Motion in speech and gesture in a CLIL context
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INTRODUCTION

BACKGROUND

MOTION EVENTS

Figure – Ground – Path – Manner

Self-propelled motion events (SPME)
Caused motion events
Caused location events
Location events

THE LINGUISTIC EXPRESSION OF MOTION EVENTS

Verb-framed languages vs. **Satellite-framed languages**
French **Dutch**
L'oiseau <u>rentre</u> dans la cage <u>en volant</u>.
De vogel <u>vliegt</u> de kooi <u>binnen</u>.
[The bird enters the cage flying.]
[The bird flies into the cage.]

CO-SPEECH GESTURE

Communication process
Speech **production** & Speech **comprehension**
Universal and language-specific characteristics

⬇

The typological differences between V-languages and S-languages are reflected in co-speech gesture
(McNeill 1985, 2005; Kendon 1980, 1994; Alibali et al. 2000; Graham & Argyle 1975, Rogers 1978 and Riseborough 1981 mentioned in Kendon 1994; Cassel et al. 1999; McNeill & Duncan 2000; Kita & Özyürek 2003; Brown & Chen 2013)

THINKING FOR SPEAKING

While acquiring their first language, children learn a specific way of thinking for speaking (Slobin 1991)

Through learning grammatical constructions and lexicon,
Children are provided with "a framework for the expression of thoughts, events and feelings" (Stam 2010: 61);
Their expression is guided "as they engage in the online thinking process related to speaking" (Stam 2010: 61).

MOTION EVENTS – CO-SPEECH GESTURE – THINKING FOR SPEAKING

Different patterns of thinking for speaking in L1 and L2 = necessity to learn the L2 pattern to master the language (Stam 1998, mentioned in 2010)

Research on motion events to test the thinking for speaking hypothesis
First focusing on linguistic descriptions
Later also taking the multimodal expression into account
➔ **Learning/Acquisition of the L2 multimodal pattern**
➔ Gestures give information on thinking for speaking and on the shift from thinking for speaking in L1 to thinking for speaking in L2 (Stam 2010)

RESEARCH QUESTIONS

How do native **French** speakers and native **Dutch** speakers express **motion events** in both **speech** and **gesture**?
How do **CLIL French-speaking learners of Dutch** express motion events in both speech and gesture?

METHOD

PARTICIPANTS

11 native French speakers
9 native Dutch speakers
12 CLIL French-speaking learners of Dutch
(Proficiency level: ranging between CEFR A1 and B2)

TASK

Tweet Zoo divided into 15 fragments

ANALYSIS

Speech	
Verb	Neutral/Manner/Path/ Manner and path/ Manner and path (prefix)
Satellite	Manner/Path/Location/ Combination
Construction	e.g. MannerV + PathS
Boundary crossing	Yes/No

Co-speech gestures	
Type	Iconic/ Deictic/Metaphoric/ Pragmatic/Beat
Semantic components in deictic and iconic gestures	Manner/Path/ Ground /Location/Combination

Iconic gestures
Figure 1: Manner and Path

"Dan **loopt** de kat efkes te ijsberen voor de kooi." (DU4, ME26)
[Then the cat is briefly pacing up and down in front of the cage.]

