#### InLiSt no. 60

### Gaze, addressee selection and turn-taking in three-party interaction

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Abstract: In this paper, I argue that gaze behavior in multiparty interaction is essential for two aspects of turn-taking: for addressee selection and for next-speaker selection by current speaker. The two conversational tasks are related, but – at least in longer turns – not identical and should be distinguished analytically. In multiparty interaction, addressee selection by gaze is a non-trivial issue, as most bodily arrangements make it hard or impossible for the current speaker to look at all (intended) addressees at the same time. Rather, current speakers alternatingly look at the co-participants they want to address. Further details of this pattern of gaze alternation are discussed.

Keywords: addressee selection, current speaker selects next, turn-taking and gaze, eye-tracking, multi-party interaction

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### 1 Introduction

This chapter offers a first and exploratory investigation of the relevance of gaze for addressee selection and turn-taking in multi-party interaction from a conversation-analytic perspective, using mobile eye tracking technology. Although the relevance of gaze for turn-taking and addressee selection was demonstrated in Kendon's classic 1967 study and brought into conversation analysis by Ch. Goodwin's equally classic studies (e.g. 1981) a long time ago, follow-up research has remained scarce. It is only in recent years that the topic has remerged in conversation analysis thanks to e.g. Rossano (2012, also cf. his overview in Rossano 2013), Streeck (2014) and Holler & Kendrick (2015). However, due to the continuous and strong influence of early work on conversational turn-taking – particularly Sacks, Schegloff and Jefferson's foundational 1974 paper which only mentions non-verbal turn-taking cues in passing – the full relevance of a multimodal approach for the "turn-taking machinery" as described by Sacks et al. has remained underexplored and underappreciated.

Since, in addition, much empirical work on gaze and turn-taking/addresse selection (e.g. by Kendon, Streeck and Rossano) has dealt with dyadic constellations, the specific conditions under which multi-party conversations are organized with respect to gaze remain to be explored. This paper is a first attempt in this direction, focusing on the speaker in a triadic constellation. Its main point is to argue for a distinction between *speaker gaze for addressee selection and speaker gaze for next-speaker selection*, i.e. for allocating the turn. The addressed participant is not always the one selected as next speaker; particularly in multiparty conversation it is often the case that more than one (often all) participants are addressed by a present speaker but only one is selected/suggested as the next speaker by gaze. As this study will also show, the distinction between other-selection and self-selection as made by Sacks, Schegloff and Jefferson (1974) needs to be reconsidered once gaze is taken fully into consideration.

In the following, various patterns will be discussed by which the gaze of the current speaker either selects addressees or suggests next speakers in three-party conversations. The study is preliminary as it is based on only two interactional episodes of roughly 60 minutes each. In both cases, three German students (three men, three women, respectively) talked to each other while sitting around a table in a room. Participants knew each other well. They had no particular assignment or task. The setting was chosen in order to create a context in which participants' gaze was free to be employed for turn-taking and addressee selection and in which this resource was not systematically needed, e.g., for handling objects or orienting in space. In the latter case, more complex gaze patterns are bound to emerge. Two of the participants in each recording were wearing eye tracking glasses.<sup>1</sup>

Mobile eye tracking glasses not only allow us to locate the participant's focal (foveal) vision, but also record the interaction from the perspective of the speaker. In our case, the interaction was additionally recorded with an external video camera (located at some meters' distance from the group). This means that the encounter was documented by three cameras each showing a different perspective, which were synchronized and displayed on a split screen for analysis, as shown in Fig. 1.

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<sup>&</sup>lt;sup>1</sup> We used SMI Eye Tracking Glasses and SMI's iViewETG recording software. The scan path videos were exported using BeGaze software and then analyzed in ELAN. The fact that the third participant did not wear trackers is entirely due to technical restrictions. In this study, only speakers wearing eye tracking equipment will be considered.



Fig. 1: Still from split screen representation of one of the recordings. Anni (middle) and Nanni (left in external recording, below) are wearing eye tracking equipment. As can be seen in the upper part of the split screen, Anni is looking at Nanni's face (right upper screen, green cursor), while Nanni is looking at Hanni's face (left upper screen, red cursor). We cannot be sure about Hanni's gaze, since she is not wearing eye tracking glasses, but judging from the direction of her head, she seems to be looking at Nanni.

### 2 Gaze and turn-taking: a short overview<sup>2</sup>

Sacks, Schegloff and Jefferon (1974) describe a "machinery" for turn-taking in conversation that has become a cornerstone of conversation analysis research and beyond. Crucially, their model includes a "turn-allocation" component which is built on three hierarchically ordered steps ("rules") that operate once a "transition-relevant point" has been reached. (The stretch of talk up to such a transition-relevant point is called a "turn-constructional unit", TCU.) In a first step, the current speaker can select a next speaker (current-selects-next); the second step provides the opportunity to self-select for all current non-speakers, among whom the "first starter" will be successful. If neither the current speaker other-selects nor one of the current non-speakers self-selects, the current speaker is given the opportunity to expand the turn. Rule (1)(a), most relevant for this study, is formulated in Sacks et al. as follows:

"If the turn-so-far is so constructed as to involve the use of a ,current speaker selects next' technique, then the party so selected has the right and is obliged to take next turn to speak; no others have such rights and obligations, and transfer occurs at that place." (1974: 704)

As the authors further point out,

"[t]he group of allocation techniques which we have called ,current speaker selects next' cannot be used in just any utterance or utterance-type whatever. Rather, there is a set of utterance-types, adjacency pair first parts, that can be used to accomplish such selection; and with the constraint to employ one of those, there are constraints on what a party can say."  $(710-11)^3$ 

<sup>&</sup>lt;sup>2</sup> Overviews of previous research can also be found in Rossano 2013: 315-322, Streeck 2014 and Holler & Kendrick 2015.

<sup>&</sup>lt;sup>3</sup> In a later part of their paper, Sacks et al. also count repair initiations among the actions that select a next speaker, i.e. the party whose utterance the repair refers to (1974: 717).

A standard technique for selecting a next speaker designated to deliver the second pair part of an adjacency pair is, according to Sacks et al., the use of a name in the function of an address term.

There are several problems with this restriction of the current-speaker-selects-next option to the context of adjacency pairs. Above all, restricting next-speaker selection by current speaker to first adjacency pair parts threatens the independence of the turn-taking machinery from action which Sacks and colleagues insist on. In addition, the dichotomic distinction between one group of actions that have the status of "firsts" and which need to be responded to in adjacent position with a defined second action ("adjacency pairs", such as question/answer or invitation/rejection or acceptance), and another group of actions for which no next actions are projected at all, has been shown to be empirically untenable and should be replaced by a continuum of more or less projecting first actions (see Rossano & Stivers 2010). Moderately projecting first actions are, for instance, first assessments or tellings.

