



The import of verbo-gestural metaphor in collective reasoning

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► To cite this version:

Sandra Lagrange-Lanaspre, Jean-Marc Colletta, Jean-Pascal Simon. The import of verbo-gestural metaphor in collective reasoning. 4th International Conference on Analogy, Jul 2017, Paris, France. hal-02008173

HAL Id: hal-02008173

<https://hal.univ-grenoble-alpes.fr/hal-02008173>

Submitted on 15 Feb 2019

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INTRODUCTION

This empirical work stresses a non-documented issue: **the cognitive input of metaphor in collective reasoning**.

The child 6 years and older spontaneously verbalizes metaphors and produces metaphoric gestures during explanation and reasoning (Colletta, 2004; Colletta & Pellenq, 2009).

Nevertheless what is the cognitive input of metaphor in collective reasoning?

Does metaphor, linguistic and gestural, play a role when discussing concepts and judgment premises (Daniel, 2007; Lipman, 1995)?

We study the “resonance” of **verbo-gestural** metaphor in CPI (« Community of Philosophical Inquiry »)*, i.e. its maintenance and significance across speech turns.

* CPI is a pedagogical practice which encourages children to think for themselves and collectively from a philosophical question.

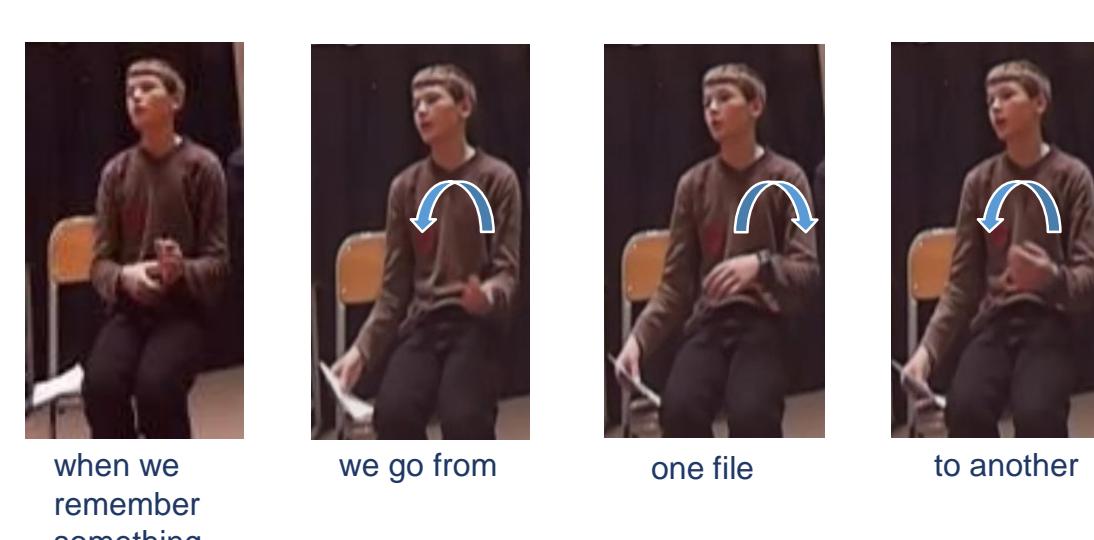
METHOD

- Selection and analysis of 3 sequences collected in 3 CPI videos recorded in two middle schools in France. Sequences selected for their richness in verbo-gestural metaphor resonance.

