Coffee or tea? Yes
Maria Boritchev, Maxime Amblard

To cite this version:
Maria Boritchev, Maxime Amblard. Coffee or tea? Yes. SEMDIAL 2018 (AixDial) - The 22nd workshop on the Semantics and Pragmatics of Dialogue, Nov 2018, Aix-en-Provence, France. <hal-01922151>

HAL Id: hal-01922151
https://hal.archives-ouvertes.fr/hal-01922151
Submitted on 14 Nov 2018

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L’archive ouverte pluridisciplinaire HAL, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d’enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.
Coffee or tea? Yes.

Maria Boritchev, Maxime Amblard
Loria, Inria Nancy Grand Est

**Introduction**

Get able to quantify the amount of logical inconsistencies inside a dialogue?

A1: Do you want coffee or tea?
B1: Yes

- **Incomprehension in dialogue**: question/answer relationship, correspondence (span of an answer? logical coherence?)
- **Real-life phenomena** (corpus-observed)

Possible applications:
- Chatbot programming: fluid automatic answers generation
- Human-human interaction: further study of specific human dialogues (children, psychiatry)
- Improvement of learning algorithms: identification of difficult cases

**Objectives**

Model dialogue in a dynamic and compositional way, automatically identifying incomprehension.

- Produce logical representations of questions and answers in dialogue
- Find logical incoherences in speech acts combinations

**Negotiation Phases**

A speaks in light grey, B in dark grey. The dialogue is split in several negotiation phases (bold black boxes). When one of them ends, its representation is computed and stored in the dialogue context. Utterances inside negotiation phases are built both using previous utterances and information coming from the dialogue context storage.

**Inquisitive Semantics [1]**

A1: Do you want sugar or stevia in your coffee?
B2: Neither.
B2: #Both.

A1: Do you want sugar or milk in your coffee?
B2: Neither.
B2: Both.

**Corpora**

UniC - Unicorn Corpus
Toy handmade corpus in English and French, composed of 18 sentences in each language, 9 questions (1 polar + 8, one per wh-word) and 9 corresponding assertions.

Where-question
Where is the unicorn?
Où est la licorne ?

Where-answer
The unicorn is at home.
La licorne est à la maison.

DinG - Dialogues in Games
Corpus collection in progress: real-life dialogues among french-speaking players of Settlers of Catan, a board game where bargaining over resources is a major part of the gameplay. [4]

A1: Est-ce que quelqu’un a de l’argile ?
B2: Oui
A3: Contre du bois ?
B2: Non

A1: Does anyone have clay?
B2: Yes
A3: To trade for wood?
B2: No

**Conclusion**

We focus our work on the question-answer relationship in dialogue as we think it will give us an entering point for our studies on incomprehension in dialogue, towards a method that will allow us to quantify this type of phenomena in conversations.

- Articulation of several logical frameworks
- Testing of the models on different corpora
- Collection of the DinG corpus

**References**