MANAGING REFERENTIAL MISMATCHES IN GERMAN MAP TASK DIALOGUES

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Interactive settings create the need for a constant development of the common knowledge (or common ground) of the interlocutors (Clark 1996). But how do two speakers manage situations with diverging individual knowledge? Which strategies or routines (Pickering and Garrod 2005) do they apply to recover from it? And how long will it take for each strategy to solve this mismatch?

Since the study of Anderson et al. (1991), map tasks are used for enquiring quasi-spontaneous speech. The Berlin Map Task Corpus[1] (Sauer 2014) consists of six conversations, each of which comprises two sequences. In each sequence, an instructor tells an instructee to reproduce a route with landmarks. The subjects can neither see each other nor the map of their fellow interlocutor. They assume to work with identical maps. However, as stated in the BeMaTaC documentation, "one landmark differs between the two maps, [which] introduces an element of surprise and forces the participants to adopt a different strategy". In sequence 1, the instructor's map shows a picture of nails, whereas the instructee sees a picture of a chimney sweeper. In sequence 2, the interlocutors change roles and maps. The differing landmarks now depict crops and a hamburger. This study will investigate which strategies are prevalent means of managing those moments of surprise.

In the first sequence, the subjects are still unaware of the differing pictures. In the second sequence, however, they might anticipate that their common ground might not be completely common. Consequently, a higher effort of restoring the common ground should be observable in sequence 1.

A preliminary analysis has identified several strategies for managing the differing landmark in sequence 1 from the instructees' perspectives. Instructees either

- a) ask what is going on by stating that there is a mismatch and naming the landmark ($n = 3$),

- b) repeat the instructor's landmark ($n = 2$), sometimes with clarification requests (Purver 2004), cf. example 1, or

- c) ignore the mismatch ($n = 1$) and wait for information they can work with.

Strategy (a) is often employed together with a narrow and prosodically hesitating repetition of the linguistic material just uttered by the instructor. The pursuit of strategies (b) and (c) will both hide the mismatching information from the instructor.

(1) a. instructor: *dann äh schräg rechts also diagonal son   Stückchen zurück läufst du   wieder*
           then uh askew right well diagonal such a piece   back   go   you again
        bis   zu zu som   Reparaturladendings kommst
        until to to such a repair store thing   come
        'and then you go skewed right well diagonal a little bit back until you come to a repair store thing'
     b. instructee: *Reparaturladen*
           repair store
     c. instructor: *ja*
           yes
     d. instructee: *ähm*
           uhm
     e. instructor: *so   ne Werkstatt oder so*
           such a garage   or   so
     f. instructee: *ham die   was   mit Wohnwägen zu tun*
           have they something with caravans   to do
        'do they have something to do with caravans'

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[1]This study uses version BeMaTaC_L1_2013-02.1.

g. instructor: *äh ja   wenn du   da   schon bist dann umso besser*
                   uh yes if   you there yet   are then the   better
              'uh yes if you are already there even better'

In sequence 2, the interlocutors may be primed for a mismatching item by the development in sequence 1. The strategies employed are

- d) simply stating that there is a mismatch without naming it ($n = 2$),

- e) naming the mismatch ($n = 3$), or

- f) ignoring the mismatch ($n = 1$).

In one case, strategy (e) is not employed by the instructee, but by the instructor replying to a landmark anticipation of the instructee. It seems that (d) is an implication of the priming of sequence 1, whereas (e) is comparable to (a). Strategy (b), (c) and (f) seem to be similar. Thus, it might be interesting for future quantitative research to test the emerging strategies $a' = (a, e)$, $b' = (b, c, f)$ and $d' = d$ for reliable statistical behaviour. Overall, the applied strategies in sequence 2 mirror the reduced need for an extensive discussion of the mismatch.

Table 1 shows the tokens needed for instructor and instructee to restore a common ground and to move on with the task. The mismatching dialogue sequence was queried with ANNIS (Zeldes et al. 2009), using the diplomatic transcription tier *instructor_dipl* and *instructee_dipl*. Set 1–3 and 6 show fewer tokens in sequence 2. It seems that Table 1 shows a reduced communicative need for strategies in sequence 2.

Table 1: *Tokens and strategies used for resolving the common ground both for instructors and instructees. Set 1–3 and 6 show tendencies for a quicker recovery from the mismatch.*

set	seq	instructor	instructee	Σ	strategies		instructor/instructee	Σ seq 2/Σ seq 1
1	1	56	12	68	a	a'	4.67	
1	2	17	7	24	d	d	2.43	0.35
2	1	132	94	226	a	a'	1.40	
2	2	24	17	41	e	a'	1.41	0.18
3	1	45	45	90	a	a'	1.00	
3	2	42	11	53	e	a'	3.82	0.59
4	1	12	1	13	c	b'	12.00	
4	2	38	12	50	d	d	3.17	3.85
5	1	24	9	33	b	b'	2.67	
5	2	24	22	46	e	a'	1.09	1.39
6	1	27	21	48	b	b'	1.29	
6	2	13	10	23	f	b'	1.30	0.48

A preliminary result of general mismatch strategies may state the application of two concepts. (a) and its primed versions (d) and (e) will result in a discussion and make the mismatch obvious. (b) can be seen as similar to (c), when considering the resulting concealment of the mismatch by the instructee. Together with their primed version (f), they will not result in an update of the common ground, but in a ground bias towards the instructee. The identified strategies for managing the mismatching common ground may also have implications on the amount of disfluencies in the respective sequences. For example, one would expect more disfluencies in the first setting, considering that the misleading picture is an all-new cognitive stimulus, whereas it might be expected in the second setting. Furthermore, it would be relevant to inquire whether the identified strategies are persisting in data more ample than the one at hand.

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