On word searches, gaze, and co-participation

Peter Auer & Elisabeth Zima[1]

Abstract

Our paper provides a detailed and fine-grained account of the role of gaze in word searches based on combined eye-tracking and video data. Starting from the patterns first described by Goodwin & Goodwin (1986), our analyses reveal that the interplay of gaze and word searches as solitary or interactive activities is more complex than suggested in prior studies. The strongest evidence for the claim that gaze shifts to co-present participants elicit collaboration in the search is found in side-by-side arrangements and partly also in co-tellings. Gaze shifts are less efficient practices to invite a coparticipant's participation in the word search in triadic (stationary) F-formations, and they are even less efficient in dyadic (stationary) F-formations. We also show that the efficiency of gaze to elicit help in a word search interacts with epistemics, i.e. co-participants' access to the search domain in which the missing concept or word is to be found. Finally, we present evidence that speakers dispose of means (strategies) to increase the efficiency of gaze at the recipient to make them engage in a word search, such as sustaining gaze and meta-pragmatic word search markers during an ongoing search activity.

Keywords: word search – gaze – eye tracking – collaboration – recruiting.

German Abstract

In diesem Beitrag präsentieren wir eine detaillierte Analyse der Rolle des Blicks bei Wortsuchen; Datengrundlage sind kombinierte Video- und Eyetracking-Daten. Ausgangspunkt sind die von Goodwin & Goodwin (1986) erstmals identifizierten Muster zur Beziehung zwischen Blickzuwendung vs. Blickabwendung einerseits und selbst gelösten vs. kollaborativen Wortsuchen andererseits. Wir zeigen, dass diese Beziehung komplexer ist als frühere Arbeiten annehmen und von zahlreichen kontextuellen Faktoren geprägt ist. Die stärkste Evidenz für die Gültigkeit der von Goodwin & Goodwin beschriebenen Zusammenhänge fanden wir in *side-by-side*-Konstellationen und beim gemeinsamen Erzählen. Blickzuwendungen zu den Adressierten sind hingegen weniger effektive Mittel, um Hilfe bei der Wortsuche einzufordern, wenn sich die Teilnehmer/innen in stationären triadischen F-Formationen befinden. Diese Effektivität nimmt in stationären dyadischen Konstellationen noch weiter ab. Die Wirkung der Blickzuwendung bzw. Blickabwendung hängt überdies von der epistemischen Konstellation ab, also der Frage, ob die Adressierten Zugang zur Suchdomäne haben, in der das fehlende Wort oder der fehlende Begriff lokalisiert ist. Schließlich gehen wir auf Verfahren der Wortsuchenden ein, die Wirksamkeit ihrer Blickzuwendung zu erhöhen und diskutieren dabei anhaltenden Blick und metapragmatische Wortsuchemarker.

Keywords: Wortsuchen – eye-tracking – Blick – Kollaboration – Rekrutierung von Hilfe.

1. Introduction

In one of the pioneering works on the multimodal analysis of verbal interaction entitled *Gesture and coparticipation in the activity of searching for a word*, Charles and Marjorie Goodwin (1986) formulated fundamental and frequently quoted insights into the relationship between gaze and co-participation. They made two key observations on the multimodal structure of word searches. The first is (1986:57, our emphasis):

> During a word search speakers frequently gaze away from their recipients; indeed, if they have been looking toward the recipient *they will actively withdraw their gaze* as the search begins.

Gaze aversion in word searches may be seen as indicative of the preference for self-repair, i.e. the word search is construed as a solitary activity within the speaker's turn space. The recipient's co-participation in this word search is dispreferred in this case.

The second observation is made in the course of the discussion of one particular interactional extract (70-71, our emphasis):

> After holding the thinking face for a period of time, the speaker returns her gaze to the recipient. […] In itself the visible change in the thinking-face gesture shows recipients that the speaker has abandoned at least her initial pursuit for the word being sought. […] *While it might have been inappropriate for the recipient to intrude into the search earlier […], the recipient's active coparticipation in the search is now not only appropriate, but sought by the speaker.*

Gaze shifts towards a recipient during word searches thus actively engage the recipient in the process of finding the missing word. The preference structure is reversed.

The use of gaze to invite or ward off co-participation in word search activities[2] has also been demonstrated in a number of subsequent studies (e.g. Hayashi 2003; Bolden 2003; Iwasaki 2009; Jehoul 2019; Dressel 2020; and the studies discussed in Section 3), but usually on the basis of single cases. In this paper, we aim to test the validity of the claim that gaze regulates co-participation in word searches in a larger data set. Drawing on a corpus of 177 instances of word search activities from German dyadic and triadic interactions, we show that the first observation ((1) above) can be confirmed: gaze withdrawal is significantly more often followed by same-speaker completion than by co-operation in the word search. This is true despite the fact that, in a number of examples, candidate lexemes *are* offered by a recipient during the speaker's gaze aversion, and that these offers are not always treated as unwelcome by the word searching speaker (as suggested by Goodwin & Goodwin's wording: "inappropriate for the recipient to intrude into the search", 1986:70-71). The second observation ((2) above), is only partially corroborated: co-operation is indeed more frequent when the speaker gazes at the recipient during the hesitation phase. However, in the majority of these cases, the speaker's gaze is not shifted to the recipient *during* the word search but has already reached the recipient beforehand.

We propose a more refined account of the relationship between gaze behavior and co-participation in word searches. In order to do so, we examine a number of contextual features that impact this relationship, in particular

- the number of participants and their spatial arrangement (side-by-side vs. F-Formation, Kendon 1990);

- the epistemic structure of the exchange.

Our account also covers the ways in which speakers organize their gaze in order to enhance or diminish its force as an appeal to the recipient to co-participate. Among the relevant features we investigate here are

- the temporal structure between a gaze shift to the recipient and co-participation in the word search: while Goodwin & Goodwin (1986) argue that the gaze shift needs to occur during the speaker's hesitation, we investigate whether sustained mutual gaze may have the same interactional effect.

- We further investigate the length of the hesitation phase and argue that longer hesitation phases, particularly those including metapragmatic search markers, make co-participation more likely than short ones.

The main aim of this paper is to argue that the relationship between gaze and co-participation in word searches is less straightforward than suggested by Goodwin & Goodwin (1986) and that the force of gaze to mobilize co-participation is in systematic ways context-dependent.

---

[2] We use the term "co-participation" here in Goodwin & Goodwin's sense, i.e. providing a candidate lexical item for the sought-for word. Often, but not always, this co-operation comes in the form of a co-construction. It should be noted that recipients who lack (epistemic) access to the speaker's ongoing turn project and therefore cannot come up with a solution to the word search problem may nonetheless signal engagement with the word search activity, e.g. by uttering acknowledgment tokens, continuers or by overtly admitting that they cannot help. Hence, there are ways for recipients to display their orientation to the speaker's gaze as inviting co-participation other than providing the missing word.

2. Corpus and methods

The analyses in this paper are based on integrated audio, video and eye-tracking recordings of eight dyadic and twelve three-party interactions including twenty-seven male and twenty-seven female speakers, with a total duration of fourteen hours. All participants were undergraduate or PhD-students.[3] Approximately half of the conversations involved friends and the other half involved unacquainted participants.

The dyadic data include three recordings of two people walking (mostly side-by-side) through an old cemetery while conversing freely. In another two recordings, the two interactants sat side-by-side. In the remaining three dyadic interactions, participants were seated vis-à-vis each other with a table between them. In all triadic conversations, participants were seated in a circular formation, usually around a coffee table.

Participants wore mobile eye-tracking glasses (SMI or Tobii2). The glasses have two in-built cameras that record the movement of the speakers' pupils (installed in the frame of the glasses to the left and right of the speaker's nose) with a sampling rate of 30Hz (SMI) or 50Hz (Tobii). The glasses further include a scene camera that records a rough approximation of the speaker's field of vision. For analysis, the pictures of the scene camera and the tracking camera are overlaid. A tracking cursor shows the speaker's gaze focus in his or her field of vision. In addition, all stationary interactions were recorded with an audio recording device and an external camera. The eye-tracking recordings, as well as the recordings of the external camera, were synchronized and arranged on a split screen using Adobe Premiere Pro CC. The split-screen video and the audio file were then imported into ELAN (Wittenburg et al. 2006), where speech was transcribed according to GAT 2-conventions (Selting et al. 2009).

Compared to the analysis of video recordings from an external perspective only, eye-tracking has the advantage of measuring gaze direction (foveal movement) directly and with high accuracy. It allows precise identification of gaze-fixation and gaze-movement phases for every speaker at each point in time during the conversation and hence, reconstruction of the temporal relationship between gaze and other interactional resources.

Our study thus builds on two strands of research: research on the regulatory functions of gaze based on eye-tracking technology (Holler & Kendrick 2015; Kendrick & Holler 2017; Stukenbrock 2015; Stukenbrock & Dao 2019; Weiß 2019, 2020; Zima 2018; Zima et al. 2019; Auer 2019, 2021 and the papers in Brône & Oben 2019) and research on word-searches which often (but not always) occur in the format of co-constructions (on word searches: Goodwin & Goodwin 1986; Hayashi 2003; Bolden 2003; Iwasaki 2009; Jehoul 2019; Dressel & Kalkhoff 2019; Dressel 2020; on co-constructions: Lerner 1991, 1996; Ono &Thompson 1995; Günthner 2013; Oloff 2014 and Brenning 2015, among many others).

Following Schegloff et al. (1977), word searches are defined as a specific type of self-initiated repair, which occurs within the troublesome source turn. Characteristic features of word searches are speech perturbations marked by hesitation particles (e.g. *uhm*), sound stretches, pauses, cut-offs, and restarts (retractions) (also cf. Lerner 1996; Helasvuo et al. 2004). Usually, hesitation phases include a cluster

---

[3]   We obtained written consent from all participants to publish transcripts and stills.

of these phenomena (cf. Dressel 2020; Dressel & Satti 2021). Our collection comprises 177 word search activities. To avoid confusion with other phenomena such as deliberate halts of speech fluency (e.g. pausing before the next item to draw attention), inclusion in the collection required the occurrence of more than one hesitation element. In shorter hesitation phases, at least one hesitation particle had to be present. In order to count as indicative of a word search, the hesitation additionally had to occur in a non-complete utterance at a point in which a single lexical item could be identified as the missing element. Very often, this was the case before the focus constituent of the clause.