Figure 2: Path
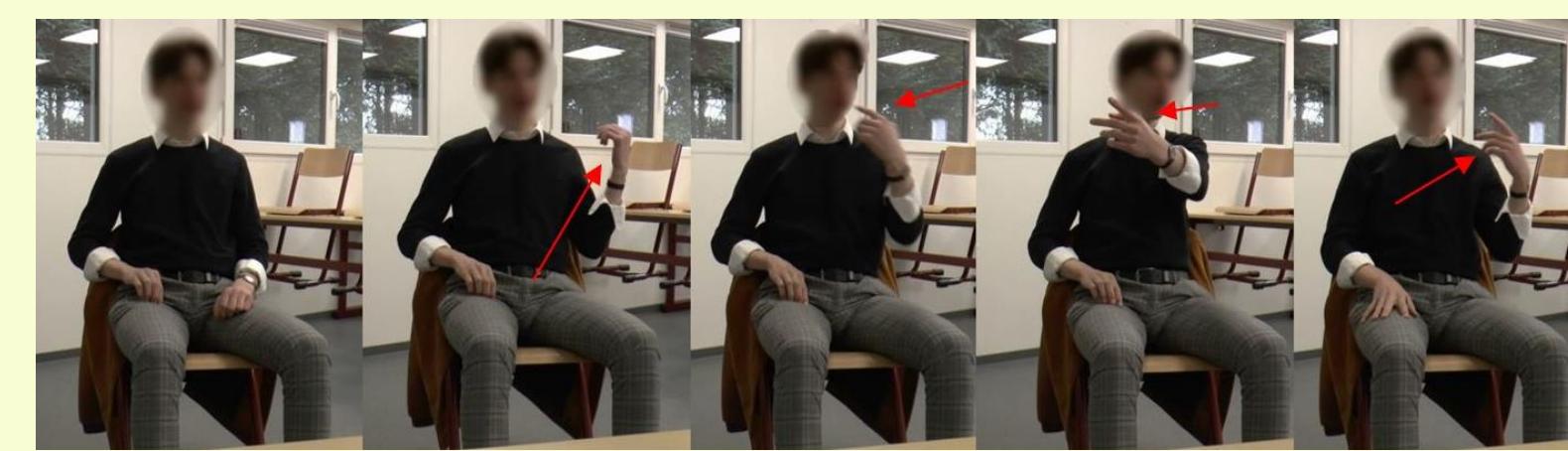
"Il fait **des aller-retours** en faisant *en réfléchissant." (FR5, ME26)
[He is going back and forth doing *thinking.]

Figure 3 : Manner
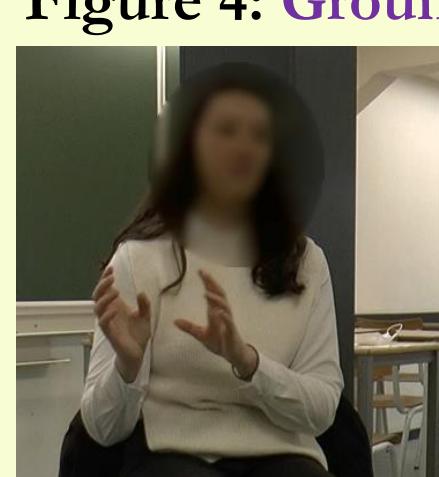
"En gaat daarmee naar de leeuwenkooi."
(DU11, ME33 + ME34)
[And goes with it to the tigers' cage.]

Figure 4: Ground

"En Grosminet is <> naast de *de huis." (CLIL14, ME26)
[And Sylvester is <> next to the *the house.]

Figure 5: Deictic - Location

"Grosminet heeft niet gezien **dat** hij in water is nu." (CLIL12, ME72)
[Sylvester has not seen that he is in the water now.]

Synchronization between iconic and deictic gestures and linguistic units
Multimodal Construction: semantic components in linguistic units and substantive gestures

(Levy & McNeill mentioned in McNeill 2006; Kendon 2004; Stam 2006; Woerfel 2019)

RESULTS

SPEECH

Types of event

	FR		DU2		DU		Total	
	n	%	n	%	n	%	n	%
Self-propelled motion	123	54%	84	48%	96	51%	303	51%
Caused motion	41	18%	19	11%	35	19%	95	16%
Caused location	5	2%	3	2%	3	2%	11	2%
Location	33	14%	17	10%	26	14%	76	13%
Action	27	12%	52	30%	28	15%	107	18%
Total	229	100%	175	100%	188	100%	592	100%

Constructions - SPME

| FR	DU2	DU
PATHV+PATHS	PATHV+PATHS	MANNERV+PATHS
MANNERV+PATHS	MANNERV	MANNERPATHV (prefix)+PATHS
PATHV	MANNERV+PATHS	PATHV+PATHS

