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Aix Map Task corpus: The French multimodal corpus of task-oriented dialogue



Jan Gorisch, Corine Astésano, Ellen Gurman Bard, Brigitte Bigi, Laurent Prévot

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Abstract

Modelled after the HCRC Map Task corpus, a French version is made available on SLDR. Participants are recorded via headset microphones and video cameras. The audio material is transcribed orthographically on the level of Inter Pausal Units (IPUs). Automatic alignment on phone, syllable and word level was performed using SPPAS®.

Introduction

The Map Task involves two participants. The instruction giver explains a path that is displayed on his map to the instruction follower whose map does not contain a path (Anderson et al., 1991).

Lexical material can be semi-controlled by the landmarks that are displayed on the maps. The material was selected with respect to findings on read speech (Astésano et al., 2007).

A dialogue evolves between the participants that involves besides descriptions clarifications, clarification requests, feedback, etc.

Several Languages, including Italian, Japanese, Occitan have been recorded in the Map Task situation. French was missing.

The remote condition involves merely the interaction over the auditive channel (Bard et al., 2013). Most natural interactions however take place face-to-face. An audio-visual condition was found necessary.

Lexical material

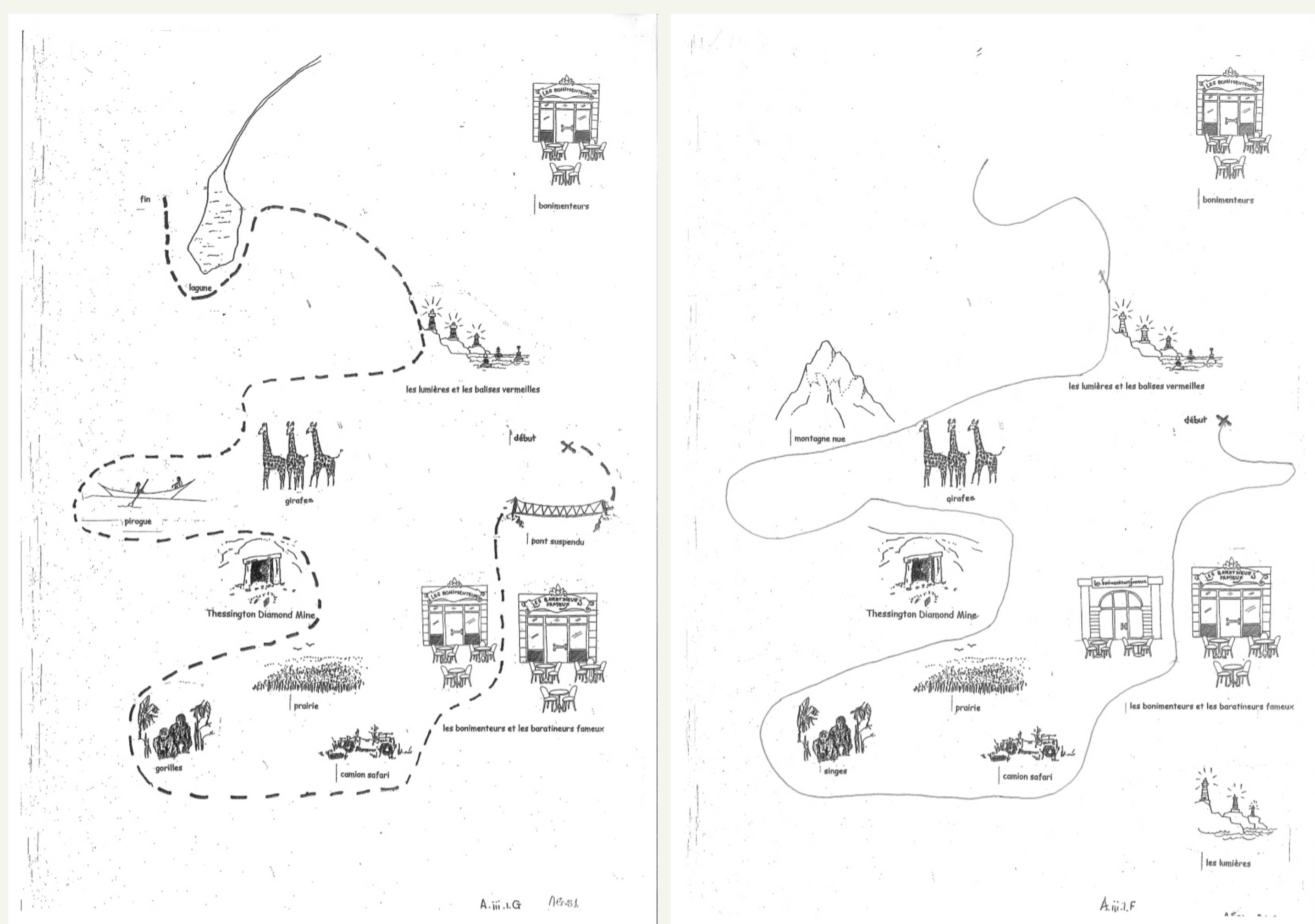
A subset of lexical material from work on elicited speech (Astésano et al., 2007) is introduced in the names of landmarks.