A majority of 125 word searches (70.6%) were completed by the word searching speakers themselves, corroborating the well-known preference for self-repair (Schegloff et al. 1977 and more recently Jehoul 2019). In twenty-eight cases, a co-participant provided a candidate lexical item and in another fourteen cases, both the speaker and a recipient came up with a solution for the word search problem, either sequentially or simultaneously. In ten cases, the word search was abandoned before a solution was found by the speaker or recipient. In eight of these ten cases, the recipients displayed active engagement with the word search but could not come up with the sought-for word.

3. The original proposal: Gaze as a means to keep the recipient from collaborating in the word search or to elicit participation therein

As Goodwin & Goodwin note, speakers regularly avert their gaze from their addressees when engaged in word searches (see also Ehlich & Rehbein 1982). Through this gaze aversion, they construe the word search as a solitary search, i.e. one that they intend to complete themselves.

This pattern is exemplified in extract (1) from our corpus of dyadic interactions. Mark is retelling the plot of a horror movie to his friend Simon.[4]

(1) *Invasio*n, Summer 2013, 17:29:09- 17:40:070
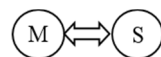

```
01 MAR:   {und dann SCHLÄFST? (--)}
           and then you sleep?
```
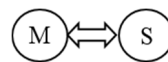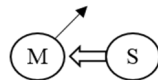


```
02        {°hh DANN äh: (1.0)} {verWANdelst du dich irgendwie;=hä,=
           then uh              you are transformed somehow;=hn?
```

---

[4] Here and in the following extracts, we use a gaze transcription system adapted from Rossano (2013) and extended to triadic interactions in Auer (2019). Mutual gaze is symbolized by a two-sided (double) arrow, and one-sided gaze from one interlocutor to another by a one-sided (double) arrow pointing at the participant being looked at. One-sided thin arrows indicate that the participant is not gazing at any of the interlocutors. (Thus for instance, in ex. (1), line 04, S gazes at M, M averts his gazes, i.e. he does not gaze at S). Curled brackets in the verbal transcript mark the parts to which a given gaze constellation applies.

```
03 SIM:  [Oke]
         okay
```
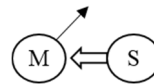


```
04 MAR:  [dann]} {wirst du zu so_nem äh zu so_nem #1 äh:°hh zu so_nem
         em (.)}
         then you turn into like a uhm into like a uh: °hh into like a
         uhm (.)
```
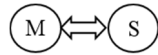


```
         {emoTIONSlosen Wesen;}
         emotionless being;
```

Mark is about to describe the corporeal transformation that the protagonists undergo while asleep. The retelling is already marked by hitches and hesitations in line 02 which indicate formulation difficulties, but it is only in line 04 that a word search becomes manifest. Mark makes three attempts to access the right noun to describe what exactly people are transformed into. He starts with *dann wirst du zu so_nem* ('then you turn into like a') and then repeats *zu so_nem* two more times before he ultimately succeeds in finishing his utterance with the (presumably) projected noun phrase *emoTIONSlosen Wesen* ('emotionless being'). Only shortly after the beginning of the TCU in line 04 does Mark avert his gaze from Simon, while Simon keeps gazing at him. At the very moment when he produces the missing word, he re-establishes mutual gaze.

#1: Mark averts his gaze from Simon during the hesitation phase in line 04.

The recipient's chances of finding the missing word are quite limited in this case, as he has not seen the movie. It could therefore be argued that the fact that the speaker looks away is a mere symptom of the ongoing mental search activity and has no interactional meaning.[5] Be that as it may, the recipient makes no move whatsoever to intervene in the search; this example therefore attests to Goodwin & Goodwin's first observation.

More complex examples such as (2), taken from a stationary, dyadic setting just like extract (1), provide evidence that looking away *can* indeed be an interactional practice. Just before the extract presented in (2), Johanna complains about the quality of the pedagogical education she receives at her department. She claims that she

---

[5] Gaze aversion is well known to reduce cognitive load as it minimizes the informational input a speaker has to process while searching for the word (Glenberg et al. 1998; Doherty-Sneddon et al. 2002).

was only able to understand the course because she had studied psychology before and therefore could relate the course content to previously acquired knowledge about child development.

(2) *Stages of Development*, **Spring 2013, 00:15:27:970- 00:15:35:500**
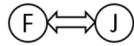
```
01 JOH {und DAdurch hab ichs verstanden.=
         and that's why I understood it

02      =weil ich WUSSte die kinder in ihren verschiedenen entwIcklungs
         because I knew the children in their different developmental

        [(.) äh  ]st}{*#2(0.65) äh}{stufen funktionieren.}
        euhm st        (0.65) uhm stages function

03 FAB  [PHAsen;]
         phases
```

In line 01, Johanna says *und DAdurch hab ichs verstanden* ('that's why I understood it'), which relates back to her previous argument that having attended courses in psychology has helped her understand the pedagogical courses. The following causal subordinated clause expands the turn: *weil ich WUSSte die kinder in ihren verschiedenen entwIcklungs* ('because I knew the children in their different developmental'), but she breaks off after the first part of the projected compound noun and starts to hesitate. The hesitation phase is marked by a micropause, followed by *äh* ('uhm') and the start of a syllable beginning with *st*, another break off, a longer pause of 0.65 seconds and another hesitation marker *äh*, after which Johanna finally manages to produce the second part of the compound *stufen* ('stages') and completes the TCU (although not exactly in the projected syntactic format, the adverb 'differently' missing). Starting with the first micropause and overlapping the first *äh* of the hesitation, Fabienne co-constructs and proposes *PHAsen* ('phases') as a candidate noun to complete the compound. The co-constructional completion she offers fits in the open slot both syntactically and semantically. It also occurs after a phase of mutual gaze. Nevertheless, it does not follow the pattern of an invited co-participation in the sense of Goodwin & Goodwin as it occurs *before* the hesitation phase begins (see below, 5.1.3, for further discussion). In this extract, Johanna does not accept the co-construction as a resolution of the word search. Rather, through her gaze, she signals her intention to resolve the word search issue by herself: She breaks off mutual gaze just after Fabienne has provided a candidate lexical item and shifts gaze away to the right. It is only when Johanna has retrieved the noun and manages to deliver it, thereby completing the TCU, that she reestablishes mutual gaze with her recipient. The very fact that she thus continues the word search with averted gaze after Fabienne's co-construction indirectly confirms Goodwin & Goodwin's observation that speakers may shift gaze away from their co-participant(s) during a word search to actively construe it is a solitary search activity that they aim to bring to a successful ending themselves.

#2: Johanna (whose field of vision is shown in the right frame)
shifts gaze away from Fabienne and continues her word search

Goodwin & Goodwin's second observation is that *gaze shifts towards an interlocutor* are a way to *solicit help with the word search*. The pattern they describe is the following: A speaker has problems retrieving a word and starts to hesitate. During this hesitation phase, he or she shifts gaze to an interlocutor. This results in mutual gaze between the two (because listeners usually look at the speaker, particularly during hesitation phases, Kendon 1967). The gazed-at recipient interprets the gaze shift as a solicitation of help and provides a candidate lexical item. An example of this pattern can be found in extract (3).

(3) *Primary school teacher*, Summer 2018, 00:26:17 – 00:26:38

```
01 AND    {er studiert}{[äh](.)ding}{LE#3HRamt[(de)
          he studies   uhm  thingy  teacher training (Ger)

02 REB             [°hh]              [GRUNDschullehr]}{amt}
                                       primary school teacher

03 AND    {grund}{schul[lehramt}{für]}{deutsch und} {muSI:K}{[und(.)]}
          primary school teacher for  German  and   music   and

04 MEL             [GRUNDschullehramt;]              [OKE,  ]
                    primary school teacher            okay
```

The three interactants, Andi, Rebecca and Melanie, are talking about a common friend of Andi's and Rebecca's. Andi has trouble finding the right word to describe his friend's field of study. He hesitates right after *er studiert* ('he studies') and after

a micro pause continues with the filler noun *Ding* ('thingy'), followed by *LEHRamt* ('teacher training'). But this noun does not conclude the turn; Andi's following syllable *de* perhaps foreshadows the noun *Deutsch* 'German' which would result in the compound *Lehramt Deutsch* 'teacher training for German'. He breaks off, while Rebecca (in overlap with his *de*) suggests *GRUNDschullehramt* ('teacher training for primary schools') as a solution for the word search. Rebecca's co-construction can be seen as a response to the speaker's gaze. At the beginning of the hesitation phase *äh* (.) *ding* ('uh (.) thingy'), Andi gazes away from his recipients, but as his problems with the utterance persist, he shifts gaze to Rebecca. Rebecca helps and provides a candidate solution for the word search which is accepted by Andi (line 03) and leads to the correct formulation of the study programme: *grundschullehramt für deutsch und muSI:K* ('teacher training for primary schools for German and music').

#3: Andi has established mutual gaze with Rebecca, who then joins in the word search

Supporting evidence for the claim that gaze shifts function as a means to elicit help in word searches comes from work on various types of interaction in which one or more participants are challenged by their non-native language competence (Brouwer 2003; Greer 2013; Taquechel-Chaigneau 2014), or because of a language impairment such as aphasia (Auer & Bauer 2009). Aside from these cases of a-typical interaction, Bolden (2003) discusses data from two participants facing an artifact (a model of a machine). Although the co-construction she discusses is not related to a word search, it occurs after (and presumably occasioned by) a hitch in the technician's turn. More importantly, the speaker employs gaze in order to solicit it: "by shifting the gaze from the focus point (…) to the recipient the speaker (…) *invites* the recipient to produce a completion" (Bolden 2003:204, our emphasis). Bolden also illustrates the inverse practice, i.e. by sustaining his gaze focus on the artifact the technician "proposes to *limit*, for the time being, [the second speaker's] involvement *to that of a listener* and observer" (208, our emphasis).

Dressel & Kalkhoff (2019) investigate co-tellings of couples seated side-by-side on a sofa and facing a camera as their recipient. In this seating arrangement, gaze

(and body orientation) seem to be used systematically to "facilitate" (as the authors cautiously phrase it) co-constructional entry of a co-teller into the current main teller's turn. In a similar vein, Dressel (2020) shows that speakers shift gaze away from their co-tellers to "pursue a solitary word search and minimize the risk of co-teller entry" (40).

4. Gaze and co-participation in German dyadic and triadic interactions: a quantitative overview

Table 1 gives a quantitative overview of the gaze patterns found in solitary and co-operative word searches in our data set of 177 word search activities.

