

# Workshop on Formal Approaches to (In)coherence and Dynamics in Dialogue

WoFA(I)CDiD

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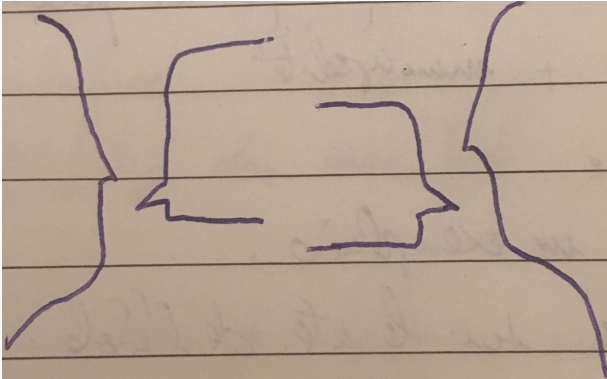
Maxime Amblard

October 10, 2019

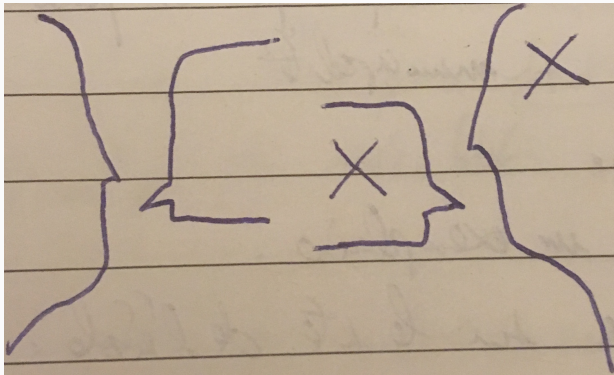
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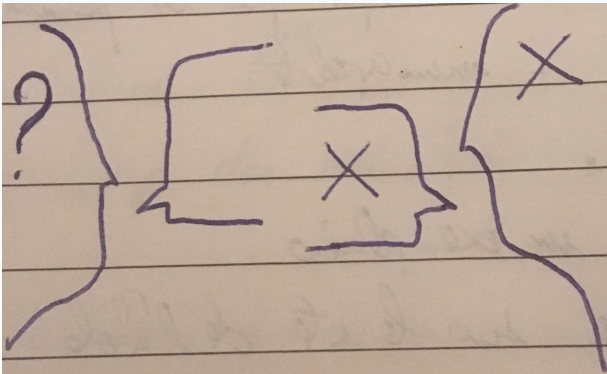
## Thought disorders appear in Verbal Interactions



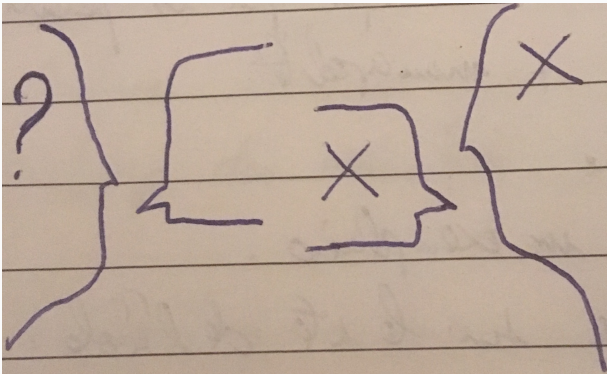
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How to find / analyse / interpret / understand / model this interaction / dialogue

1. **Why:** working on abnormal uses of languages teach (a lot) on normal ones
2. **How:** Mix of different approaches
3. **For what:** Pre-diagnostic / Diagnosis / Monitoring treatments

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In 1 word: **Interaction**

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In more words: 4 views on the **Interaction** issues

## 1. External look: the **Interaction**

- Disfluencies, turn-taking, motion capture
- neurodegenerative disease: Image description, reading(s), POS/Lemma/syntactic parsing
- Double Eye-tracker

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Important: the speaker seems to adapt her behaviour to the schizophrenic patient.

## 2. External look: the Context (of the Interaction)

- Add of an extra level of interpretation
- Patient with schizophrenia have several incompatible contexts (at the same time)
- How can we consider the rationality with schizophrenic's discourse:  
Rationality-Reasons-Responsability-Free will

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Open questions: how to include these views on the specificities of these interactions in models?



### 3. Modeling the Dialogue Interaction

- Dialogue modelling: qualitative / a more fine grain description of linguistic interaction
- Theories which seems to be useful for dialogues modelling : dynamic semantics, game theory, topoï

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Our models are (really) theoretical and need to be improved on real data

Open question on **how to combine them** together (ongoing common work)

## 4. Compute a representation of the **Interaction**

- Derive a dialogue representation
  - semantic coordination, Type-Theory, TTR
  - Continuation-Based Dynamic Semantic
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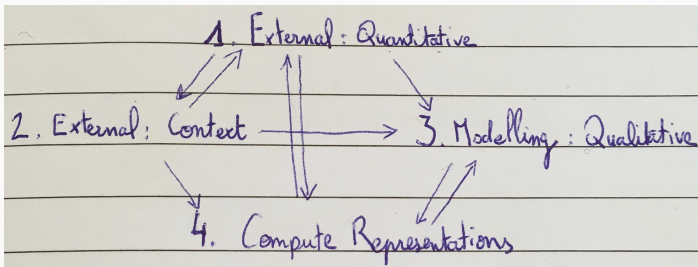
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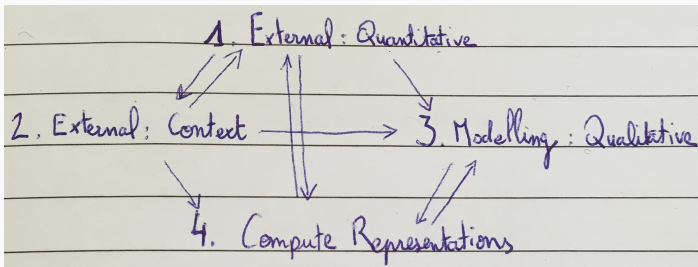
How to scale-up and improve the representation?

- Reasoning
- How do we link the 4 views on interactions?

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- Do we want to build a new common Data Set?
- Do we want to / Can we share our Data Set?
- For which language(s)?



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4. **Who?**
5. **When?**
6. **Where?**

Thanks to many institutions

- Riksbankens jubileumsfond
- French Institute in Sweden
- Olki - LUE (I-SITE PIA)
- Loria - special grant for long stay

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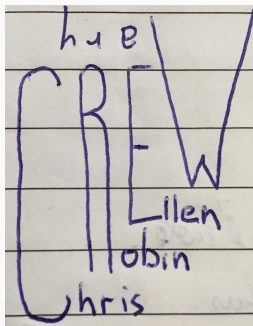
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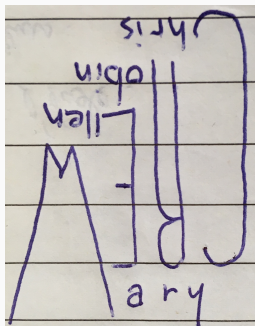
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**Thank you all for coming!**