Sacks et al. are aware of these problems and hint at the possibility that, in addition to what they call the "obvious' cases" (i.e., first parts of adjacency pairs), there are other contexts in which current-selects-next techniques may be found. Among them, they mention the use of tag questions<sup>4</sup> and "techniques which employ social identities in their operation" (1974: 718).<sup>5</sup> But even with these additions, self-selection would remain the only option for a large group of actions by a current speaker.

Gaze, on the other hand, is available as a resource for turn-allocation in all instances of face-to-face interaction in which participants are able to look at each other, regardless of the action performed by the current speaker. The ubiquity of gaze makes it a perfect candidate for turn-allocation indepent of the action performed, and is hence in line with the autonomy of the turn-taking machinery. Note, however, that if gaze is considered a current-selects-next technique, the fact that current speakers almost always gaze at a co-participant in multi-party conversation would make step two of the turn-allocation model (i.e. self-selection) almost vacuous: in most cases, there would be no chance for it to apply. (The only exception would be cases in which the current speaker looks away from all co-participants at the end of the turn; this option, however, seems to be restricted to special sequential environments, such as topic closures.)

The solution for this dilemma suggested here is that gaze does indeed function as a turn-allocation technique, but that its turn-allocating force is much weaker than that of address terms attached to first pair parts of adjacency pairs (the context Sacks et al. originally had in mind). Lerner (2003) mentions a possible reason for the special status of gaze: Gaze is an unreliable technique for next-speaker selection – it may not be seen by non-attentive coparticipants, particularly when their visual attention is devoted to other interactional tasks. As he points out, the use of second person singular pronouns is a verbal technique to remedy exactly this disadvantage. While the pronoun (as a deictic element) is not able to select one co-participant as next speaker in itself, it attracts the non-speakers' visual attention to the speaker's gaze which then designates the selected addressee as the next speaker. Asking somebody a question by using a second person singular pronoun plus gaze, and asking a question which is open for everybody to answer and gazing at one person is not the same. Combining second person pronouns and gaze is the most efficient current-speaker-selects-next option. If gaze alone is employed, it will be less effective in allocating the turn than gaze combined with a deictic pronoun.

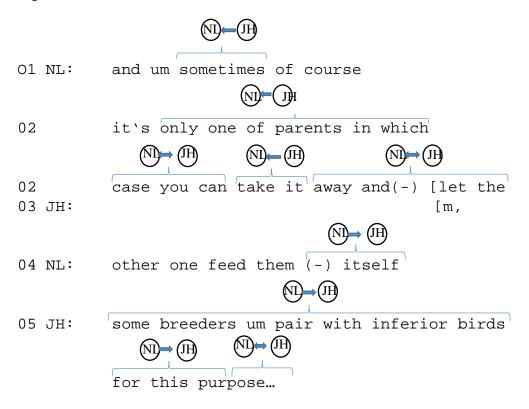
Pre-dating conversation analysis, Adam Kendon already demonstrated the relevance of gaze for turn-taking in a foundational 1967 paper on the role of speaker gaze in dyadic

<sup>&</sup>lt;sup>4</sup> Strictly speaking, like all other question formats tag questions are not a next-speaker selection technique but a technique to produce a first pair part which needs gaze or another technique to select its addressee.

<sup>&</sup>lt;sup>5</sup> In a wide interpretation of "social identities", these techniques can be understood to include those of recipient design for co-participants' background knowledge as well.

interaction, which can be summarized in his own words as follows (Kendon 1973: 61): "[B]y looking away, just in advance of the speaking, the speaker could signal his intent to claim the floor. [...] while by looking at his partner, and sustaining this look, as he brought his utterance to an end, he could signal his intent to finish. This could thus be a cue to his partner to begin speaking." In support of the second part of this generalization, Kendon observed that "extended" speaker gaze at the recipient toward the end of an utterance was much more frequently followed by the co-participant becoming the next speaker without delay than when gaze was not employed at a possible utterance end (71% vs. 29%; Kendon 1973: 61). The pattern, which is explicitly restricted to what Kendon calls "long utterances" (at least five seconds' duration, "when people are exchanging points of view comparing experiences or ... exploring one another's knowledge of something", 1973: 61), can be illustrated by an example from Kendon's 1967 article:

Extr. (1) (from Fig. 1 in Kendon 1967, gaze retranscribed; head movements and facial expressions omitted)



Kendon's example has been retranscribed here using a transcription system adapted from Rossano (2013) in which mutual gaze between NL and JH is symbolized by a two-sided (double) arrow, and one-sided gaze from the speaker at the hearer or vice versa by a one-sided (double) arrow pointing at the participant being looked at. Curled brackets mark the approximate duration of a gaze pattern. (See appendix for details.) Where no gaze is transcribed (as in the beginning of line 04), the two participants are looking elsewhere. Turn-transition from NL to JH takes place between lines 04 and 05. Shortly before that, there is a stretch of talk ((-) itself) in which the current speaker looks at the current recipient; the recipient, on the other hand, looks away from the current speaker as he approaches the end of

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<sup>&</sup>lt;sup>6</sup> It should be kept in mind that Kendon studied undergraduates at the University of Oxford who were unacquainted and told to "get to know one another".

his turn (all through line 04) and also does so in the beginning of her turn (beginning of line 05).<sup>7</sup>

Kendon makes two claims: the first claim is that the current speaker looks at the next speaker when he is about to end his turn; the second claim is that the current recipient looks away before the projectable end of a speaker's turn in order to signal readiness to take the turn. Note that for "short utterances" such as "accompaniment signals, attempted interruptions, exclamations, short answers to questions", Kendon describes different patterns, for instance sustained mutual gaze in "short answers" and "short questions" (1973: 76).

To my knowledge, Kendon's second claim (concerning recipient non-gaze to signal claim to speakership after a next possible completion point, i.e. a practice of self-selection) has not been taken up in the literature, and there is no additional empirical evidence for it beyond Kendon's own study. However, his first result (that speaker gaze selects the next speaker) has been replicated, for instance by Streeck (2014). Indirectly, Kendon's finding is also supported by a study by Bavelas et al. (2002) who show that speaker gaze at a recipient prompts a (minimal) "listener's response". As will be argued below, speaker gaze can be understood as offering the turn to a recipient who, by producing a minimal response ("continuer"), declines this offer.