		Speaker averts gaze from recipient		Speaker gazes at recipient		Multiple gaze shifts	
		Sustained gaze aversion	Gaze shift away from R	Sustained mutual gaze	Gaze shift towards R	Gaze shifts to and away from R	Total
Word search completed by	the speaker	29.6% (37)	34.4% (43)	18.4% (23)	5.6% (7)	12% (15)	70.6% (125)
		64% (80)		24% (30)			
	the recipient	14.3% (4)	21.4% (6)	28.6% (8)	21.4% (6)	14.3% (4)	15.8% (28)
		35.7% (10)		50% (14)			
	both speaker and recipient	21.4% (3)	14.3%% (2)	35.7% (5)	21.4% (3)	7.1% (1)	7.9% (14)
		35.7% (5)		57.1% (8)			
	nobody (abandoned)	40% (4)	20% (2)	0% (0)	40% (4)	0% (0)	5.6% (10)
	Total	27.1% (48)	29.9% (53)	20.3% (36)	11.3% (20)	11.3% (20)	177

Table 1: Overview of gaze patterns in relation to solitary and co-operative word searches

The different word search outcomes – completed by the speaker, the recipient, both speaker and recipient or abandoned before completion (see second column) are related to the word searching speaker's gaze behavior during the hesitation phase. Therefore, the third column lists all cases in which the speaker's gaze is averted from the recipient(s) during the hesitation phase up to the solution of the word search by the speaker or recipient, or up to the abandonment of the word search and the continuation of fluent talk.[6] The forth column lists cases in which the speaker shifts his/her gaze away from the recipient during this phase. In column five we provide the results for cases in which the speaker is already gazing at one of the recipients at the beginning of the hesitation phase and continues to do so until the resolution or abandonment of the word search. Column six covers gaze shifts by the speaker toward a recipient during the hesitation phase, and column seven lists

---

[6] This includes cases in which one recipient is gazed at by the speaker but a solution to the word search is only offered by the third (not-gazed at) participant. Example (9) is an instantiation of that pattern.

all cases in which the speaker first shifts gaze towards a recipient but then shifts gaze away again before the word search is resolved or abandoned.[7]

The relationship between gaze aversion and self-completion as described by Goodwin & Goodwin (1986) is generally confirmed by our data. The relationship between gaze at the recipient and other-completion (co-operation) is, however, weaker than expected and the dominant pattern differs from the one observed by Goodwin & Goodwin.

The majority of self-completed word searches occur with averted gaze (64%; first row, numbers in second and third columns added up, see grey cell). 36% of these solitary searches are embedded in other gaze configurations, the most frequent one being sustained mutual gaze (18.4%). As expected, gaze shifts towards the recipient are very infrequent before self-completed word searches (5.6%). Note however that in no less than 24% the word searching speaker gazes at the recipients and nonetheless completes the word search himself/herself. In 15 cases (12%), the speaker first shifts gaze towards the recipient but then shifts gaze away again and resolves the word search by him-/herself.

In word searches that are resolved by the recipients (fourth row, Table 1), the most frequent gaze pattern is sustained mutual gaze (28.6%). Only in 21.4% of the cases can the recipient's collaboration be claimed to be a response to a gaze shift towards the recipient, as suggested by Goodwin & Goodwin. The recipient is not looked at at all in 35.7% of these word searches (see grey cell that merges the frequency for sustained gaze aversion and a gaze shift away from the recipient). Other-completion of word searches is therefore not associated with *gaze shifts* in a statistically significant way but, more generally, with *gaze at the co-participant* (including mutual gaze that started before the hesitation phase and is maintained beyond the completion of the word search) (X^2=12.547; df=2; p = < .001).

There are also quite a few word searches for which both speaker and hearer provide a solution (5th row). This category includes a diversity of cases. In some of them, a speaker rejects the candidate item provided by the recipient (see example (2)) and in others, both speakers come up with a solution simultaneously. In the majority of these cases, the recipient is gazed at during the hesitation phase (57.1%).

How can this apparent difference with previous findings, most notably by Goodwin & Goodwin (1986) be explained? The first factor that may play a role here is the interlocutors' spatial arrangement. Goodwin & Goodwin's study is based on video data from stationary, multi-party F-formations (Kendon 1990). Our collection comprises data from quite different interactional constellations: dyadic and triadic interactions, side-by-side arrangements and F-formation data, conversations with free topic choice and elicited co-tellings etc. All these factors may impact the power of gaze to mobilize co-participation in word searches. In the following, we will therefore look at them in more detail.

---

[7]   These cases could also be counted as instances of gaze aversion which would result in an even stronger correlation between gaze aversion and self-completion of a word search.

5. In which contexts is gaze at the recipient likely to elicit a co-construction?

5.1. Dyads versus triads, F-formation vs. side-by-side arrangements

Our data are not homogeneous with respect to the different spatial arrangements of the recorded conversations (cf. Fig. 1). In the triadic conversations, people were sitting in a circular F-formation. In the dyadic conversations, they either faced each other, sitting at a table, or were walking or sitting in a side-by-side arrangement.
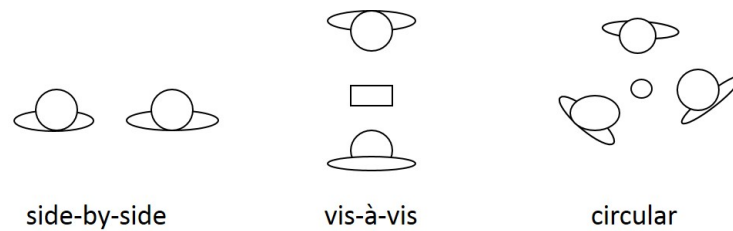

side-by-side   vis-à-vis   circular

Fig 1: Spatial arrangements of participants in our corpus

			Gaze aversion from recipient		Gaze at recipient	
			Sustained gaze aversion	Speaker shifts gaze away from R	Sustained mutual gaze	Speaker shifts gaze towards R
Side-by-side	Dyads	Self-completed word search	63.6% (7)	18.2% (2)	9.1% (1)	9.1% (1)
		Other-completed word search	33.3% (1)	0%	0%	66,7% (2)
F-Formations	Dyads (vis-à-vis)	Self-completed word search	17.9% (5)	21.4% (6)	42.9% (12)	3.6% (1)
		Other-completed word search	33.3% (1)	0%	33.3% (1)	0%
	Triads (circular)	Self-completed word search	29.1% (25)	40.7% (35)	11.6% (10)	5.8% (5)
		Other-completed word search	13.6% (3)	22.7% (5)	31.8% (7)	18.2% (4)

Table 2: The influence of the spatial arrangement on the effectiveness of gaze shifts to invite co-participation in a word search.

These spatial arrangements have an impact on the frequency of mutual gaze and by further consequence on the salience of gaze shifts as marked activities that interactants attend to because they constitute deviations from the default gaze pattern. Table 2 shows the number of self-resolved vs. recipient-resolved word searches under conditions of mutual or averted gaze, broken down into the three spatial constellations. (For simplification, abandoned word searches and simultaneous completions

have been omitted, as well as all cases in which speakers first shift gaze to and subsequently away from the recipient during a hesitation phase.) In the following, we discuss these spatial formations one by one. We start by zooming in on side-by-side arrangements in dyadic interactions.

5.1.1. Side-by-side arrangements

Walking or sitting in a side-by-side arrangement characteristically means that co-participants seldom gaze at each other. Arguably, a gaze shift toward the co-participant (in our case, the hesitating speaker) is therefore highly salient as it is an infrequent practice. It can therefore be expected that gaze at the recipient is most efficient in eliciting a response (in our case, help in the word search) in a side-by-side arrangement.

| Dyads			Gaze aversion from recipient		Gaze at recipient	
			Sustained gaze aversion	Speaker shifts gaze away from R	Sustained mutual gaze	Speaker shifts gaze towards R
	Side-by-side	Self-completed word search	63.6% (7) 81.8% (9)	18.2% (2)	9.1% (1)	9.1% (1)
		Other-completed word search	33.3% (1)	0%	0% 66.7% (2)	66,7% (2)

Table 2': Dyadic side-by-side arrangements

For convenience, we display the results for dyadic side-by-side arrangements separately in table 2'. Our corpus contains only a few word searches that occurred among people walking or sitting side-by-side. However, the picture we get from this sub-corpus is very clear. In 81.8% of the self-completed word searches (n=9, see row 3, grey cell), the word-searching speaker averts gaze from the interlocutor. In two of the three other-completed word searches, the speaker shifts gaze towards the interlocutor during the hesitation phase (row 4, grey cell). Many of the studies that have confirmed the Goodwin & Goodwin pattern (such as Bolden 2003, Dressel & Kalkhoff 2019 and Dressel 2020) also draw on data from side-by-side arrangements. It can therefore be concluded that gaze at the co-participant is highly efficient in eliciting the recipient's help in the word search in such a constellation because to shift gaze at the co-participant is a marked activity.

We illustrate this case with an example from an interaction between two friends who are walking side-by-side through an old cemetery. During the word search in question, the speaker not only gazes at her co-participant, she also turns her whole upper body and, most notably, her gesturing hand towards her interlocutor. Such a full-body realignment is a very strong mobilization device that the interlocutor can hardly not respond to.

Hannah is walking on the left, Sarah on the right. The tomb stones remind Hannah of a monument near a mutual friend's apartment.
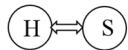
(4) *Arc*, Spring 2013, 00:16:35- 00:16:44
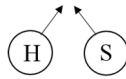

```
08 HAN   {°hh #4 und ähm-(1.0) und da gibt_s so: (-) im
              and err (1.0) and there's sort of (-) in the
```
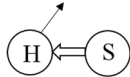


```
09       +EIN}{#5gangs(-) porta:l also des ist so_n;
         entrance portal well it's sort of a
         +gesture->
```



```
10       [(0.4)]}{n:#6(1.2)
         (0.4) a  (1.2)

11 SAR   [hm_hm]
```



```
12 HAN    ah}+{[wie so_n]}{so_ne art BOgen aber}
          uhm [like sort of a] a kind of arc but
          -->+
13 SAR       [BOgen;   ]
              arc
```


#4: Hannah (whose gaze is shown in the right frame)
and Sarah (whose gaze is shown in the left frame)
avert their gaze from each other, focusing on the scenery or the path, respectively.

#5: Sarah (walking on the right side) gazes at Hannah (walking on the left side)
during the word search as the latter begins to gesture.
Hannah's gaze is directed to the trees on the right of the path.

#6: Sarah and Hannah gaze at each other while Hannah continues to depict an arc.

