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Gestural expressions of spatial information in L1 and L2

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Research project

- Typological differences w.r.t. expression of static location (native & learner data), with focus on:
 1. differences at lexical level
 2. differences at construction level
 3. different discourse strategies
 4. differences at gesture level
- separated for analytical purposes, goal = fully integrated account

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Location verb project

(cf. Lemmens 2005; Lemmens & Perrez 2012)

- guided elicited descriptions based on 5 pictures from a children's book
- analysis of locative verbs, also in relation to the construction used, discourse factors
- against background of Talmy's typology of S/V-framed languages (but not so crucial anymore)
- inter-Germanic differences (En./Du./Sw.); French-Gmc; co-verbal gestures L1 & L2

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Picture 3



Here I'm interested in the clothes and the furniture.
Can you tell me where they are?

Oral Picture Description Project

- SUBJECTS:
 - 12 subjects per language; 22 for Dutch L2 (3 proficiency levels)
 - gesture data: 11 Du-L1; 9 Du-L2 (3 per level)
- Video-taped, transcribed & coded (ELAN; quantitative analysis in Excel)
- Some results :
 - verbs: Lemmens & Perrez 2012 *CogniTextes* 8
 - constructions: Perrez & Lemmens (in prep. a)
 - discourse: Lemmens & Perrez (in prep. b)

Co-verbal gestures

Research questions:

- Do speech and gesture convey the same **type** of information?
- How is the information expressed by lexis and gestures **distributed**? (i.e., what is expressed where and when?)
- What verbal elements do the gestures **align** with?
- Are there **interlinguistic differences** for gestures?
- Differences between **natives & learners**?

Previous work on gesture & space

- - and speech; "gesture fogs" (Spanish) & "manner enhancing gestures" (English)
 - Brown & Chen (2013): motion events, manner gestures in Mandarin, English, and Japanese
 - Kita & Özyürek (2003): motion events
 - Gullberg (2011, 2013) placement events
- Static location:
 - Tutton (2010, 2013a, b)

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Outline

1. Analysis
 - gesture types
 - gesture semantics
2.
 - idiogests
 - quantitative analysis
 - qualitative analysis

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Gesture types

Classification inspired by McNeill + Kendon :

1. REPRESENTATIONAL
 - locational (LOC)
 - directional (DIR)
 - locative-semantic (LOCSEM)
 - shape / size / surface
 - enactment
2. PRAGMATIC
 - beats
 - meta-linguistic comments
 - discursive gestures

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Non-rigid categories

- Categories not always strictly delineated:
 - simultaneous expression of different semantic values ('semantic stacking'), e.g.
 - SHAPE+LOC (anchored gesture with shape of table)
 - SHAPE+ENACT (shape of chairs (fists) placed near table)
 - SHAPE+ENACT (shirt on chair): polysemous
 - distinctions not always clear-cut, e.g.
 1. DIR vs. LOC ;
 2. LOC vs. LOCSEM : "anchoring"
 3. PRAGM vs. REPR

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1. LOC vs. DIR

- LOCative : gesture is "anchored" in gesture space
DIRectional : gesture indicates direction (lateral, frontal, vertical axis)
- Example
 - "to(wards) the front"
"in front of"
 - "on/to the right" (anchored vs. non-anchored)

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2. LOC vs. LOCSEM

- Given the task at hand (describe spatial scenes on picture), many gesture will center around locative relations (LOC, DIR, fictive motion gestures)
- some gestures express spatial relations without anchoring the gesture in the gesturally represented space
=> LOCATIVE SEMANTICS gestures
(Non-anchored locative predicates)

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Examples LOCSEM

- naast het tafeltje en de twee stoelen (DuL1-3)
next to the table.DIM and the two chairs
repeated oscillating of thumb and index finger
in center space chest height
- daarnaast ... staat ... een bed dat tussen twee nachttafeltjes staat (DuL1-6)
next to that stands a bed that stands between two bedstands
 1. RH hand downward, center
 2. LR hands express "between" (non-anchored)
 3. LR hands locate the bedstands (anchored)