In another important study on gaze in dyadic face-to-face interaction, Rossano (2012) takes a somewhat different perspective from Kendon's in arguing "that gaze in interaction is not organized primarily by reference to turns at talk" but "in relation to sequences of talk and the development of courses of action" (Rossano et al. 2009: 191-2). For instance, mutual gaze withdrawal can signal sequence termination. To support his claim, Rossano presents evidence from Italian conversation that the duration and frequency of recipient's gaze at speaker varies with the action performed; for instance, recipients were found to maintain gaze at speakers during tellings, but not questions. Hence, there seem to be restrictions on Kendon's (as well as Goodwin's 1981) findings, according to which the recipient is required to look at the speaker most of the time. It must be kept in mind here that Rossano's data differ from Kendon's in that participants were mostly handling objects while they were talking, such as photographs they were looking at.<sup>8</sup> This task diminishes the amount of recipient gaze at speakers, as recipients look at the object being talked about instead. Other findings by Rossano show that speakers systematically employ gaze as a way of "mobilizing" a recipient's response (Stivers & Rossano 2010). If speakers gaze at a recipient towards the end of their turn, it is not only more likely that a response will ensue without delay; it is also observed that an action not responded to can be followed by a speaker's gaze to elicit the missing response (Rossano 2013, Ch. 3). This finding is in line with Kendon's, as both are evidence for the link between current speaker's gaze and next speaker selection.

A typical sequence in which all these features can be found is given in the following extract:<sup>9</sup>

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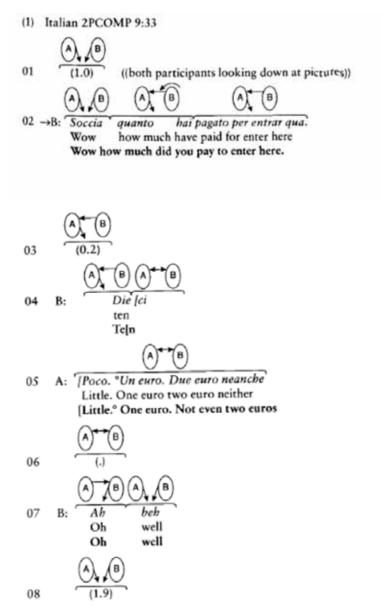
<sup>&</sup>lt;sup>7</sup> Note that JH produces a recipiency token in line 03, which plays a role in this speaker transition, perhaps for pre-selection by JH. Kendon describes the example as follows: "She utters a faint "mm," and [...] drops her eyelids over her eyes, tilting her head forward in the next frame. She continues to look down, even after she begins to speak [...]. This looking away, and other changes, which occur before she begins to speak, coincide with the beginning of the last phrase of NL's utterance at the point at which, it may be presumed JH has realized NL is going to finish."

<sup>&</sup>lt;sup>8</sup> This is a general finding, cf. De Ruiter (2007) for gaze in task-based dialogues (picture task) where gaze is mostly used for this task and not for managing turn-taking. In his data, neither of the participants looked at the other much, i.e. only 7% of the time.

<sup>&</sup>lt;sup>9</sup> Transcription as above, but downward arrows included to mark participants' gaze at an object before them, here a photograph.

### Extr. (2) (from Rossano et al. 2009: 194-5; extract from his ex. 1 = 2PCOMP 9:33).

Original transcript. Two participants are looking at photographs taken during a trip to Rome by A.



B asks A how much it cost him to climb up the church tower in Rome shown in the photograph (line 2). During this question, recipient A continues to look at the picture while the speaker raises his gaze from the picture and looks at the recipient (who, although looking down, can see B's gaze being directed at him in his peripheral vision). After a short silence, during which the speaker's gaze at the recipient is sustained, the question is expanded as the speaker suggests an answer, still gazing at the addressee and thereby eliciting an answer/confirmation from him. During the course of this expansion, the recipient raises his gaze and looks at the questioner (line 04). This mutual gaze is sustained through the answer (line 05) and a bit beyond (line 06). Then the questioner produces an acknowledgement token and gazes away. The sequence is dissolved when the co-participant averts his gaze as well (second part of line 07 and line 08).

Kendon and Rossano focus on dyadic interaction, not on multi-party interaction. In the case of dyadic interaction, the issue is *when* a current speaker relinquishes the turn and provides an opportunity for the other participant to speak. In multi-party interaction, the issue is also *which* of the co-participants will speak next. However, Kalma (1992), Lerner (2003)

and Tiitinen & Rusuuvuori (2012) have shown that current speakers in multi-party interaction also employ gaze in order to select a next speaker out of various available 'candidates'.

But we need to go one step further. The "participant constellation" (Goffman 1981) in a given moment of a conversational interaction is not only defined by who is the current (and next) speaker. It also involves the status of the non-speaking participants, which may be that of addressees of the speakers, of recipients, or neither of these two (cf. Clark & Clarson 1982, Gibson 2003). While addressee selection is done by the speaker, displays of recipiency are delivered by the recipient. The addressed party should actively display recipiency, but non-adressed parties may do so as well (cf. Holler & Kendrick 2015, Kidwell 1997).

The status of an addressee and that of a next speaker as selected by current speaker are often conflated. For instance, Vertegaal et al. (2001) use an experimental setting involving head-mounted eye trackers to measure the average amount of gaze by current speaker at one of three co-participants depending on whether the speakers addressed that person (or all three). (A speaker was taken to have addressed a co-participant if s/he said so when watching the recording of the interaction afterwards.) They found that the speaker looked at the addressed co-participant more than three times as often than at any of the other participants. If, on the other hand, the speaker intended to address all three co-participants, the average rate of looking at any one of them diminished substantially, while the total amount of looking at all participants increased. Vertegaal et al.'s study provides solid evidence that gaze is indeed functional for displaying who a current turn is directed at; however, it seems premature to argue on the basis of these results that this pattern will at the same time regulate who is "expected to speak" (2001: 301) next.

In the following, the function of gaze for addressee selection and for next-speaker selection will be strictly distinguished analytically, although the two may of course coincide, particularly in short utterances.

# 3 Speaker gaze in three-party interaction: Addressee selection and next-speaker selection

If three-party interaction were a mere extension of two-party interaction, speaker gaze would select one particular co-participant both as the addressee and the next speaker of a turn. Each turn would be exclusively directed at one and not the other co-participant, thus selecting this one participant as the next speaker. This pattern is indeed found in the data, but it does not account for all data by any means. An obvious case are short questions directed at one party and answered by that party, as in the following extract (3).

As in extract (1), the gaze configuration between the three speakers is schematically represented in topview with double (thick) arrows indicating gaze toward another participant. Two-sided arrows indicate mutual gaze. In addition, simple (thin) arrows are used to mark a participant's gaze away from the co-participants, either at some other point that can be shown in a topdown perspective (solid), or down/up (dotted). If the speaker or hearer looks at their hands or an object, the hand/object is designated by an iconic picture. The curled brackets once more indicate the duration of a given gaze pattern. Movements between fixations are interpolated unless they are slow, which is indicated by a space between the brackets. (See appendix for further details.) The segmental transcription follows GAT2. <sup>10</sup>

 $<sup>^{10}</sup>$  A summary of the GAT transcription conventions can be found at the end of Stukenbrock's chapter in this volume.