At the beginning of the excerpt, the two women have no eye contact (cf. still #4). Hannah's gaze (right frame) is directed towards a tree a couple of meters in front of her, while Sarah (left frame) gazes down at the ground. Hannah's word search begins in line (08), marked by the hesitation marker *äh* followed by a one-second-pause, a restart/retraction to the initial *und* ('and'), a lengthened vagueness marker *so* ('kind of'), another short pause, another breakoff and retraction to *EINgangs* ('entrance') and a further short pause before the noun *porta:l* ('portal'). At this point, it is clear that Hannah is having difficulties finding the right word for the object 'in the entrance' that she wants to refer to. The utterance is noticeably incomplete. While she utters *EINgangs* ('entrance'), she starts to produce an iconic arc-like gesture (still #5), but has persisting problems in retrieving the corresponding lexeme, a typical tip-of-the-tongue phenomenon (Butterworth & Hadar 1989). Simultaneously, and presumably due to these hesitations, recipient Sarah shifts gaze to Hannah. Hannah continues to gaze away from her interlocutor while still trying to find the right word. The word search continues to be accompanied by hesitations. In line 10, the speaker pauses for 0.4 seconds, and before repeating the cliticized indefinite article n (> *ein*, 'a') and pausing again for 1.2 seconds, she looks at Sarah. Her upper body and the gesturing hand are now clearly oriented towards her friend (cf. still #6). She again moves her left arm up and down along a curved path. The gaze shift thus entails a shift of the whole body towards her interlocutor. Sarah first utters a continuer (line 11), and then offers the candidate lexical item *BOgen* ('arc'), thereby potentially completing Hannah's unfinished utterance. This co-constructional offer

is arguably informed by Hannah's gesture. It overlaps with Hannah's continuing attempt to find the missing word (*wie so_n*, 'like kind of a'), which is ultimately successfully brought to an end: Hannah integrates Sarah's candidate lexical item in *so_ne art BOgen aber* ('kind of an arc but'), while at the same time stressing that *Bogen* is not the perfect word to describe the thing she has in mind.

5.1.2. Dyadic vis-à-vis constellations

Let us now look at the dyadic vis-à-vis constellations (see Table 2''). In this case, the larger number of self-completed word searches (46.5%) occur while interactants are gazing at each other. Only in 39.3% of the self-completed searches did the speaker avert gaze from the interlocutor. As our extracts (1) and (2) above demonstrate, this does not mean that gaze aversion is interactionally irrelevant in single cases. However, there is no evidence for a systematic relationship between gaze aversion and self-completion. (We do not have enough data to prove or disprove the opposite claim that gaze at the recipient and co-operative resolution of the word search are linked to each other in meaningful ways, but given the ubiquity of mutual gaze in these data, it seems unlikely.) Hence, there is no evidence that Goodwin & Goodwin's two claims hold in this constellation in a systematic way. Mutual gaze is too ubiquitous to be salient and thus cannot take over interactional functions, as it does most typically and most efficiently in side-by-side arrangements.

Dyads			Gaze aversion from recipient		Gaze at recipient	
			Sustained gaze aversion	Speaker shifts gaze away from R	Sustained mutual gaze	Speaker shifts gaze towards R
	F-Formations (vis-à-vis)	Self-completed word search	17.9% (5)	21,4% (6)	42.9% (12)	3.6% (1)
			39.3% (11)		46.5% (13)	
		Other-completed word search	33.3% (1)	0%	33.3% (1)	0%

Table 2'': Dyadic vis-à-vis constellations

To substantiate this explanation empirically, we coded mutual gaze in continuous sections randomly chosen from two interactional episodes for each of these constellations (see Table 3). Leaving out silent periods, which are of course much more frequent in the walking constellation than in the stationary setting, the percentage of time during which the two participants look at each other differs radically. Participants in the two stationary settings looked at each other for 55.53% and 77.70% of the total speaking time, respectively, while the two couples who were walking side-by-side did so in roughly one eighth of this time only: 9.31% and 11.43%, respectively.

	Dyad/walking side by side 1	Dyad/walking side by side 2	Dyad/sitting vis-à-vis 1	Dyad/sitting vis-à-vis 2
Total duration of extract (s)	1675.77	1241.50	787.8	720.00
Mutual gaze (s)	107.22	127.42	427.26	522.34
Time spent in mutual gaze (Percentage)	6.38%	10.26%	54.27%	72.54%
Total speaking time in ms	1150.50	1114.34	769.38	672.24
Time spent in mutual gaze when somebody is speaking (Percentage)	**9.31%**	**11.43%**	**55.53%**	**77.70%**

Table 3: Frequency of mutual gaze in dyadic side-by-side vs. vis-à-vis formation

As a first conclusion, we therefore propose that in dyadic interactions, side-by-side and F-formations offer different potentialities for gaze at the co-participant to be an interactionally salient behavior. While gaze at the recipient is highly efficient in eliciting co-operation in dyadic side-by-side arrangements, the opposite is true for dyadic F-formations. We now turn to triadic F-formations in order to investigate gaze as an interactional practice in more detail.

5.1.3. Triadic F-formations

Triads			Gaze aversion from recipient		Gaze at recipient	
			Sustained gaze aversion	Speaker shifts gaze away from R	Sustained mutual gaze	Speaker shifts gaze towards R
	F-Formations (circular)	Self-completed word search	29.1% (25)	40.7% (35)	11.6% (10)	5.8% (5)
				69.8% (60)		
		Other-completed word search	13.6% (3)	22.7% (5)	31.8% (7)	18.2% (4)
					50% (11)	

Table 2''': triadic F-formations

Most of our examples for word searches come from triadic F-formations, which is the constellation most similar to Goodwin & Goodwin's. In this part of our data set, just like in the entire collection, gaze away from/at the recipient and other/self-production of the missing word are connected to each other in a statistically significant way (cf. Table 2'''; X^2=10.88; df=2; p = < .001). But note: only 18.2% of the other-completed word searches in the triadic context were preceded by a gaze *shift* from the speaker to the recipient that occurred during the hesitation phase. In a much larger number of cases, the hesitation phase began *after* mutual gaze had already been established (31.8%). Hence, although Goodwin & Goodwin's two observations are confirmed, assumption (2) is only confirmed with regard to *gaze at* the recipient in general, not with regard to *gaze shifts to* the recipient. The most frequent pattern is not the one found in extract (4) above, but rather the one in the following extract:

(5) *Diner*, Summer 2016, 23:00:785-22:05:715

```
                              ( T )
                             ↗     ↖
                          ( N )   ( L )
```
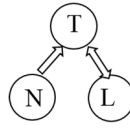
```
01 THO: {so die letzte szene ist dass sie dann in einem so einem (.)
          so the last scene is that they then in a kind-of a
```

```
                ( T )              ( T )
               ↗     ↖            ↗     ↖
            ( N )→( L )        ( N )   ( L )
```

```
        in so einem (0.4)}{[ (1.00)    ]} {DIner sitzen;
        in kind-of a                       diner sit

02 LIN:                     [d- DIner   ]
                             d- diner

03 THO:  +GEnau+.}
          exactly

        +nod  +
        +gesture+
```

The topic of this exchange is a movie that Thomas and Lina both had watched together. Norbert, to whom the movie is being retold, displays his recipiency by shifting gaze back and forth between the two co-tellers but is not verbally active in this sequence. Thomas and Lina, on the other hand, orient their bodies towards each other and are engaged in mutual gaze. Thomas is trying to recount the last scene of the movie.

At the end of line 01, Thomas starts to encounter a problem of formulation when describing the location of the scene. He starts to hesitate at a point in which a noun denoting a location is projected to follow in the prepositional phrase *in so einem* ('in such a'). He pauses shorty and then repeats the prepositional phrase (beginning of line 02). However, he is still not able to retrieve the 'right' noun and pauses again. Lina helps out 400 milliseconds into that pause and provides the lexical item *DIner*, which completes the unfinished noun phrase and does indeed seem to be the word that Thomas has been searching for (cf. his *GEnau*, 'exactly', in line 03).

Lina and Thomas are already in eye contact when Thomas, the main speaker, starts to hesitate. Mutual gaze is sustained across the hesitation phase and is not immediately dissolved even after the word search phase. Hence, gaze cannot be claimed to have invited Lina's co-participation in the same way as in extracts (3) or (4). Rather, Lina and Thomas seem to be already sharing a turn space when the word search begins. This is the case because they are acting as *co-tellers*. Thomas is the primary speaker in this moment, but by gazing at Lina, he not only addresses but also includes her in his telling, which is motivated by the need to check whether his memories of the film are in line with hers, and whether the way he recounts the movie receives her support. Lina, being the co-teller and the only participant in the conversation who can provide the missing lexeme, has special rights to access Thomas' turn and to co-construct it (see below, Section 5.2). Her help is acknowledged by Thomas in that he keeps gazing at Lina even after the co-construction

while he integrates the word *DIner* in his continuation of the turn. In addition, a nod paired with an open-hand gesture towards Lina equally expresses acceptance of the word offered.

This finding, which contradicts Goodwin & Goodwin's pattern, obviously needs to be confirmed in a larger collection (we only found 19 cases of co-operations in word searches in our triadic data) but we hypothesize that non-aversion of gaze during the hesitation phase seems to be sufficient to create a "local opportunity space" (Dressel 2020:46) for co-operation, even though it might not make relevant such a co-operation in the same way as gaze shifts do. Four examples of co-operative word searches in which the establishment of mutual gaze precedes the onset of the hesitation phase come from co-tellings (as in extract (5)), and in one further example, the two co-operating participants share a common experience which the third participant does not have. This brings us to the second contextual feature which, in addition to the spatial constellation, impacts on the ways in which gaze can be used to elicit or invite co-operation in word searches; it is the epistemic constellation (Heritage 2012a, b).

5.2. Epistemic constellation

The more common ground is shared by the speaker and the looked-at recipient, the more likely a collaboration; if a recipient knows nothing about the concept the speaker is searching for, it is difficult to help. In addition to how much common ground speaker and recipient(s) share, the success of a speaker's gaze to elicit or invite help is also dependent on how many cues the speaker has already provided for the recipient(s) to retrieve the word in question.

Unfortunately, the term "word search" lacks precision with regard to the cognitive processes involved. The term covers two very different mental activities; on the one hand, it can refer to searches on the level of conceptualization (as in extract (1)), on the other hand, it can refer to problems of access to a particular lexical lemma (as in extracts (2)-(4)). In the first type, the word search includes the search for the right concept to refer to a given referent, in the second case it consists in a problem of lexical retrieval. The concept is mentally activated but the 'name' of the concept cannot be accessed.

On the interactional plane, the ambivalence of the term "word search" and the two processes it covers becomes evident in cases in which the speaker knows, and the recipient is able to identify the concept that the speaker is struggling to evoke, but not the missing word. The recipient may signal that understanding is possible despite the lacking words. The current speaker may then decide whether she or he wants to pursue the word search on the level of lexical access. A case in point is the following exchange about meat consumption.