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3. REPR vs. PRAGM

- "recycling" REPR for PRAGM in gestural repetition sequence:
 - first representational gesture
=> coded as REPR
 - repetition same gesture repeated to confirm lexical or gestural choice (\pm like a beat)
=> coded as PRAGM

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idiogests

- Lemmens 2015: individual differences between speakers:
 - frequency: ranges from 0 to 91 for same picture
 - type : gestural idiolects, cf. *idiogest* (term from choreography, Brannigan 2011)

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Examples of idiogests

- speaker's gestural idiolect reflected in recurrent gestures with similar form
- Examples (OPD data, P3, Dutch L1):
 - the oscillator (DuL1-3; oscillating with hands)
 - the swayer (DuL1-2; swaying with hands)
 - the indexer (DuL1-12; using index finger all the time + maintaining that handshape)
 - the hook (DuL2-22): bent index finger

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Idiogests



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Idiogests



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Idiogests



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Idiogests

Suggestion that

- idiogests are attributable to a personal gestural style,
- idiogests are semantically or discursively motivated, i.e. reveal a speaker's (temporary) perspective (pragmatic focus) on a given scene

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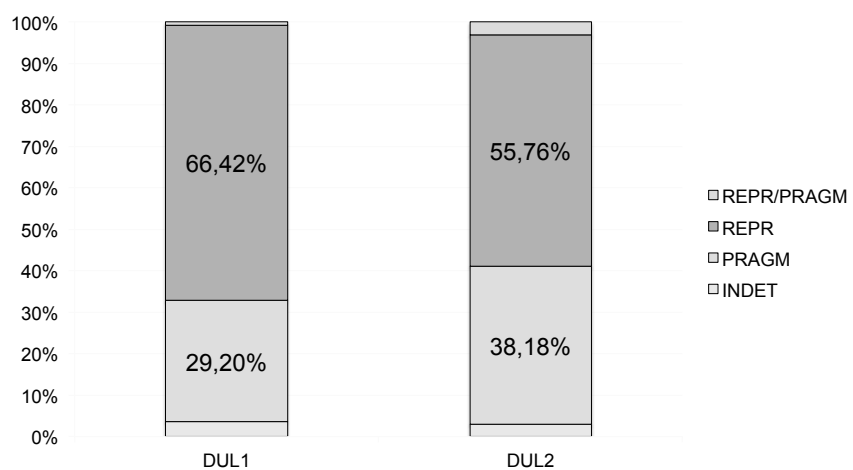
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Quantitative analysis