(1) En loopt ie naar het water. [And he runs to the water.] (DU1, ME95)
(2) De kat loopt weg uit de kooi. [The cat runs out of the cage.] (DU4, ME23)
(3) Il sort de l'enclos. [He leaves the pen.] (FR5, ME23)

GESTURE

Types of gesture

■ Iconic ■ Deictic ■ Pragmatic ■ Beat
Total = 741 (FR: 192; DU2: 335; DU: 214)
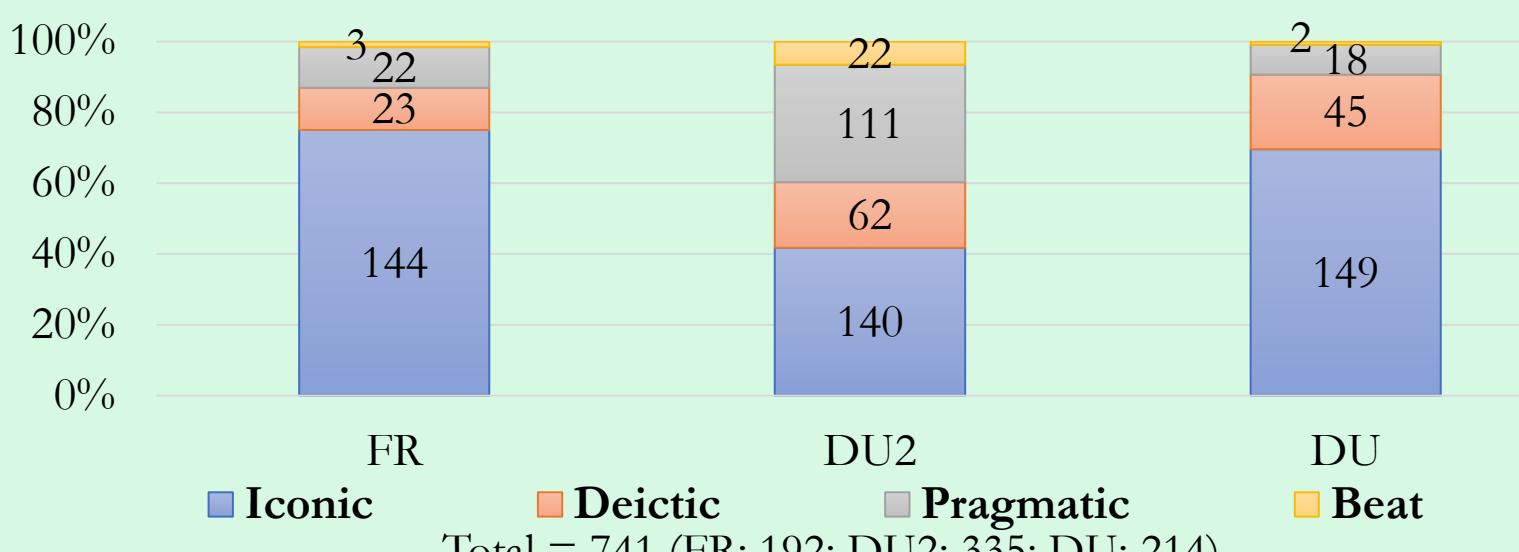
Semantic components in the gestures used to describe SPME

