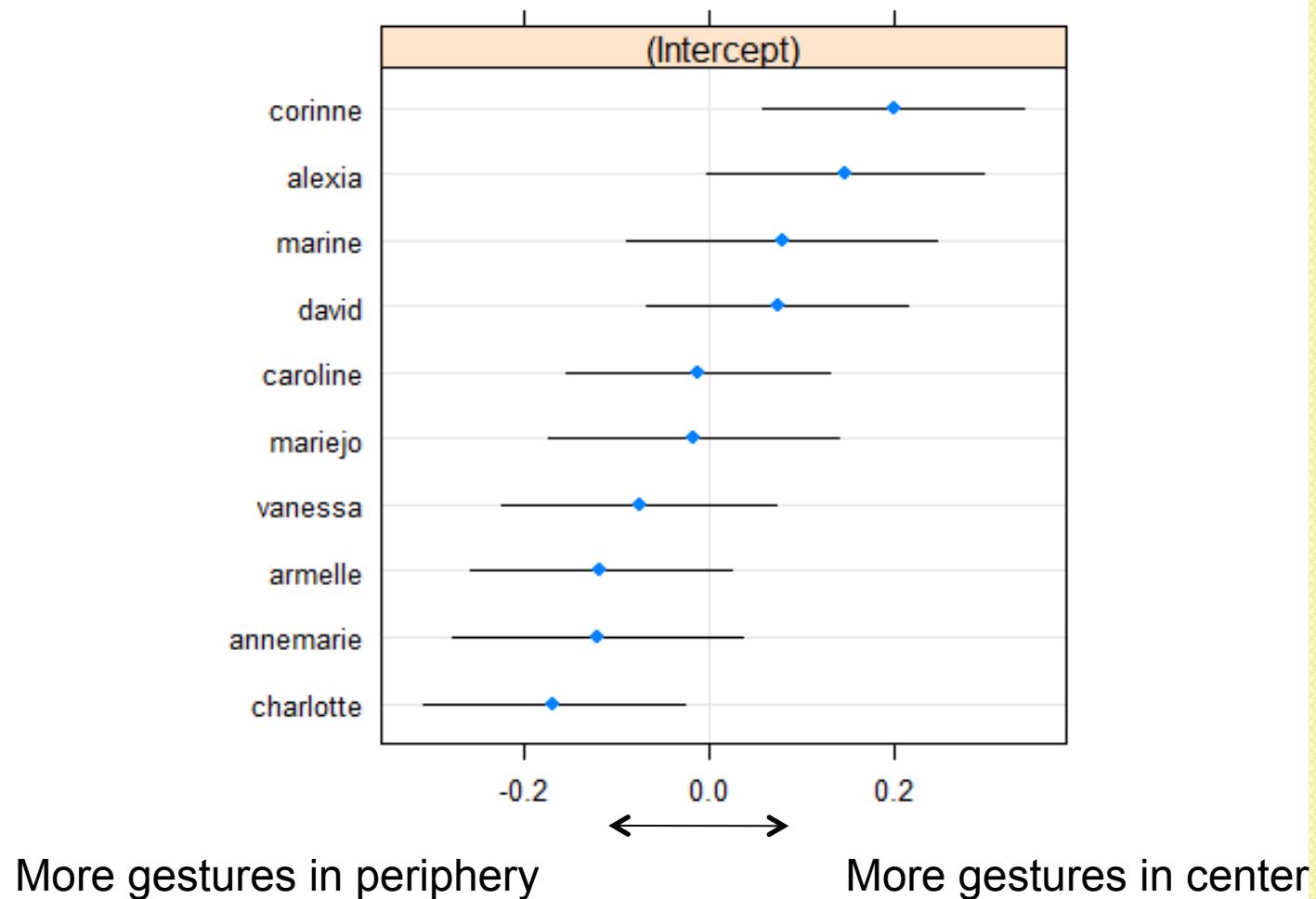


Significant effect of the condition on the use of gesture space ($p < 0.001$)

Gesture Space Differences



Individual variation in the use of gesture space



Effects on Use of Gesture Space

- Interlocutor
- Individual propensity
- Culture (Müller, 2001)
- Word being explained
 - Concrete vs. abstract

Take Home Message

The future teachers of FLE when explaining words to non-native listeners tend to use gestures:

- (1) that last longer,
- (2) that are more illustrative,
- (3) that are larger

than when they talk to native listeners.

Thank you! / Merci!

Gale Stam gstamp@nl.edu

Marion Tellier marion.tellier@lpl-aix.fr

Brigitte Bigi brigitte.bigi@lpl-aix.fr

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