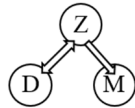**(6) *Consequences*, Spring 2017, 08:18:051 – 08:24:386**


```
01 ZAC    {°hhh oder alle} {so_n bisschen hAlb so viel FLEISCH,
               or all        a little half as much meat
```
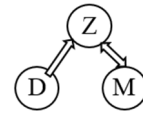
```
02          so das hätte schon_nen enormen:(0.2)}{#7äh#8: [(0.5)      ]}
            so that would already have an enormous (0.2) euhm (0.5)

03 MAX                                                    [((nickt))]
```



```
04 ZAC    {(0.4) ja (0.3) AUSwirkungen so.}
          (0.4) well (0.3) consequences
```


#7: At the onset of the hesitation particle *äh*, Zac gazes away (to the window, see the box)

#8: At the end of the hesitation particle *äh*, Zac has established mutual gaze with Max

Zac argues that it would not be difficult to reduce the world's carbon emission if people reduced their meat consumption by only a little bit. However, he cannot access the word he is searching for (perhaps the noun *Effekt* ('effect'), or a synonym) (end of line 02) and hesitates after the adjective *enormen*. The grammatically projected noun after the indefinite determiner *nen* and the inflected adjective would be in the singular. Zac first pauses briefly, produces *äh*, then pauses again for 0.9 seconds before saying *ja* ('yes, well') and briefly pausing again. Then he delivers the semantically, but not grammatically fitting plural noun *Auswirkungen* ('consequences'), which completes the TCU (and the word search).

The grammatical mismatch between the indefinite article and adjective on the one hand, and the nominal head on the other, displays to the recipient (and analyst) that the speaker has not been successful in retrieving the projected noun but has opted for a semantically fitting synonym. Through gaze, Zac turns to Max for help during the hesitation phase (end of line 02). Max does not provide a candidate solution for the word search, but nods instead. This nod seems to work as a continuer as Max acknowledges Zac's word search issues while at the same time signaling that he is not able (or willing) to produce the missing word.

In order to predict whether gaze at the co-participant will be an efficient way of eliciting help, the speaker thus needs to evaluate the recipient's access to the search domain, often without having sufficient cues to know how much s/he knows. There is, however, one context in which speakers can be sure that they share common ground with one of their recipients; these are the co-tellings of which we already discussed an example in extract (5). We elicited the co-tellings in some of the encounters in our corpus by asking two study participants to go to the movies together. We then recorded the conversations of these two participants with a common friend to whom they would jointly recount the content of the film. The corpus also comprises one extended joint storytelling activity that developed spontaneously during one conversation.

Co-tellings are special activities because co-tellers both have epistemic access to the story and equal rights to tell it (Falk 1980; Lerner 1992; Zima 2018). Therefore, they have to negotiate on a turn-by-turn basis who gets to tell what and when. Dressel & Kalkhoff (2019) and notably Dressel (2020) show that in co-tellings, the main speakers may share the turn space. This means that, compared to the recipient, the co-teller has upgraded rights to take the floor from the main teller in the course of the telling (which includes co-constructions of turns), while the main teller has upgraded rights to ask the co-teller for help in the telling. In order to monitor each other, main teller and co-teller often look at each other during the co-telling. These extended phases of mutual gaze create windows of opportunity for recipients to join in the turn space (see also Iwasaki 2009).

Table 4 compares our co-telling data with the rest of the corpus. It shows that the word searching speaker gazes at the co-teller and comes up with a solution to the word search herself in 23.5% (n=4) of cases, while 60% of the other-completed word searches are embedded in mutual gaze between the co-tellers. Only in one case does the speaker shift gaze to the co-teller but the co-teller does not provide the missing item and the word search is abandoned (not included in Table 4). In co-tellings, then, turning to the co-teller for help is a strategy with an exceptionally high success rate of 86% (6 cases out of 7).

		Sustained gaze aversion	Speaker shifts gaze away during hesitation phase		Sustained mutual gaze		Speaker shifts gaze	
Co-tellings			*from recipient*	*from co-teller*	*with recipient*	*with co-teller*	*towards recipient*	*towards co-teller*
	Self-completed word search	0% (0)	41.2% (7) 47.1% (8)	5.9%% (1)	17.6% (3)	5.9% (1)	0% (0) 23.5% (4)	17.6% (3)
	Other-completed word search	10% (1)	0% (0)	20% (2)	0% (0)	40% (4)	0% (0) 60% (6)	20% (2)
		Sustained gaze aversion	Speaker shifts gaze away from a gazed-at recipient		Sustained mutual gaze with a recipient		Speaker shifts gaze towards a recipient	
Interactions with free topic choice	Self-completed word search	34.3% (37) 66.7% (8)	32.4% (35)		17.6% (19)		3.7% (4)	
	Other-completed word search	14.3% (3)	19% (4)		19% (4) 38% (8)		19% (4)	

Table 4: Co-tellings compared to the rest of the data

Table 4 also shows that during co-tellings, current speakers always single out their co-teller if they want to elicit help in a word search, and not to the recipient (last two columns, third and fourth row). In three cases, the speaker turns to co-teller but completes the word search herself (last column, third row). Arguably, in these cases, the gaze shift is not meant as an invitation to co-construct but the speaker signals uncertainty whether the word (s)he is about to provide is correct and turns to the co-teller for approval or correction.

Compared to the rest of our data, i.e. all (parts of) the conversations that do not involve a co-telling activity, we see that gaze at the co-participant is associated with the interactive resolution of the word search more strongly in co-tellings than in the rest of the data (60% vs. 38%), while self-completion is less tied to gaze aversion (47% vs 67%[8]). Our collection therefore confirms the hypothesis that shared background knowledge, as can be assumed for co-tellings, enhances the likelihood that speakers use gaze to involve their recipient (or co-teller) in a word search.

Nonetheless, even in co-tellings where speakers can rely on a shared experience and common ground with their co-teller, speakers may have to do additional interactional work to get co-participants engaged in a word search. One way to enhance the mobilizing force of gaze to invite cooperation in a word search is to maintain gaze towards a co-participant over a very long part of the hesitation phase (Section 6.1). Another way is to use meta-pragmatic search markers such as *What is it called?* in combination with gaze (Section 6.2).
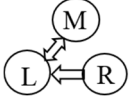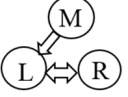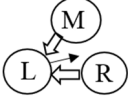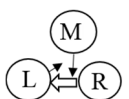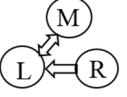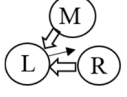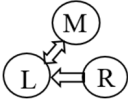

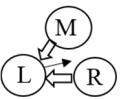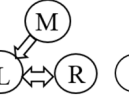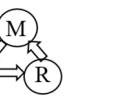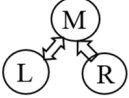[8]   On average, a speaking co-teller and one of her co-participants (recipient or co-teller) are mutually gazing at each other 32.84% of the time. Compared to that, the average frequency of mutual gaze between a speaker and a recipient is 43.4 % for all other triadic data in our corpus (refered to as 'interactions with free topic choice' in Table 4).

6. Ways to enhance the mobilizing force of gaze in the search for help

6.1. Prolonged gaze at recipients during hesitation

There are ways by which speakers can enhance the mobilizing force of their gaze. An obvious way to do so is to gaze at somebody for longer stretches of a hesitation phase or to repeatedly shift gaze towards a recipient during that phase (see Stivers & Rossano 2010 on "pursuing" a response by gaze). A good case in point is extract (7).

(7) *Jargon*, **Summer 2017, 09:03:891 – 09:16:714**

```
01 LUI:    {die waren ja} {im deutschen vOll GUT,=
            they were really good in German


02         =und manchmal}{is es ja nich so gleiche}{sprich (-) also}
            and sometimes it is not the same      pro          so


03         {wie nennt man das nich sprich}{wörter SONdern,
            how do you say       not  proverbs        but


04         (0.9)} {äh (1.9))} {0.9}   {(1.2)} {(0.4)}
            (0.9)  uhm (1.9)  (0.9)    (1.2)   (0.4)


05 MAN:    {jarGON?}
            jargon?
```

Luisa is talking about the film *Alice in Wonderland*, which she saw in the German dubbed version. The movie's humor hinges heavily on wordplay, and in line 01 Luisa states that the puns were very well translated into German. She elaborates on this point in line 02 saying that sometimes there are no similar 'proverbs' (*Sprichwörter*) (which makes dubbing a hard job). She, however, breaks off after *Sprich* ('pro'), accounting for this break-off in line 03 by saying that *Sprichwörter*

is not the accurate word, but that she cannot come up with a better-suited one. The word search problem is marked in line 04 by a pause of 0.9 seconds, followed by the hesitation marker *äh* and another, very long pause of 4.4 seconds. This extended hesitation phase is ended by Manfred finally providing *jarGON?* as a candidate lexical item. He marks this item as tentative through rising intonation ("try-marked" in the sense of Sacks & Schegloff 1979 [2007]). He thus signals uncertainty as to whether the lexical item he offers is suitable to the lexical gap, and in the ensuing sequence (not shown here), it will become clear that it is indeed not the word Luisa was searching for. Hence, he co-operates in an attempt to ensure the progressivity of the conversation (Stivers & Robinson 2006), which Luisa has suspended by her long silence, even though the provided candidate is unlikely to be a solution to her word-finding problems.

Looking at the interlocutors' gaze behavior, we see that Luisa uses gaze shifts to address both her interlocutors during line 01. When her word search issues become apparent in line 02, she averts her gaze while both her interlocutors continue to gaze at her, thus construing her search as a solitary activity. But when her attempts to resolve the word search remain unsuccessful, she turns to Manfred and utters the meta-pragmatic word search markert *wie nennt man das* 'how do you say' (line 03; see the following section). Manfred reciprocates this gaze but does not provide a candidate word. Luisa then again shifts gaze away from him and continues to search for the missing word by herself. However, she remains unsuccessful and redirects her gaze back to Manfred when she says *äh* and pauses again, making it very obvious that she wants to engage him in the word search. During the first 1.9 seconds of this pause Luisa and Manfred are gazing at each other but Manfred still does not come up with a candidate item to help her. Therefore, Luisa again shifts gaze away from Manfred, averting gaze from both her interlocutors for another 0.9 seconds, before turning to the other interlocutor, Fritz, and gazing at him for another 1.6 seconds. The word search is then finally brought to a temporary ending when Manfred proposes *jarGON* as a possible solution. Most interestingly, Fritz's gaze behavior equally shows that he thinks that Manfred should help (and not him) as he shifts gaze to Manfred soon after Luisa has started to look at him, thereby passing on the responsibilty to help with the word search back to Manfred.