Extr. (3) DREIER-MÄDELS IV: 3:59-4:08/238.635 (seated as in picture 1 above)



01 Nanni: [hast du dir eigentlich damals überlegt auch in KARLSruhe zu

did you ever consider studying in Karlsruhe then

02 Anni: [((sips a glass of water ))

N  $\Psi$  H

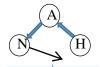
03 Nanni: [studieren an der pe ha?

at the university of education?

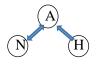
04 Anni: [((puts down glass of water))



05 Anni: JA,=aber des wär nur so: meine NOTh- (.) lösung; yes, but that would have just been like my emergency option



05 Nanni: hmHM,



06 Anni: [geWEsen.]

07 Nanni: [NEE ich hab] mich gar nich beWORben.

no I didn't even apply.

Nanni (sitting left) asks Anni (in the middle) a simple information question, i.e. whether she applied to other universities. (Both Anni and Nanni are presently enrolled at the same university.) The question selects Anni as the only addressed co-participant by the use of a second person singular pronoun (*du*) combined with current-speaker-gaze for selecting the next speaker. Anni is also designated in this way as the *only* legitimate next speaker. While she anwers (in line 05), Nanni sustains her gaze on her. Anni herself averts her gaze toward the end of Nanni's question and continues to look away well into her answer (in line with the pattern described by Kendon, see above, discussion of Extr. 1). Toward the end (on 'emergency option'), she looks back at the questioner.

During the sequence, the third, non-addressed participant (Hanni, sitting to the right) is not looked at by either Nanni or Anni. Non-addressed conversationalists usually display their participation in such an exchange by looking alternatingly at the momentary speaker (and sometimes, particularly in anticipation of turn-taking by the addressed speaker, also at the recipient; cf. Holler & Kendrick 2015). However, when this pattern is continued over several sequential steps, a multi-party constellation of four or more people is in danger of desintegrating into different focused interactions (schism), and in a three-party constellation,

<sup>11</sup> As far as the video allows us to analyse her gaze, Hanni always looks at Anni, i.e. she does not follow the pattern described by Holler & Kendrick 2015.

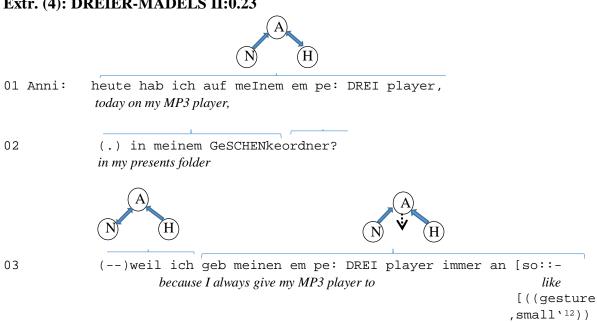
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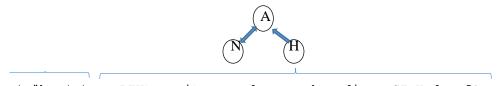
one of the participants is in danger of being marginalized. The marginalized conversationalist may then withdraw from the currently active dyad by gaze aversion, signalling that s/he is no longer participating, and in an extreme case may become a bystander. If this pattern were dominant, multi-party interaction would be in permanent danger of dissolving into two-party interaction (as indeed argued by Stivers 2015 and implied by Sacks, Schegloff & Jefferson 1974: 712, who talk about a "last-as-next" bias in conversation). However, this is clearly not what we find. In fact, there is evidence that participants systematically employ practices to avoid schisms or marginalizations of speakers.

The most ubiquitous of these practices during an emerging turn are (1) for speakers to select different addressees alternatingly, or (2) to select all co-participants as addressees by looking at them alternatingly (section 4).

In the first case, segments of a speaker's turn are designed specifically for the background knowledge of one participant but not the others, as shown in Goodwin's early work (Goodwin 1982). Here, "recipient design" (Sacks/Schegloff 1979) based on background knowledge selects an addressee. This addressee selection is also regularly accompanied by gaze at the speaker for whom the segment is designed. An example is the following:

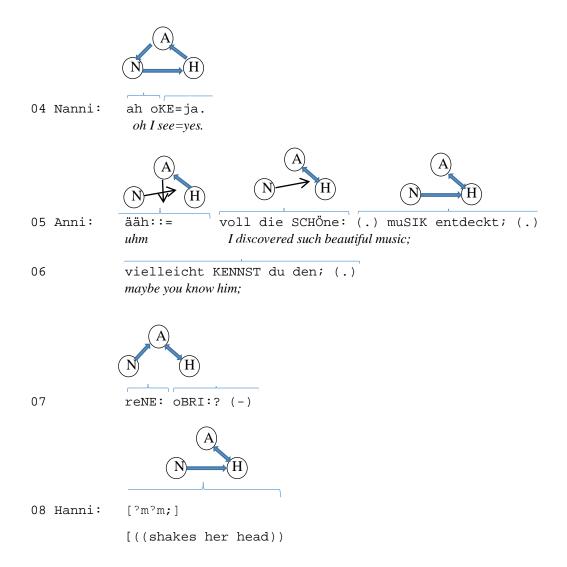






(.) ähm (.) an LEUte weiter un\_dann machen die muSI:K drauf?= uhm to people and then they put music on it?

<sup>&</sup>lt;sup>12</sup> The gesture is done with the thumb and the crooked index finger forming a parallel, with the distance between the fingers depicting small size, presumably of the MP3 player.



Anni begins her turn with a turn segment for which Hanni is the addressee, as shown by her gaze. But before finishing the sentence, i.e. after today on my MP3 player/ in my presents folder..., and hence before a possible turn completion point is reached, she inserts another parenthetical turn segment (line 03), which is designed specifically for Nanni. In this parenthetical remark, she explains to Nanni that she often asks other people to transfer music onto her MP3 player, background information apparently not available to Nanni but known to Hanni. During this parenthetical insert, Anni, the speaker, withdraws her gaze from her former addressee Hanni and looks at Nanni (apart from a short word search at the end of line 03, during which she looks down at her hand with which she performs a gesture indicating size, presumably that of the player). Nanni acknowledges this background information, and hence her status as the recipient of that piece of information, in line 04 (ah oKE=ja.); but she cannot become the next speaker at this point, since Anni's main line in the news telling is not finished yet, and the initial sentence incomplete. After another short hesitation (beginning of line 05), Anni returns to this main line. The interrupted syntactic construction is continued and completed, and Hanni, the original addressee of the news telling, is once more chosen as its primary addressee through gaze. Lines 06/07 complete the turn by providing the referent (the name of the musician whose music Anni found so beautiful).