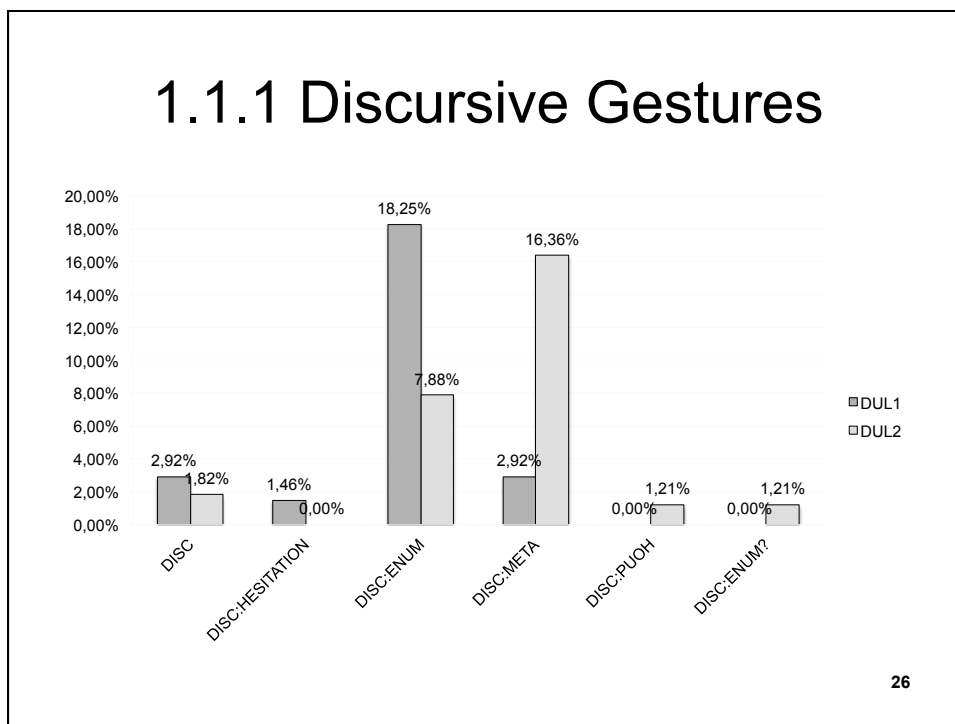
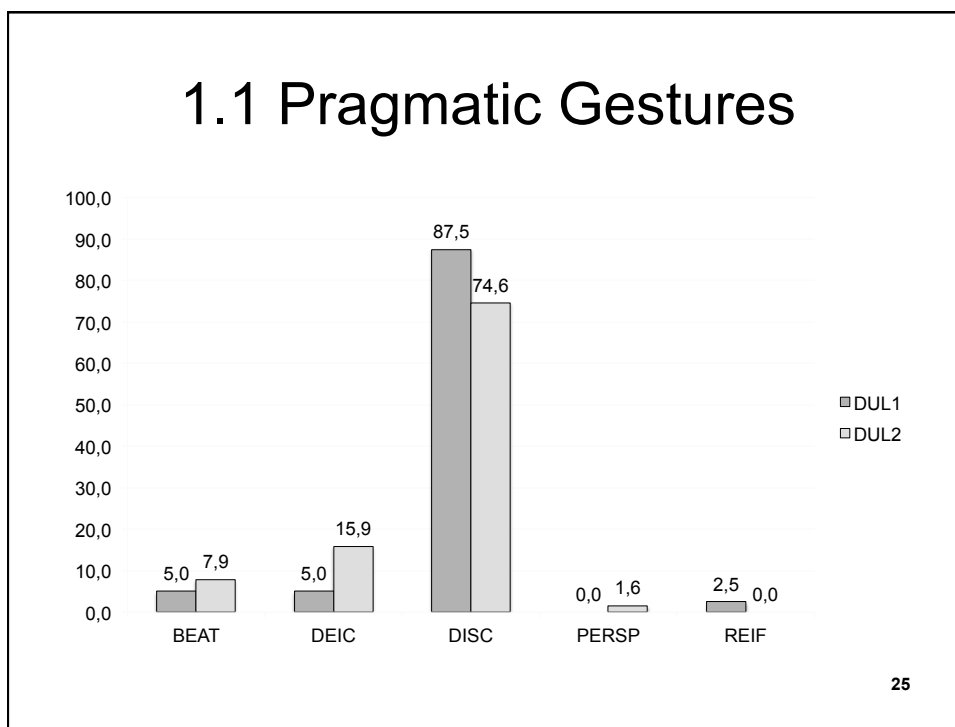
	N	N Gestures	Mean Gestures	Min	Max
Natives	11	137	12.5	3	29
Learners	9	165	18.3	2	57
Total	20	302	15.1	2	57