This example illustrates that long and repeated phases of gaze at an interlocutor have a strong mobilizing effect on interlocutors. They know they are expected to get engaged even if they have little access to the searched-for word and have to do considerable effort to come up with a candidate item. The most apparent reason for this engagement despite low access to the search domain and limited chances to actually find the missing word, is the need to ensure the interaction's progressivity.

In this context, it is useful to look at the average length of the hesitation phase in self-resolved word searches as opposed to interactively resolved word searches. With an average of 1981.85 ms, self-resolved word searches are remarkably shorter than interactively resolved word searches (3367.33 ms). Coparticipants are thus more likely to become engaged if word searches do not get resolved quickly by the word searching speakers themselves.

6.2. Enlarging the hesitation phase by metapragmatic word search markers

As we have already seen in extract (7), word searches can be accompanied by "word search markers", which explicitly mark the word search as a problem in need of resolution (Brouwer 2003; Kurhila 2006). Metapragmatic word search markers such as e.g. *wie heißt X?* (what's X called?) or *wie sagt man?* (how do you say?) are not restricted to co-operative word searches. Of the 29 cases in which word searches contain these markers, a majority of 34.5% are self-completed word searches, while only 27.6% are other-completed (see Table 6). Explicit word search markers are typically found in long and difficult word searches that neither the speaker nor the recipient(s) are able to resolve. This becomes evident when we compare them with the word searches without such a marker. The difference is significant (X^2=39.25, df=3, p< 0.01): word searches that involve a word search marker a more likely to be abandoned and less likely to be completed by the speaker (77.7% without marker, 34.5% with marker).

	Word search completed by speaker	Word search completed by recipient	Word search completed by both speaker and recipient	Abandoned word searches	Total
Word search marker	34.5% (10)	27.6% (8)	10.3% (3)	27.6% (8)	16.4% (29)
No word search marker	77.7% (115)	13.5% (20)	7.4% (11)	1.4% (2)	83.6% (148)

Table 6: Metapragmatic word search markers and their relation to self- and other-completion

However, if combined with a gaze shift towards a recipient, word search markers have a strong mobilizing effect. Table 7 shows that if speakers mark their word search with a meta-pragmatic marker, recipients are more likely to become engaged even if gaze is averted (22.2% of hearer-completions vs. 7.8% when no meta-marker is used, see row 2, column 4 vs. row 5, column 4). But if a speaker uses a word search marker *and* gazes at the co-participant, the latter always co-participates (see rows 3 and 4, grey cells), even though this engagement does not always lead to a satisfactory completion of the word search: in 4 cases, the word search gets abandoned despite the recipient's active engagement in the word search (row 3, column 6). By contrast, if speakers gaze at a recipient but do not use a word search marker, the recipient engages in the word search in only 43.2% of cases (row 6, columns 4 and 5 added up).

|	Gaze	Word search completed by speaker	Word search completed by recipient	Word search completed by both speaker and recipient	Abandoned word searches	Total
Word search marker	+ gaze aversion	55.6% (10)	22.2% (4)	0% (0)	22.2% (4)	18
	+ gaze at recipient	0% (0)	0% (0)	33.3% (2)	66.7% (4)	6
				100% (6)		
	+ gaze shifts to and away from recipient	0% (0)	80% (4)	20% (1)	0% (0)	5
			100% (5)			
No word search marker	+ gaze aversion	89.6% (69)	7.8% (6)	3.9% (3)	1.3% (1)	77
	+ gaze at recipient	60.8% (31)	27.5% (14)	15.7% (8)	2% (1)	51
			43,2% (22)			
	+ gaze shifts to and away from recipient	100% (15)	0% (0)	0% (0)	0% (0)	15
			0% (0)			

Table 7: The combination of metapragmatic word search markers
and gaze in relation to self- and other-completion

Extract (8) can serve as an illustration. Max, Den and Zac have been talking mainly about which countries they have visited so far and which German regions they come from. The topic 'travelling' has led them to a discussion on the consumption of natural resources. Max has been talking about the influence of Western consumer life styles on the earth's natural resources. Just before line 01, he explained that he took an online test in which participants have to answer various questions about their life style.

(8) *1.8 times the world*, **Spring 2017, 10:21:607 – 10:39:81**


```
01 MAX:   {dann rechnet (.)} {dann rechnen die des AUS sozusagen-
          then they they calculate (.) then they calculate like
```
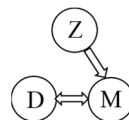


```
02        äh:m}{wenn JEder so (--) sich genauso verhalten würd wie DU,
          uhm if everybody like (--) would behave just like you,
```
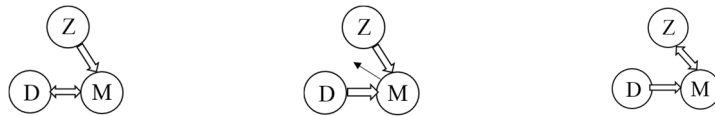
```
03        dann bräuchten wir EINS komma acht mal die erde?
          then we would need one point eight times the world
```



```
          [(0.64)] damit_s GAN}{ze: #9ähm::: }{(0.73) WIE sagt man;
                  so that the whole uhm (0.73) how do you say?
```

```
04 DEN:   [mhm,  ]
```

```
05 ZAC:   (0.63) ((schnalzt mit der Zunge)) ÖKOsystem?}
          ((clicks his tongue)) ecosystem?
```



```
06 MAX:   {ja also dass es ähm:}{(-) dass es sich nich} {AUFbraucht.}
           yeah so that it uhm: (-)  that it isn't depleted.
```


Still #9: At the beginning of the hesitation phase, Max is gazing at the wall,
middle distance between Den and Zac, while Zac and Den are gazing at Max.

The test result, which Max summarizes in lines 01 to 03, was that if all people lived like him, 'we would need one point eight times the world'. In line 04, Max then pauses briefly (0.64 seconds) and continues with *damit_s GANze:* ('so that the whole'). The last syllable *ze:* is stretched, which foreshadows an upcoming formulation problem. He produces an elongated hesitation marker *ähm:::* and again pauses briefly. During this hesitation phase, his gaze is averted from both his conversational partners (still #9). Then, shortly (240 ms) before he starts to produce the word search marker *WIE sagt man?* ('how do you say?'), he shifts his gaze to Zac. In line with Goodwin & Goodwin's findings, this gaze shift signals that Max has given up on his initial attempt to find the missing word by himself (with gaze averted) and now solicits help from gazed-at Zac. In combination with the gaze shift the word search marker works as a package, i.e. as a means to request the recipient's

help in an explicit and therefore enforced way. This is exactly how Zac understands Max: After a 0.63 seconds pause and a tongue click, which both indicate that he cannot readily come up with a candidate word either, he suggests the term *Ökosystem,* which is "try-marked" as a candidate by rising intonation (Szczepek Reed 2000). Max agrees (line 06), but does not pick up the term and instead brings the turn to completion in his own words. (Presumably, *Ökosystem* was not the word he was searching for, although it captured his intention.)

Summarizing the results of this section, we have presented evidence that speakers have ways to enhance the efficiency of gaze at a recipient to elicit a co-participation in the word search. The most important parameter here is timing. Prolonged gaze at the recipient combined with a meta-pragmatic search marker seems to be a strategy that turns an invitation to co-participate in the search into an elicitation, which is difficult for the recipient not to respond to, even if the missing word is hard to be guessed.

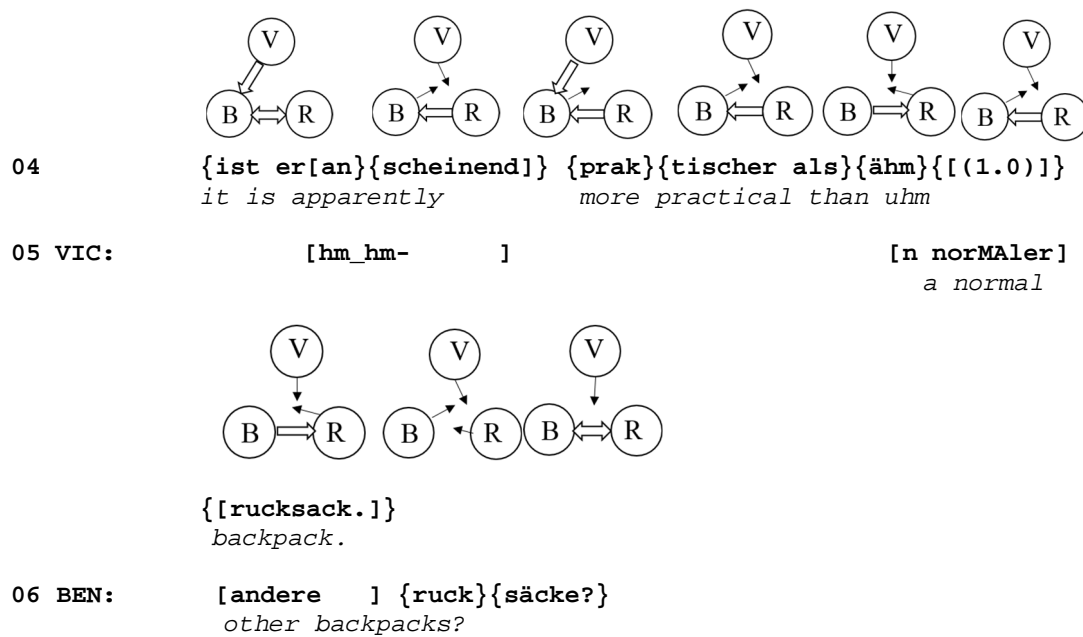## 7. Recipient participates in word search despite averted gaze

A total of 35.7% of co-constructional offers are made while the speaker is not looking at the co-participant, i.e. they contradict the Goodwin & Goodwin pattern (more specifically, assumption (1) on p.1). Why recipients choose to provide a missing word without having been gaze-invited by the current speaker is a complex question that would need a separate, detailed investigation. Here, we only want to make the point that – judging from the evidence that the current speaker provides after a non-invited co-participation in the word search – these counterexamples are by no means treated as a "competitive in-coming" throughout (French & Local 1983). In a good number of cases, candidate items are accepted, for instance by repeating the item, by nodding, or by producing a confirming response particle such as *genau* ('exactly'), and shifting gaze to the co-constructing interlocutor. Others are ignored or rejected; in the latter case, the speakers produce completions of their own, without looking at the co-constructing participants. While the second group is easily analyzed within Goodwin & Goodwin's two assumptions, the first group is more problematic.