Anni mainly talks to Hanni, delivering some news to her (cf. the second person pronoun in the question in line 06); but for a well-defined insertion, she only addresses Nanni who does not have the same background knowledge as Hanni. Hence, the parenthetical insert has a recipient design different from that of the main line of the turn. These different designs do not

affect next-speaker selection, however, as the insert does not occur in a position in which turn-taking could become an issue. Addressee selection is an issue, but next-speaker selection is not.

This suggests the following hypothesis: addressee selection (by gaze) and next-speaker selection (by gaze) are temporally ordered. While addressees may vary during an emerging turn, the co-participant who is gazed at toward the end of a speaker's turn is the one who is selected as next speaker. There are obvious logical alternatives; for instance, the designated next speaker may be the participant who the current speaker looks at in the beginning of the turn; or it might be the co-participant who is looked at most of the time. These, however, are not chosen by the speakers.

In section 5 the relevance of turn-final gaze for next-speaker selection will be discussed further. In the next section, it will be shown that speakers systematically work against the reduction of a three-party to a two-party interaction through their gaze behavior.

# 4 Speakers regularly address more than one co-participant simultaneously, although only one of them can be looked at at a time

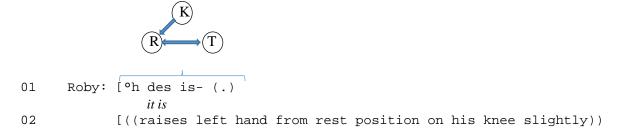
We now turn to the second alternative, i.e. a current speaker wants to select *all* co-participants as addressees for a turn. As a speaker usually cannot look at all co-participants at the same time, the standard technique here is to shift gaze between them. <sup>13</sup> Gaze shift may occur just once or several times within a turn, as required by the turn's length (and presumably by other factors still to be investigated). During the emergence of the turn (other than towards its end), gaze shifts of this kind once more do not pre-empt next-speaker selection. Any of the addressed co-participants may be suggested as the next speaker by gaze when the current speaker approaches the transition relevant point.

### 4.1 Loosely structured sequential contexts

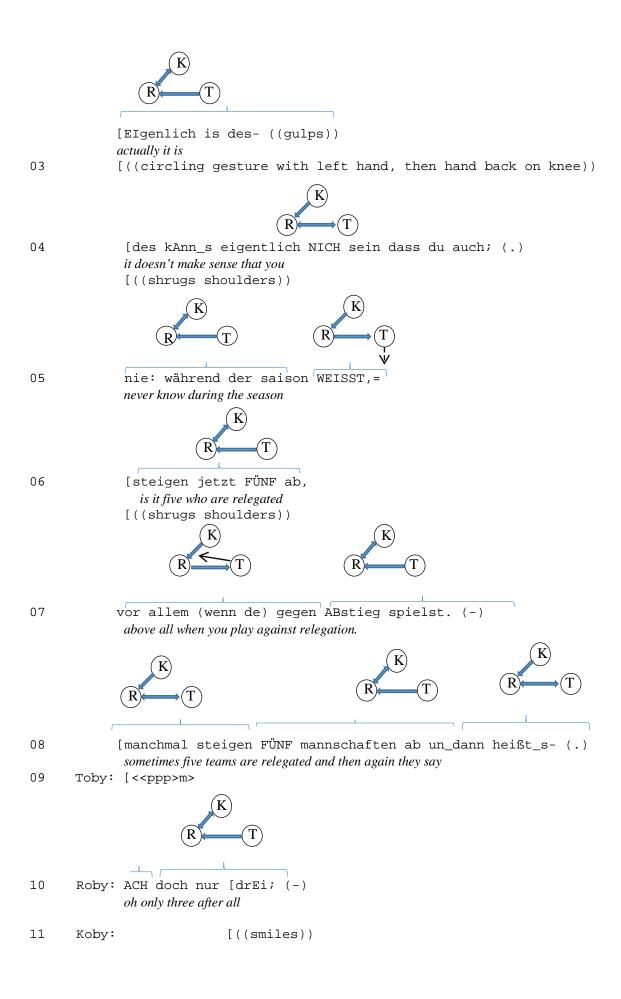
We start with two examtples of sequentially weak projecting turns. Here, the current speaker's action does not project a specific uptake by a co-participant.

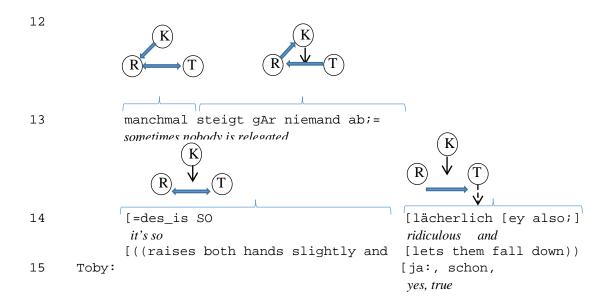
In the first example, taken from a conversation among three young men, Roby argues that the rules for volleyball matches are not fair. During his longish turn, Roby repeatedly switches gaze between Koby and Toby. Both of his friends are addressed. They do not seem to share his concerns to the same extent, and it is only in line 15 that Toby responds and produces two agreement tokens. The emerging turn by Roby continues across various intonational phrase boundaries (indicated by line breaks) without being semantically and syntactically complete. It only reaches a first possible completion – and hence a first possible turn transition point – at the end of line 11.

### Extr. (5) DREIER-Jungs I: 04:21-04:34



<sup>&</sup>lt;sup>13</sup>The theoretically possible alternative of not looking at anybody seems to be rare in our culture.