They concern the role of Initial Accent in syntactic and prosodic structure making in French.

Example: One set of lighthouses at the top of a cliff with tall buoys tilting on a choppy sea (*les lumières et les balises vertigineuses*: broad adjective scope) and another sketch with lighthouses at sea level and tall buoys (*les lumières et les balises vermeilles*: narrow adjective scope).

The likelihood of an Initial Accent on "balises" might change with the length of the conjoined nouns or with the syntax, depending on the adjective scope.

Experimental Design



Standard rules of Map Task experiments apply (Anderson et al., 1991).

Task: collaborate in order to reproduce on the Instruction Follower's map a route that is pre-printed on the Instruction Giver's version.

Participants may say anything necessary to accomplish their communicative goals.

Remote condition: Participants cannot see each other.

Face-to-face condition: Participants can see each other.

Example on Feedback

Conversational Feedback is the focus of the project CoFee

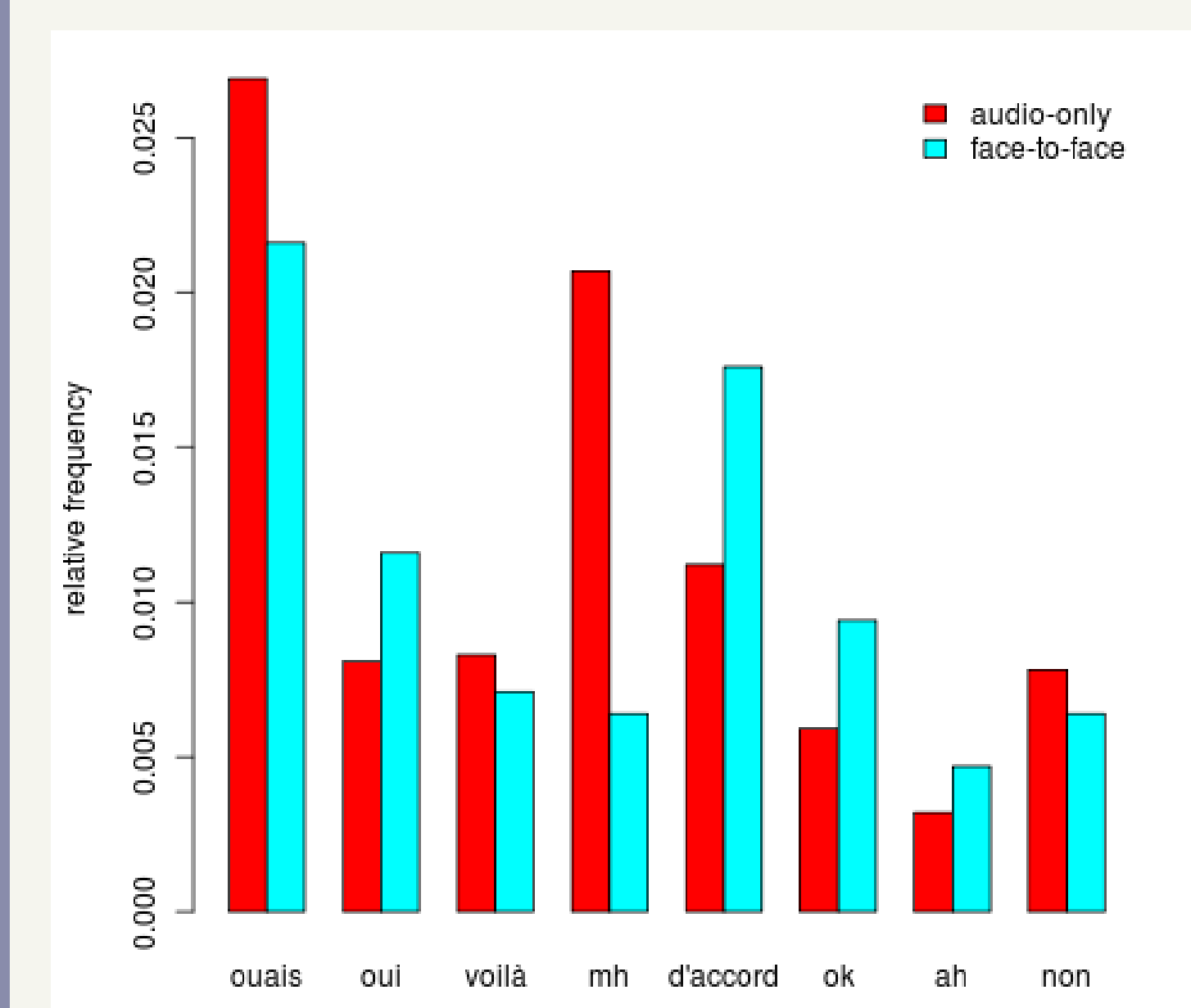
Extract 1: Interaction between giver (G) and follower (F) from the audio-visual condition (AG-YM; minute 9:36 to 9:58). The visual movements and gaze are not included in this example transcription.

```
1 G: .h et normalement tu as pas de dessin du tout à gauche là
2 (0.6)
3 F: à gauche
4 > G: ouais
5 F: non dans le coin en bas à gauche j'ai les lumières (0.2)
6 F: et-