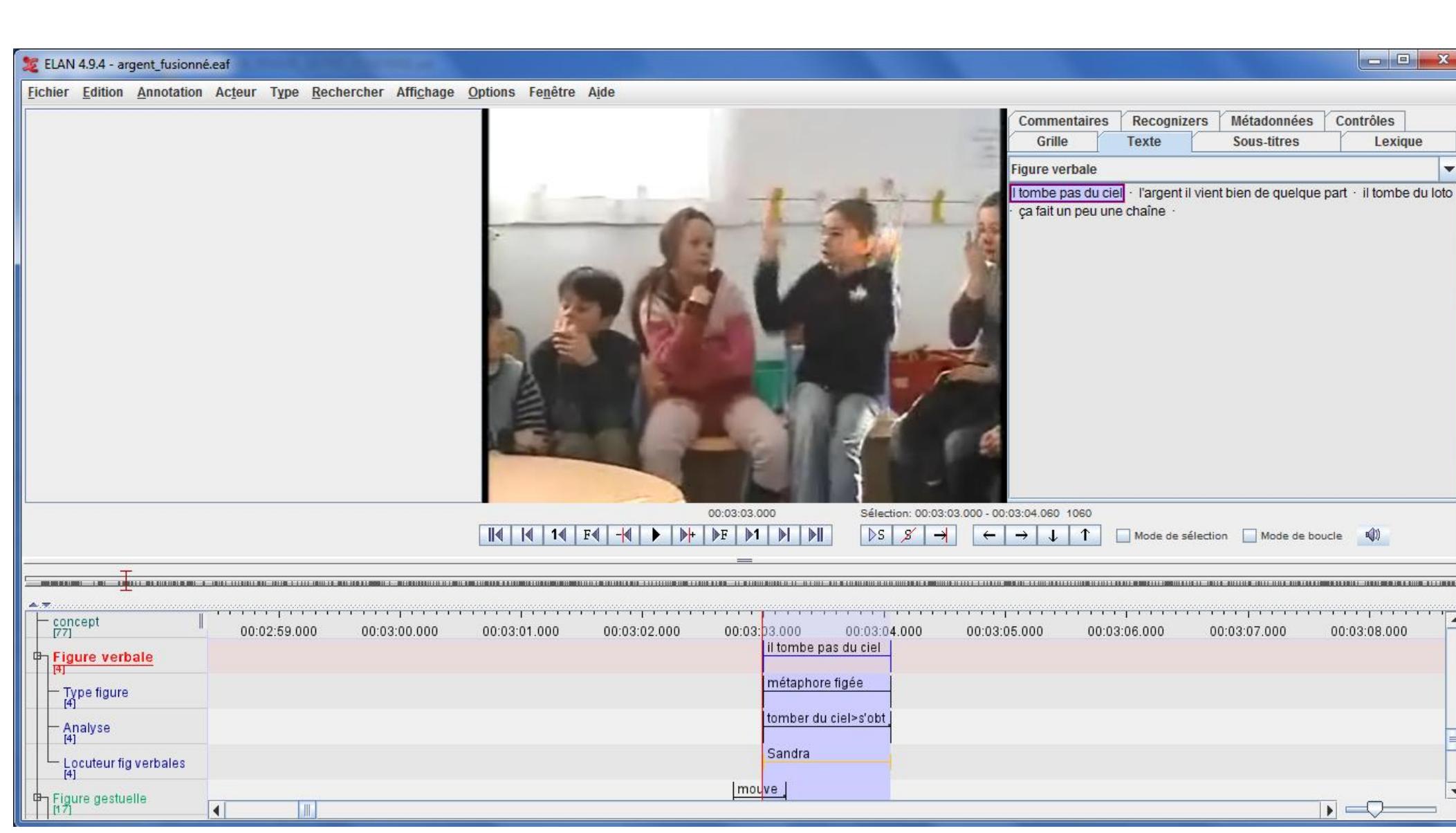
Topic	Grade	Extracted sequence
CPI #1	Money	5th 02:50-14:35 (12 min)
CPI #2	Life and death	6th 30:56-34:08 (3 min)
CPI #3	Thought	7th-8th 36:45-41:02 (4 min)

- Participants wordings transcribed with ELAN® software
- Annotation of bimodal metaphors (speech and gestures)

Example of bimodal metaphor :



- Qualitative analysis of each sequence across speech turns and participants
 - Repetition/complement/enrichment of bimodal metaphors
 - Plurality of participants (number of speech turns)
 - Focus of the sequence (presence of conceptualisation and reflexivity) (Tozzi, 2001)



Annotation window and scheme

ANALYSIS

EXAMPLE OF SEQUENCE #3: EXTENDED METAPHOR ABOUT « TO FORGET/ TO REMEMBER SOMETHING » (CPI about thought)



Analysis of sequence #3 across speech turns and participants

CONCLUSION AND PERSPECTIVES

- Our data show that bimodal metaphors are used **verbally** and **gesturally** by the **educators** to help children **clarify concepts**
- Bimodal metaphors tend to be used **by the speaker** and **by other children** to bring **conceptual distinctions and networks**
- They tend to be enriched **at verbal and gestural level simultaneously**:
 - extented metaphors co-occur with polysign gestures

Perspectives

- Analysis of
 - Gesture-only metaphors
 - Verbal-only metaphors
- Developmental analysis
- Longitudinal and quantitative analysis

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