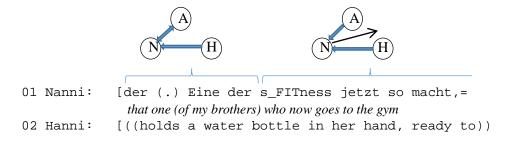


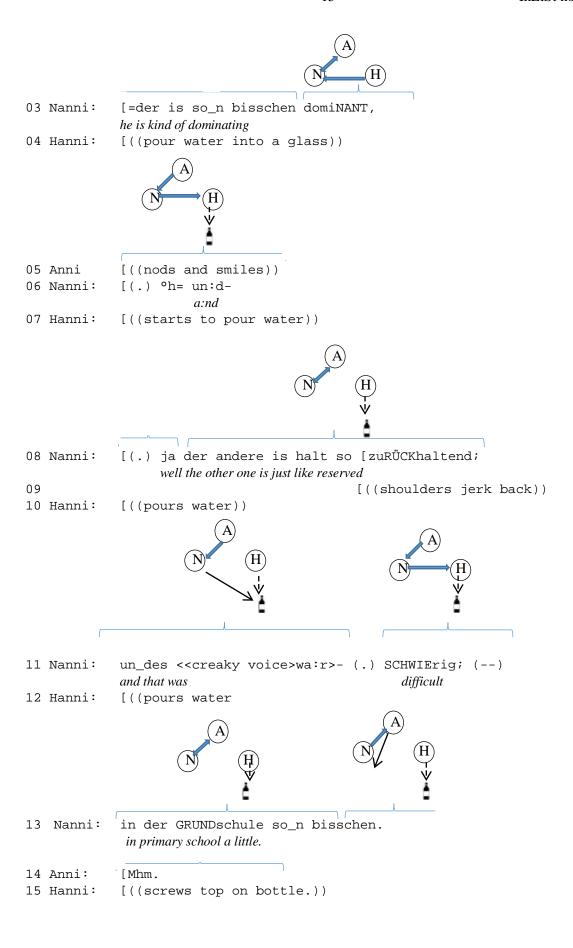


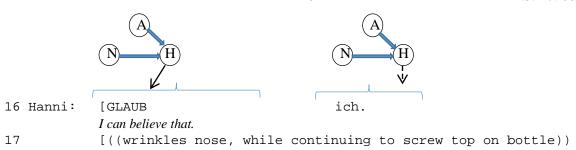
Let us look at Roby's gaze during this phase (lines 0-11). Although both co-participants are looking at him and thereby displaying their availability as recipients, he begins his turn with two restarts accompanied by a gaze shift from Toby to Koby and back again (lines 01-03). The third beginning in line 05 is accompanied by gaze at Toby, but after an intonational break at the end of line 05, Roby shortly looks at Koby during the production of *nie: während der saison* and then back at Toby during the production of the finite verb *weißt* (end of line 06). Probably because Toby looks down at the table for a short time at this moment, Roby again looks at Koby for the production of the complement clause in the format of a direct question (line 07). The turn format up to now projects another negated question which provides the alternative to 'is it five (teams) who are relegated?'. Instead of this alternative, Roby produces a kind of increment ('particularly....', line 08), during which he first gazes at Toby (who looks away) and then again at Koby. At this point, a turn completion point is reached. Toby, the co-participant last addressed by gaze, murmurs a hushed continuer.

The second example that develops in a parallel fashion is from the conversation between the three young women. Nanni is talking about her two brothers, who are very different. The turn is addressed to both Hanni and Anni. Nanni's gaze alternates between the two.

#### Extr. (6) DREIER-Mädels 3, 3:12







Nanni compares her two brothers. One of them is presented as 'dominant' in lines 01/03. The segment is syntactically complete but ends with rising intonation, therefore projecting more to come. The speaker's gaze is first directed at Anni (line 03, with a short intermitted gaze away into the distance), who receipts the utterance with a nod and a smile. During a micro-pause and an inhalation, Anni turns to Hanni, co-selecting her as the addressee of her turn; however, Hanni at this moment starts to pour water into her glass and therefore has to look down at her hands to coordinate her movements. Nanni therefore cannot secure this recipient's gaze. While she produces the second part of her turn, describing the second more 'reserved' brother (08, 11) and his 'difficult' situation, she first looks at Anni and then at Hanni's glass and again at Hanni's face, who still cannot look back (second part of line 11). During the emerging turn up to this point (at which a turn transition might occur), the speaker has looked at one of her co-participants three times and at the other one two times – despite the fact that the latter was not available for reciprocating gaze due to her manipulation of a bottle and glass that needed her visual attention.

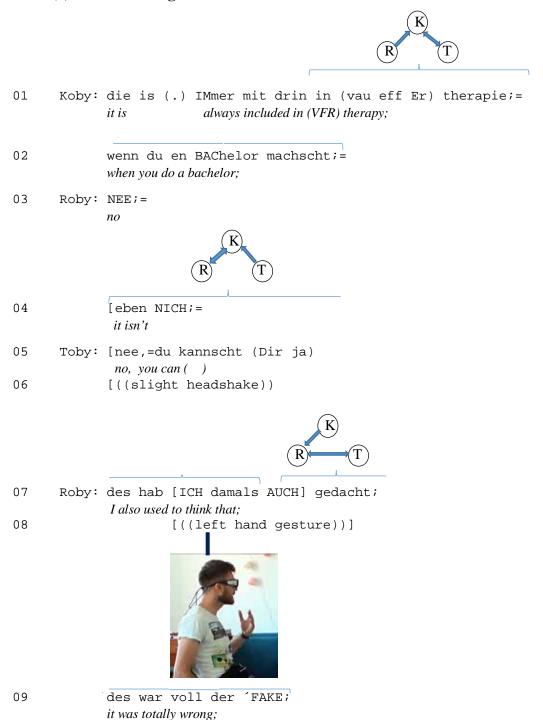
As the turn's projecting force is weak, it does not receive immediate uptake (also perhaps because the last looked-at co-participant, Hanni, is still looking at her glass and handling the bottle). Nanni therefore expands it syntactically (cf. the increment 'in primary school a little'), while her gaze turns back to Anni (line 13). Anni responds with a continuer (*Mhm*) and looks away (line 14), thereby proposing to close the sequence. Nanni once again looks at Hanni who now acknowledges Nanni's assessment of her 'reserved' brother's situation as ,difficult' (line 16: ,I can believe that'), thus closing the sequence.

### 4.2 Tightly structured sequential contexts

Extracts (5) and (6) are typical of longer turns containing descriptions, tellings or reports leading up to or implicitly expressing an evaluation. Typically, they are internally complex, can be expanded and make no clearly projectable next activity by a co-participant relevant. (In the examples above, co-participants' activities are restricted to acknowledgements, agreements or weak co-assessments.) They can be described as loosely structured sequences. We now look at two extracts in which turn-internal gaze shifts occur in tighter sequential environments.

In the first example, the three Sports students talk about their study program, i.e. whether it is mandatory to include therapeutic gymnastics. Koby claims that this is the case but both Toby and Roby disagree. We focus on Roby's disagreement in lines 03/04/07-09.

### Extr. (7) DREIER-Jungs I: 15.33-15.43.5



Koby's gaze in lines 01/02 is directed at Toby, but it is Roby who contradicts first (line 03) with a simple *nee* 'no', <sup>14</sup> and then reformulates his disagreement in line 04 (*eben nicht* 'it isn't'). Overlapping Koby's second disagreement, Toby also disagrees (05). Explicit disagreements are usually followed by an account, which both disagreeing parties start to deliver now. Toby begins his account in line 05 but breaks off in favor of Roby, who gives his account in lines 07/09, arguing that he also thought that therapeutic gymnastics would be an obligatory part of their study program when he began his studies, but then realized that this was not true. In sequential terms, disagreeing with a speaker means that the turn is addressed

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<sup>&</sup>lt;sup>14</sup> This case will be discussed below in section 6.

at this speaker. Roby contradicts Koby, who is therefore his addressee for this turn on sequential grounds. But at the same time, he uses gaze to integrate Toby in the sequence. This is done by turning from Koby to Toby in the end of line 07, whom he looks at until the end of the extract.