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1. Gesture types



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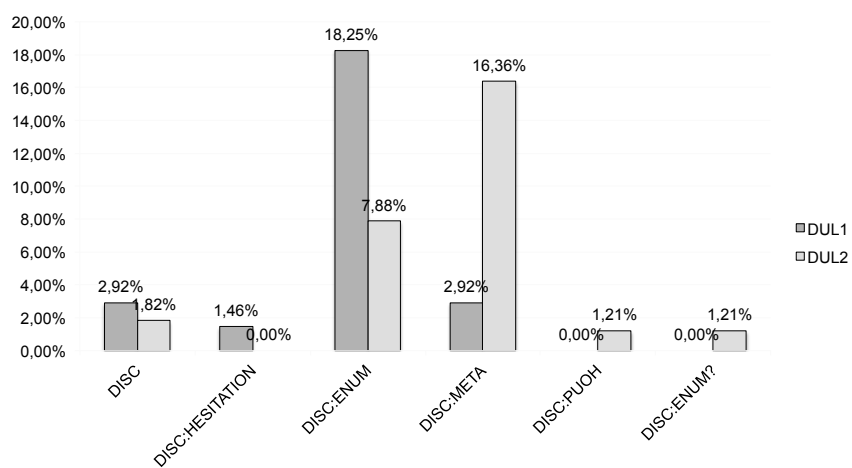


Discursive gesture > Enumeration



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1.1.1 Discursive Gestures



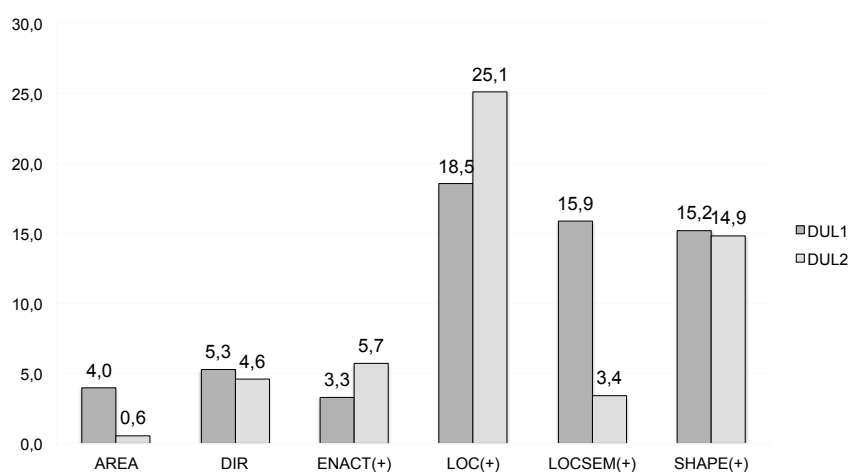
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Discursive gesture > metalinguistic function (learner)



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1.2 Representational gestures



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Example of LOC gesture



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Example of LOCSEM gesture



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- qualitative analysis: onomasiological perspective

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Picture 3 > Bed



Here I'm interested in the clothes and the furniture.
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Onomasiological perspective

	Bed (only)	Bed (+ bedside tables)	N speakers using gestures?	N gestures
DUL1 (11)	9	8	6	12
DUL2 (9)	7	4	4	10

Tendencies

- When the bed is mentioned, the bedside tables tend to be mentioned as well (learners > natives)
- When the bed and the bedside tables are mentioned, they tend to be accompanied by (multiple) co-verbal gestures
- Scene => **gesture burst**



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Onomasiological perspective



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Onomasiological perspective



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Onomasiological perspective



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Discussion (1)

- Learners are more tied to the concrete reality they are describing
 - Represented spatial reality
 - More locative and enactment gestures
 - Physical reality of the picture
 - More deictics
- The natives tend to construct a more complex spatial reality in their discourse
 - Gestures expressing spatial interrelationships

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Discussion (1)

- Lines up with previous results on the linguistic expression of spatial relationships (posture verbs, locative Cxs)
- Language (discourse) proficiency is reflected by lexical variety and accuracy, constructional complexity and more complex gestural representation

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Discussion (2)

- Rice & Hinnell (ICLC13)
 - Manual gestures > predominantly propositional (representational)
 - Upper body movements > more attitudinal and stance
- => Metadiscursive gestures tend to co-occur with gaze, upper body orientation, shoulder movements,...

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Discussion (2)

- Difference between PRAGM:ENUM & REPR:LOC gestures not always clear
- // language: existence verbs to locate entities vs. specific posture verbs
- Gestures might show different degrees of locative specificity

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Thank you !

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