We first discuss one example, in which a recipients' co-operation after a rather short hesitation accompanied by a short speaker gaze shift towards a recipient followed by a gaze aversion during a 1.0 second pause is contested by the speaker. In extract (9), Ben is talking about Fjällräven backpacks which he has seen a TV report on. According to this report, people particularly like these backpacks because they are 'square'[9] (line 01) and therefore more practical (line 04).

(9) *Fjällräven backpacks*, **Summer 2018, 00:03: 56 – 00:04:04**

```
01 BEN:     [die meinten weil er halt] so quaDRAtisch ist.
            the said because it is like a square.
02          mit diesen ECKen,
            with these corners,
03          so AUSgeformt;
            like shaped;
```

---

9   They are actually rectangular rather than square but this is the word Ben used in line 01.

```
            V              V              V                V               V               V
          ↙‖            ↓              ‖↓             ↓              ↓              ↓
    B⟺R       B⟹R        B⟺R        B⟸R   B⟹R    B⟺R
```

```
04          {ist er[an]{scheinend]} {prak}{tischer als}{ähm}{[(1.0)]}
            it is apparently         more practical than uhm
```

```
05 VIC:              [hm_hm-        ]                        [n norMAler]
                                                               a normal
```

```
            V            V            V
          ↓          ↓          ↓
    B⟹R    B ↙R   B⟺R
```

```
            {[rucksack.]}
            backpack.
```

```
06 BEN:      [andere    ] {ruck}{säcke?}
             other backpacks?
```

After the comparative *praktischer als* ('more practical than'), which projects a noun phrase as the object of comparison, Ben hesitates (marked by *ähm* and the ensuing pause). During the first three syllables of the utterance in line 04, Ben has been in eye contact with Richard, but then has shifted his gaze to the background. It is only during the hesitation marker (end of line 04) that he looks at Richard. However, instead of Richard, it is Victor who co-constructs and offers a syntactically suited candidate solution: *n normaler rucksack* ('a normal backpack'). But the speaker does not even acknowledge, let alone accept the candidate but rather completes the utterance himself in partial overlap with Victor. His formulation is noticeably different from, although semantically equivalent to, Victor's suggestion. While completing his utterance, he keeps his gaze averted from Victor, looking into the open space between Victor and Richard. By not taking up his wording, and failing to look at him, Ben makes Victor's contribution go unnoticed.

Even though it is the second recipient who helps in the formulation (and not the one invited by the current speaker) it seems surprising at first glance that a speaker who runs into formulation problems and invites another participant's help by gaze shift during a hesitation, should ignore such help. A likely interpretation is that this intervention comes too soon. Victor is too eager to help (cf. the recipient token *hmhm* produced even before the hesitation in line 05), and his co-construction is placed so early in the hesitation phase that Ben does not accept it. The extract is in stark contrast with extracts (4), (6) or (7) above or (10) below, in which the hesitation phase is much more prolonged and successfully elicits the gazed-at recipient's co-participation.

In extract (10), a recipient (Lina) joins in the word search despite gaze aversion by the word searching speaker (Norbert, lines 03-06). The topic here are movie utopias. Norbert wants to argue that all utopian movies follow a similar pattern, and he is searching for the title of an American movie ('The Hunger Games', as it turns out) that is supposed to prove his point.

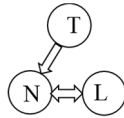**(10)** *Hunger Games*, Summer 2016, 04:02:910- 04:13:735
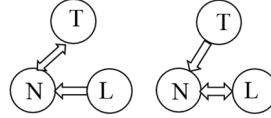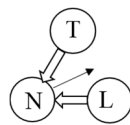

```
01 NOR: im grUnde ist es so ein ÄHN}{[liches}{schema für}
            essentially it is a similar scheme for
```
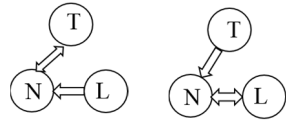


```
        {ALle utopie} {filme;
         all utopian films
```
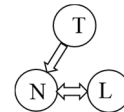
```
02 LIN: mhm,
         mhm
```



```
03 NOR:  so was wie:}{ (.) die:se::n:
          something like (.) this
```

```
04       WIE heisst de
          what's its na
```
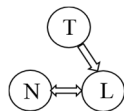
```
05       WIE heisst der DENN:-
          what's its name
```



```
06       dieser ameriKAnischer;(-)eh=
          that American uh
```

```
07       wo dann die KINder: [ähm  ] ABgeschlach}{tet wurden;
          where the children   uhm     got slaughtered
```
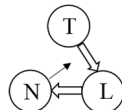
```
08 LIN:                      [ja;]
                              yes
```
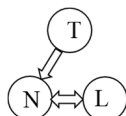


```
09       the HUNger}{games;
```



```
10 NOR:  the [HUN}{ger games;]}
```

```
10 THO:      [ah:: (.) ja;  ]
              ah (.)   yes
```



```
11 NOR:  {GEnau.}
          exactly
```

The hesitation starts in line 03 with elongations and a break-off, and continues with two explicit word search markers (line 04, 05); in order for the others to understand which movie he is talking about, Norbert has to give hints and list some of its features, cf. lines 06 ('American') and 07 ('about children who get slaughtered'). He thus verbally construes the search as an open search. Nonetheless, during this hesitation phase, Norbert looks away from his co-participants, which can be taken to indicate that he aims to find the solution to the word search issue by himself. In overlap with the second feature of the movie, Lina says *ja* ('yes'), which may mark her identification of the referent (the movie).[10] Shortly after, when Norbert has finished the second hint, she provides a candidate title. Exactly at this point in time, Norbert directs his gaze at Lina. Despite the fact that Lina's help was not gaze-invited, this gaze shift to her, which is most likely a response to her saying *ja* ('yes'), indicates that he does not judge her intervention as intrusive. After Lina has provided the missing title, Norbert confirms that the film title that Lina suggested is the right one by repeating it with falling intonation. His *GEnau* ('exactly') completes the word search.

Example (10) hence demonstrates that not being invited to 'help out' does not per se turn active co-participation in word searches into an interactionally 'sanctionable' event.

8. Conclusions

Research in conversation analysis implicitly or explicitly, but regularly ascribes "in order to-" as well as "because-motives" (Schütz [1932]1997) to interactants. They are described as performing an action *in order to* make some next action by their co-participants relevant, or *as responding to* other participants' actions, which are thereby treated as the motives that occasion or require them.

In early conversation analysis, the relationship between these actions was mainly described as being based on normative expectations, such as "conditional relevances". Methodologically, these normative sequential relationships may be translated into hypotheses that can be tested quantitatively, but as normative 'rules', they do not need quantitative evidence to be proven. In fact, more valuable evidence can be gained from the (usually rare) cases in which they do not apply: (a) from contexts in which normative expectations are systematically suspended for circumscribed reasons, and (b) from 'violations' of the 'rule'. For instance, (a) the normative relationship between first and second pair parts is systematically suspended in contexts in which a subordinated sequence (such as a repair sequence) is inserted into it; and (b) if such a systematic suspension of the rule is not warranted, the absence of a conditionally next action leads to repair activities that re-establish and thereby indirectly reflect the normative order. However, this methodological approach to conversational order as normative order, despite having been applied very successfully in a number of cases, has its limitations. Already in the case of only weakly projecting actions such as tellings, the absence of a responding action does not regularly lead to repair activities.

Goodwin & Goodwin's (1986) findings on gaze and its role in the collaborative solution of word searches, which have been the focus of this paper, can be rephrased

---

[10] Following Brenning (2015), in word search sequences *ja* often foreshadows a co-construction.

in normative terms ('gaze aversion makes same-speaker solution of the word search normatively expectable', and 'gaze shift to recipient makes this recipient's collaboration in the word search normatively expectable'), but such a rephrasing would not be sufficiently supported by conversation analytic evidence: collaboration may occur despite gaze aversion and is then not regularly followed by repair activities, and the same holds for non-collaboration after gaze shift. We therefore surmise that the relationship between gaze and collaboration in a word search is of a different kind. The main difference is that the expectation of gaze shifts or aversions to be followed by collaborative or solitary word searches is of a fundamentally contextual nature: it increases and diminishes due to its contextual embedding, and can be enhanced or attenuated by certain strategies of the participants. Only in strongly favoring contexts and with additional strategies is it strong enough for non-expected next actions to be 'morally sanctionable'.

Given these features of the phenomena under investigation, our analysis had to foreground these contexts and strategies. Methodologically, it is mandatory in such a case to go beyond single- (or several-) case analyses and follow a principle of exhaustive analysis which accounts for all instances found in the data collection, whether they support the hypotheses or not. This also requires some amount of quantification.

We found the strongest evidence for the patterns first described by Goodwin & Goodwin (1986) in quite specific settings: in side-by-side arrangements and partly also in co-tellings, confirming similar findings by Bolden (2003), Dressel & Kalkhoff (2019), and Dressel (2020). Outside these settings, the relationship between gaze aversion and self-completion on the one hand, and a gaze shift at a coparticipant and active help with the word search on the other hand, is much less straightforward. Gaze shifts are less efficient practices to invite a coparticipant's participation in the word search in triadic (stationary) F-formations, and they are even less efficient in dyadic (stationary) F-formations. An explanation for this systematic impact of the setting on the way in which gaze becomes interactionally relevant can be found in the saliency of the cue: co-participants facing each other in a dyadic constellation look at each other most of the time, co-participants in side-by-side arrangements mostly do not look at each other. Triadic constellations are somewhere in-between. Here, speakers look at their addressees, but they regularly shift gaze between the two co-addressed co-participants (Auer 2019). Gaze at one of the two co-participants is therefore more expectable than in the side-by-side arrangement, but less than in the dyadic F-formations where only one co-participant is the looked-at addressee. The power of gaze to regulate co-participation in word searches is clearly dependent on whether gaze is 'free' to do the job and whether a gaze shift (to or away from a co-participant) constitutes a deviation from the default gaze pattern and therefore a marked activity.

We were also able to show that the efficiency of gaze to elicit help in a word search interacts with epistemics, i.e. co-participants' access to the search domain in which the missing concept or word is to be found. Speakers turn to a co-participant if they can expect help from the latter. This explains why co-tellings, in which two participants share a common experience, comply with the Goodwin & Goodwin pattern much more than other conversational activities do.

After having identified factors that affect the relevance of gaze in different interactional settings, we shifted focus to the means (strategies) that speakers have at

their disposal to increase the efficiency of gaze at the recipient and in order to make them engage in a word search. To that aim, we investigated the role of sustaining gaze and of meta-pragmatic word search markers during an ongoing search activity and found that both work as enhancing factors. Very short gaze shifts (single or repeated) to a co-participant, on the other hand, seem to diminish or even nullify the cues' relevance.