In the second extract, we find the female students talking in a tight sequential context. The topic here is the music streaming platform Spotify. In this sequence Anni is in danger of becoming marginalized, as Hanni and Nanni are talking about a topic she knows nothing about (i.e. regulations for using Spotify before she began using it). We focus on Nanni's turn in lines 06-07.

### Extr. (8) DREIER-Mädels II 2:23

```
01 Nanni:
              FRÜher,
              before,
              war doch mal so n LImit,
              there was once like a limit
03
              dass man IRgendwie nu:r; (.)
              that you could somehow only
              zwanzig [STUNden oder so (.) [hören durfte,]
04
              listen to twenty hours or so
                        [!STIMMT!;
                                                  [!ZE:HN! waren des] doch [nu::r;=
05
    Hanni:
                                                    ten I think it was only
                           right!
06
    Nanni:
                                                                                 [JA: un
              dann, (.)
              yes and then
07
              des zählt aber [NICH mehr; ne?]=
              but this isn't the case now any longer; is it?
08
    Anni:
                                 [des war noch VOR meiner][spOtifypha::se;
                                    this was before my spotify phase
09
    Hanni:
                                                                 [ja:,
                                                                  yes
              ja DOCH ((...))
10
              no that's true
```

Nanni remembers that music from Spotify could only be listened to for 20 hours at a go (lines 01-03). She looks at Hanni, who she knows from the previous conversation to have used the streaming platform as well. Hanni agrees enthusiastically and in overlap, displaying her own remembering of the same restriction (04), but immediately goes on to correct Nanni's version (Spotify could only be listened to for 10 hours in her opinion, not for 20; cf. line 05). The turn goes back to Nanni after line 05 to confirm or disconfirm Hanni's correction. Up to this point in the sequence, the two speakers have been linked to each other by mutual gaze. Anni, the third participant, has done what an attentive third party should do (cf. Holler & Kendrick 2015): she has followed the sequence between Nanni and Hanni by looking at the respective speaker.

Once more in overlap, Nanni confirms the correction and sets out to describe the changes in streaming policy that have taken place in the meantime (line 06, 'yes but then'). During this segment, she looks at Anni, the participant not involved in the sequence so far. Anni at this point is still monitoring Hanni with her gaze. Not finding a gazing recipient, Nanni reorients her gaze toward Hanni in line 07. The segment ends with a question tag (ne?), requiring confirmation from Hanni. Before Hanni can provide this next sequential step (which she eventually does with ja in line 09), Anni actively intervenes with an overlapping comment that this was all ,before her Spotify phase'.

Other than in extracts (5) and (6), the turns during which speakers in extracts (7) and (8) alternate gaze are short turns that occur embedded into a tightly organized sequential context in which the speaker is involved with one of the other two participants. Nevertheless, they take care to include the third participant as well by looking at him/her at least briefly.

In sum, we have seen that current speakers actively keep a three-party conversation from turning into a two-party conversation by addressing both co-participants by gaze. Multiple-addressee status is achieved despite the fact that a speaker can only look at one co-participant at a time (in the spatial constellation we are dealing with here). Gaze alternation for multiple addressee selection occurs in loose as well as in tight sequential contexts. It is not identical with next-speaker selection on the basis of sequential structure.

# 5 The addressee looked at toward the end of a turn constructional unit is given privileged access to the following turn

In the data under consideration here – i.e. three-party conversations in which gaze is free to deal with matters of turn-taking – the co-participant last gazed at in a TCU by the speaker has a privileged status with respect to turn-taking (all other factors being equal). Even if there was multiple addressee selection in the current turn, this co-participant will most often <sup>15</sup> provide the next turn. Examples can be found in extracts 5 (lines 11-12 and 15-16), 6 (lines 03-05 and 13-14), and 8 (lines 04-05, 06-07) above. The verbal response can be a continuer by which the looked-at participant signals that s/he is not interested in taking the turn (i.e. gaze elicits the continuer, cf. Bavelas, Coates & Johnson 2002) or a full next turn.

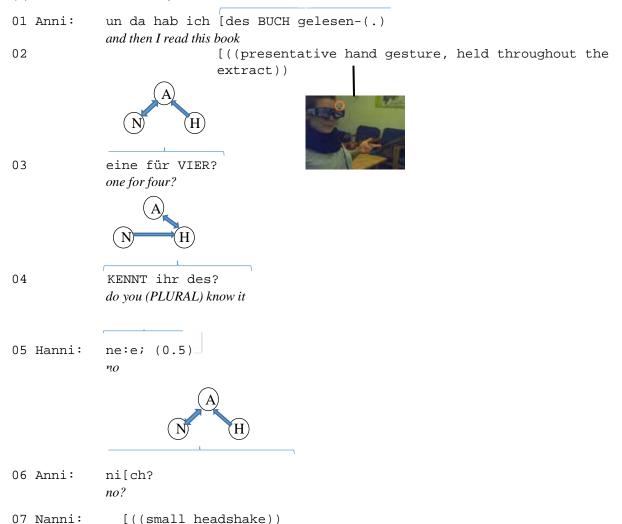
In this section, qualitative evidence will be presented for the claim that participants interpret last speaker's gaze as an offer or proposal, and sometimes even as an appeal to take the turn.

### 5.1 Micro-negotiations of turn-taking by gaze

One piece of evidence can be found in micro-negotiations about who will take the turn. An obvious case are answers to questions. Usually, the co-participant gazed at last answers (first) after a question with multiple addressee design:

<sup>&</sup>lt;sup>15</sup>See Tiitinen & Ruusuvori 2012 as well as Kalma 1992 for quantitative evidence.

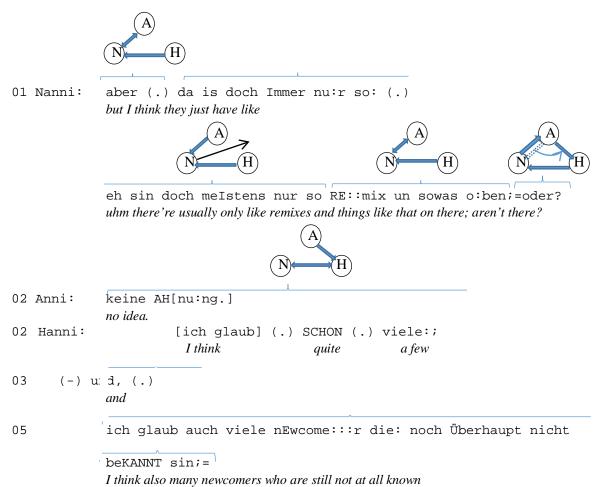
### (9) DREIER-Mädels II, 4:395



Anni asks whether a certain book is known to her two friends. The question emerges in several steps; in 01/02, the name of the book is presented with try-marked (upward) intonation at the end of the TCU. Anni's gaze is directed at Nanni, who, however, does not respond verbally; Anni then turns to Hanni (line 03) and expands her turn with an explicit question ('do you know it?'). Although the second person plural pronoun in the question selects both co-participants as potential answerers, Anni's gaze is on Hanni. And indeed, Hanni provides the projected second pair part (line 05: *ne:e*). While this answer is produced, Anni turns back to Nanni again and keeps her gaze on her even during the following half-second silence, now selecting her as the answerer. Nanni responds with a faint headshake (line 07). All in all, Anni shifts her gaze twice in order to select answerers in a certain order.