7 G: ah ben alors c'est peut-être ça [ il faut ben tu passes au dessus-
8 F: .h et à côté d'=
9 > F: =la d'la:: ouais mais c'est vraiment dans l'coin en bas à gauche
10 F: hein (0.7) [.hh [et ] par contre à côté des terrasses en haut
11 G: mh mh [bon
12 F: à gauche [des terrasses] assez collé
13 > G: ouais
14 > G: ouais (0.2)
15 F: j'ai euh le bar fleuri (0.2)
16 G: et non j'ai pas moi ça
17 F: ah (.) [ alors il faut ] que j'aïlle où là
18 G: .hh
19 G: eh ben tu tu tu remontes euh ...
```

Verbal feedback, e.g. *ouais*, that appears in a line of transcription is indicated by ">"

Basic quantitative information

Relative frequency of feedback items per condition.



	relative frequency	
token	audio-only	face-to-face
ouais	0.0269	0.0216
oui	0.0081	0.0116
voilà	0.0083	0.0071
mh	0.0207	0.0064
d'accord	0.0112	0.0176
ok	0.0059	0.0094
ah	0.0032	0.0047
non	0.0078	0.0064
total	0.0922	0.0850

Duration and Number of tokens per condition

	audio-only	face-to-face
duration	6608s ≈ 1h50	8287s ≈ 2h18
# tokens	39792	26706

Conclusions and ongoing work

The Aix Map Task corpus is a resource for speech analysis:

- **structured** in terms of the selection of lexical items for intonation research
- **rich in spontaneity** of task-oriented dialogue

Orthographically transcribed and aligned on word level

Ongoing work improves the transcription and adds annotation of visual properties for the analysis of non-verbal feedback.

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