Our last section on co-constructional offers made to resolve a word search despite a speaker's gaze aversion completes this picture by showing that interlocutors may co-participate in a word search even if this co-participation was not invited by gaze, and that current speakers may still welcome this co-operation.

Our paper provides a more detailed and fine-grained account of the role of gaze in word searches than previous studies, combining qualitative and quantitative analyses. These analyses reveal that the interplay of gaze and word searches as solitary or interactive activities is more complex than suggested in prior studies. A possible next step would be to work towards a multifactorial model that incorporates and weighs the factors that encourage or disencourage co-participation in word searches. This approach may also prove to be relevant for other sequential contexts in which speakers wish to mobilize co-participant action.

9. References

Auer, Peter (2019): Gaze, addressee selection and turn-taking in three-party interaction. In: Brône, Geert / Oben, Bert (eds.), Eye-tracking in Interaction. Studies on the role of eye gaze in dialogue. Amsterdam: Benjamins, 197-231.

Auer, Peter (2021): Turn-allocation and gaze: A multimodal revision of the "current-speaker-selects-next" rule of the turn-taking system of conversation analysis. In: Discourse Studies 23(2), 117-140.

Auer, Peter / Bauer, Angelika (2009): Aphasie im Alltag. Stuttgart: Thieme

Bolden, Galina B. (2003): Multiple modalities in collaborative turn sequences. In: Gesture 3(2), 187-212.

Brenning, Jana (2015): Syntaktische Ko-Konstruktionen im gesprochenen Deutsch. Heidelberg: Universitätsverlag Winter.

Brône, Geert / Oben, Bert (2019) (eds): Eye-tracking in Interaction. Studies on the role of eye gaze in dialogue. Amsterdam: Benjamins.

Brouwer, Catherine E. (2003): Word Searches in NNS–NS Interaction: Opportunities for Language Learning? In: The Modern Language Journal 87(4), 534-545.

Butterworth, Brian / Hadar, Uri (1989): Gesture, speech, and computational stages: A reply to McNeill. In: Psychological Review 96, 168-174.

Doherty-Sneddon, Gwyneth / Bruce, Vicki / Bonner, Lesley, Longbotham, Sarah / Doyle, Caroline (2002): Development of gaze aversion as disengagement from visual information. In: Developmental Psychology 38(3), 438-45.

Dressel, Dennis (2020): Multimodal word searches in collaborative storytelling: On the local mobilization and negotiation of coparticipation. In: Journal of Pragmatics 170, 37-54.

Dressel, Dennis / Kalkhoff, Alexander T. (2019): Co-constructing utterances in face-to-face-interaction. A multimodal analysis of collaborative completions in spoken Spanish. In: Social Interaction. Video-based studies of human sociality, 2,2. (DOI: 10.7146/si.v2i2.116021)

Dressel, Dennis / Satti, Ignacio (2021): Embodied Coparticipation Practices in Collaborative Storytelling. Gesprächsforschung 22, 54-86.

Ehlich, Konrad / Rehbein, Jochen (1982): Augenkommunikation. Amsterdam: John Benjamins.

Falk, Jane (1980): The duet as a conversational process. PhD thesis, Princeton Univ.

French, Peter / Local, John (1983): Turn-competitive incomings. In: Journal of Pragmatics 7(1), 17-38.

Glenberg, Arthur M. / Schroeder, Jennifer & Roberston, David A. (1998): Averting the Gaze Disengages the Environment and Facilitates Memory. In: Memory & Cognition 26(4), 651-658.

Goodwin, Marjorie / Goodwin, Charles (1986): Gesture and coparticipation in the activity of searching for a word. In: Semiotica 62(1-2), 51-75.

Greer, Tim (2013): Word search sequences in bilingual interaction: Codeswitching and embodied orientation toward shifting participant constellations. In: Journal of Pragmatics 57, 77-100.

Günthner, Susanne (2013): Ko-Konstruktionen im Gespräch: Zwischen Kollaboration und Konfrontation. In: GIDI-Arbeitspapierreihe 49.

Hayashi, Makoto (2003): Language and the Body as Resources for Collaborative Action: A Study of Word Searches in Japanese Conversation. In: Research on Language and Social Interaction 36(2), 109-141.

Helasvuo, Marja-Liisa / Laakso, Minna / Sorjonen, Marja-Leena (2004): Searching for words: syntactic and sequential construction of word search in conversations of Finnish speakers with aphasia. In: Research on Language and Social Interaction 37, 1-37.

Heritage, John (2012a): Epistemics in action: action formation and territories of knowledge. In: Research on Language and Social Interaction 45(1), 1-29.

Heritage, John (2012b): The epistemic engine: Sequence organization and territories of knowledge. In: Research on Language and Social Interaction 45(1), 30-52.

Holler, Judith / Kendrick, Kobin (2015): Unaddressed participants' gaze in multiperson interaction: Optimizing recipiency. In: Frontiers in Psychology 6: 98. doi:10.3389/fpsyg.2015.00098.

Iwasaki, Shimako (2009): Initiating Interactive Turn Spaces in Japanese Conversation: Local Projection and Collaborative Action. In: Discourse Processes 46, 226-246.

Jehoul, Annelies (2019): A multimodal study of filled pauses. PhD thesis, University of Leuven.

Kendon, Adam (1967): Some functions of gaze direction in social interaction. In: Acta Psychologica 26, 22-63.

Kendon, Adam (1990): Conducting interactions: Patterns of behaviour in focused encounters. Cambridge University Press, UK.

Kendrick, Kobin / Holler, Judith (2017): Gaze Direction Signals Response Preference in Conversation. In: Research on Language and Social Interaction 50(1), 12-32.

Kurhila, Salla (2006): Second Language Interaction. Benjamins: Amsterdam.

Lerner, Gene H. (1991): On the syntax of sentences-in-progress. In: Language in Society 20, 441-458.

Lerner, Gene H. (1992): Assisted storytelling: Deploying shared knowledge as a practical matter. In: Qualitative Sociology 15, 247-271.

Lerner, Gene H. (1996): On the "semi-permeable character" of grammatical units in conversation: Conditional entry into the turn space of another speaker. In: Ochs, Elinor / Schegloff, Emanuel A / Thompson, Sandra A. (eds.), Interaction and Grammar. Cambridge: Cambridge University Press, 238-276.

Oloff, Florence (2014) : L'évaluation des complétions collaboratives: analyse séquentielle et multimodale de tours de parole co-construits. In : SHS Web of Conferences, Volume 8, 4e Congrès Mondial de Linguistique Française, 2125-2145.

Ono, Tsuyoshi / Thompson, Sandra A. (1995). What can conversation tell us about syntax? In: Davis, Philip W. (ed.), Alternative Linguistics: Descriptive and Theoretical Modes. Amsterdam: John Benjamins, 213-271.

Rossano, Frederico (2013): Gaze in conversation. In: Sidnell, Jack / Stivers, Tanya (eds), The Handbook of Conversation Analysis. Oxford, U.K., Wiley-Blackwell, 308-329.

Sacks, Harvey / Schegloff, Emanuel (1979 [2007]): Two preferences in the organization of reference to persons in conversation and their interaction. In: Psathas, G. (ed), Everyday Language: Studies in Ethnomethodology. New York, Irvington, 15-21. Reprinted in: Enfield, Nick / Stivers, Tanya (eds.), Person Reference in Interaction: Linguistic, Cultural and Social Perspectives Cambridge: Cambridge University Press, 23-28.

Schegloff, Emanuel / Jefferson Gail / Sacks, Harvey (1977): The preference for self-correction in the organization of repair in conversation. In: Language 53(2), 361-382.

Schütz, Alfred ([1932]1997): The Phenomenology of the Social World. Evanston, IL: Northwestern University Press.

Szczepek- Reed, Beatrice (2000): Formal Aspects of Collaborative Productions in English Conversation. In: InLiSt – Interaction and Linguistic Structures 17. URL: http://www.inlist.uni-bayreuth.de/issues/17/inlist17.pdf.

Selting, Margret / Auer, Peter / Barth-Weingarten, Dagmar et al. (2009): Gesprächsanalytisches Transkriptionssystem (GAT 2). In: Gesprächsforschung 10, 152-183.

Stivers, Tanya / Robinson, Jeffrey D. (2006): A preference for progressivity in interaction. In: Language in Society 35(03), 367-392.

Stivers, Tanya / Rossano, Frederico (2010): Mobilizing responses. In: Research on Language and Social Interaction 43, 3-31.

Stukenbrock, Anja (2015): Deixis in der Face-to-Face Interaktion. Berlin: Mouton de Gruyter.

Stukenbrock, Anja / Dao, Anh Nhi (2019): Joint Attention in Passing: What Dual Mobile Eye Tracking Reveals About Gaze in Coordinating Embodied Activities at a Market. In: Reber, Elisabeth / Gerhardt, Cornelia (eds), Embodied Activities in Face-to-face and Mediated Settings. Palgrave Macmillan, 177-213.

Taquechel-Chaigneau, Roxana (2014): Resolving a search for words as an interactional resource for achieving professional activity goals. In: Linguistica Atlantica 33(1), 38-56.

Weiß, Clarissa (2019): When gaze-selected next speakers do not take the turn. In: Journal of Pragmatics 133, 28-44.

Weiß, Clarissa (2020): Blick und Turn-Taking in Face-to-Face-Interaktionen. Multimodale Interaktionsanalysen triadischer Gesprächssituationen mit Hilfe von Eye-Tracking. Verlag für Gesprächsforschung.

Wittenburg, Peter / Brugman, Hennie / Russel, Albert / Klassmann, Alex & Sloetjes, Han (2006): ELAN: a Professional Framework for Multimodality Research. In: Proceedings of LREC 2006, Fifth International Conference on Language Resources and Evaluation, 1556-1559.

Zima, Elisabeth (2018): Multimodale Mittel der Rederechtsaushandlung im gemeinsamen Erzählen. In: Gesprächsforschung 18, 241-273.

Zima, Elisabeth / Weiß, Clarrisa / Brône, Geert (2019): Gaze and overlap resolution in triadic interactions. In: Journal of Pragmatics 140, 49-69.

Prof. Dr. Peter Auer
Dr. Elisabeth Zima

Albert-Ludwigs-Universität Freiburg
Deutsches Seminar - Germanistische Linguistik
Platz der Universität 3
79085 Freiburg

peter.auer@germanistik.uni-freiburg.de
elisabeth.zima@germanistik.uni-freiburg.de