■ Path ■ Manner ■ Manner & Path ■ Ground ■ Location
Total = 247 (FR: 69; DU2: 84; DU: 94)
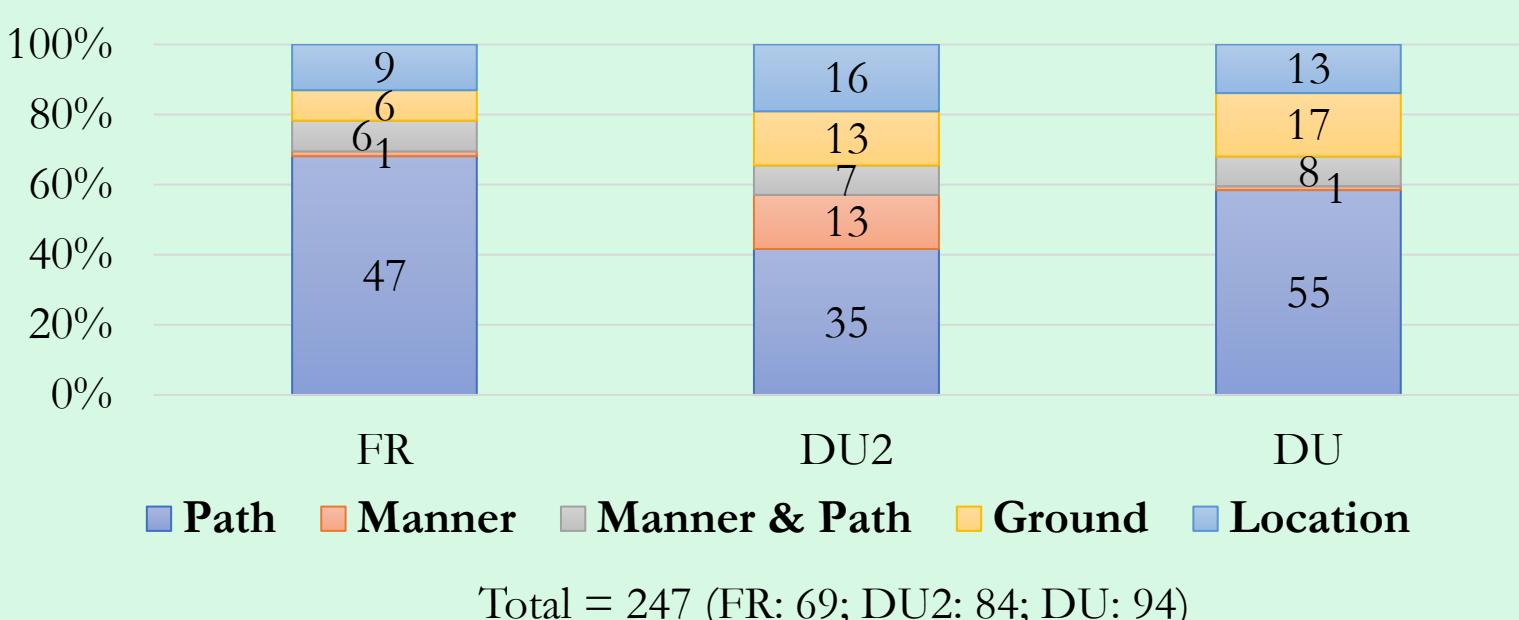
SPEECH & GESTURE

Multimodal Constructions - SPME

FR & DU2	DU
PATHV+PATHS+PATHG	MANNERPATHV (prefix)+PATHS+PATHG
MANNERV+PATHS+PATHG	MANNERV+PATHS+PATHG

Synchronization - PATHGESTURE
Synchronization between speech and co-speech gesture

■ Verb ■ Satellite
■ Satellite + Ground ■ GNP
■ Verb + Satellite ■ Verb + Satellite + Ground
■ Verb + Ground ■ Subject
■ Other ■ More than one element

Total = 182 (FR: 62, DU2: 52; DU: 68)
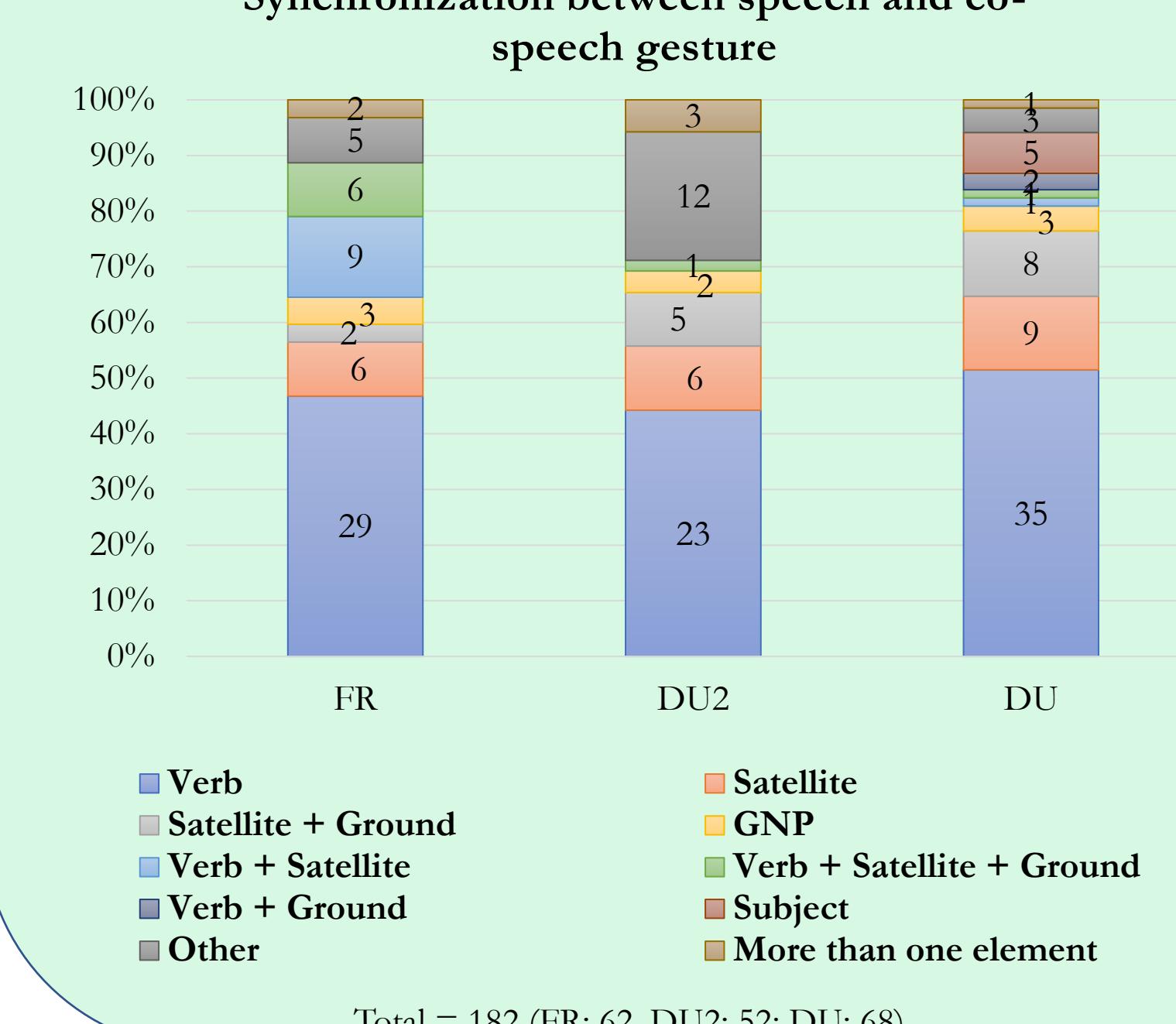
DISCUSSION & CONCLUSION

- The most frequent **construction** used by L2 learners = same as in their L1.
- **MANNERPATHV(PREFIX)**: difficult for learners but still **MANNERV**.
- More **pragmatic** gestures in L2 vs. in L1 (// Piot (2019)).
- **PATHG**:
  - Most frequent semantic component in both French and Dutch (// Alferink (2015)), a bit more frequent in French;
  - Most frequent semantic component in DU2 as well even though it is less prevailing.
- **MANNERG**: more frequent in DU2: sometimes compensation gesture.
- Conflated gesture (**MANNERPATHG**) : not very frequent here and similar in the three groups.
- Most frequent multimodal construction in French and Dutch L2: same ones vs. Dutch L1.
- Synchronization: Verb: Dutch L1 > French L1 > Dutch L2.

FURTHER RESEARCH

- More data
- **Boundary crossing gesture**
- **Conflated gesture vs. 2 gestures**
- L2 leaners' evolution

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