In addition, there is another pattern of micro-negotiation of next speakership involved in this texample, this time related to recipient's gaze. As we have seen, Nanni, who is first selected by Anni as the answerer after the try-marked book name in line 03, nevertheless does not take the turn. As a response to Anni's question and gaze, she instead directs her gaze at Hanni (between lines 03 and 04), thereby 'delegating' the role of answerer to her. Averting gaze from the questioner to the co-addressed alternative answerer signals (to the questioner and to the potential other answerer) that Nanni is not able to provide the answer. The same pattern can also be observed in the following extract from the same conversation:

### (10) DREIER-Mädels II, 2:51 (topic: Soundcloud, another streaming platform and alternative to Spotify)

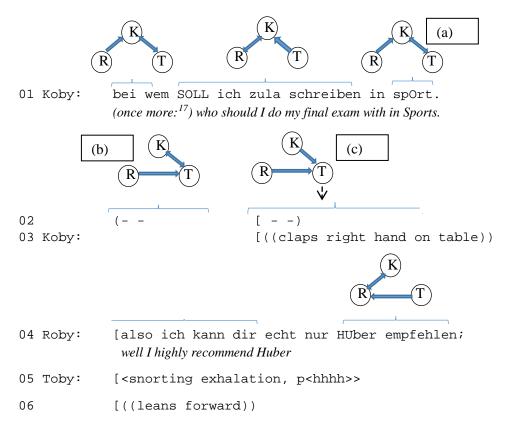


Nanni says she believes that Soundcloud mainly plays remixes of the songs she would like to hear; she finishes her statement with a question tag by which she asks for confirmation of her view (line 01). Her gaze is directed at Anni who is thereby invited to be the next speaker and answerer. However, Anni does not seem to know whether this is true (as she confesses in line 02). She defers the question to Hanni who will eventually confirm Nanni's view, at least tentatively, in lines 03-05. To do so, she averts her gaze from Nanni during Nanni's question tag (oder, end of line 01) and turns it toward Hanni. Note that Hanni, the knowing party, does not start to answer immediately after Nanni's request for confirmation, but respects Nanni's gaze which selects Anni, and not herself, as the (first) answerer; only after having been invited by Anni's gaze does she give the answer. This is clear evidence for participants' orientation to gaze as a relevant cue for turn-taking. 16

As a final example of micro-negotiation of next-speakership, consider the following extract:

<sup>16</sup> It is worth mentioning that this micro-negotiation takes place before Anni responds verbally in line 02. At this point, Hanni and Nanni have already established mutual gaze.

### Extr. (11) DREIER-Jungs II, 20:32



Koby's question in line 01 regarding who he should choose as an examiner is accompanied by fast gaze shifts, first from Toby to Roby, and at the end of the turn back to Toby (a). Toby is hence selected as the privileged respondent. However, after about 0.4 seconds during which Koby (as well as the third participant, Roby) keep looking at Toby (b), Toby lowers his gaze and thereby signals that he does not want or does not know how to answer (c). At this point, Roby starts an answer (line 04). Although he is not the invited next speaker, he can answer Koby's question in a legitimate way at this point, as the speaker selected by the current speaker by gaze has visibly declined to do so. Note that the shift from the last gaze constellation in line 01 to the second one in line 02 takes less than a second:

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<sup>&</sup>lt;sup>17</sup> The reading ,once more 'is due to the exceptional location of the focal stress on the auxiliary *soll* instead of the canonical stress on the direct object (so-called verum focus).



Fig. (2)(a): Koby looks at Toby (left cursor), Roby looks at Koby (right cursor); Toby (left) looks at Koby (not shown). Time 20:39:000.



Fig. (2)(b): Koby (left cursor) and Roby (right cursor) both look at Toby. Time 20:39:600



Fig. (2)(c): Koby (left cursor) and Roby (right cursor) look at Toby; Toby looks down. Time 20:39:900

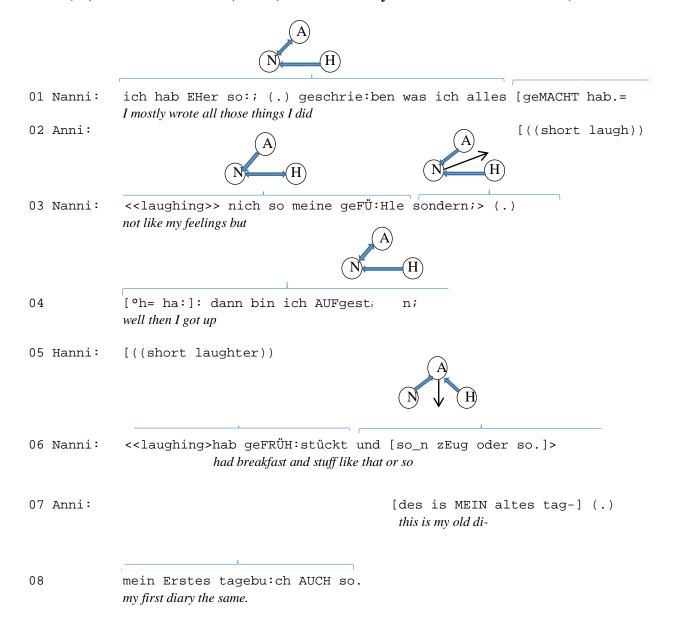
### 5.2 Gaze and the timing of turn-transition

Exact duration and timing is a highly relevant parameter in determining the effectiveness of a speaker's gaze in choosing a next speaker. In this section, two extracts are considered in which timing differs radically and hence has different conversational effects.

A first observation is that in terminal overlaps, it is regularly the last looked-at party who is responsible for this overlap, not the third participant. In other words: Being looked at seems to

be interpreted as a license to start a next turn early. Once more, this shows that participants make use of and orient to gaze as a turn-allocation technique.

Extr. (12) DREIER-Mädels II, 8:05 (about what they wrote in their first diaries)

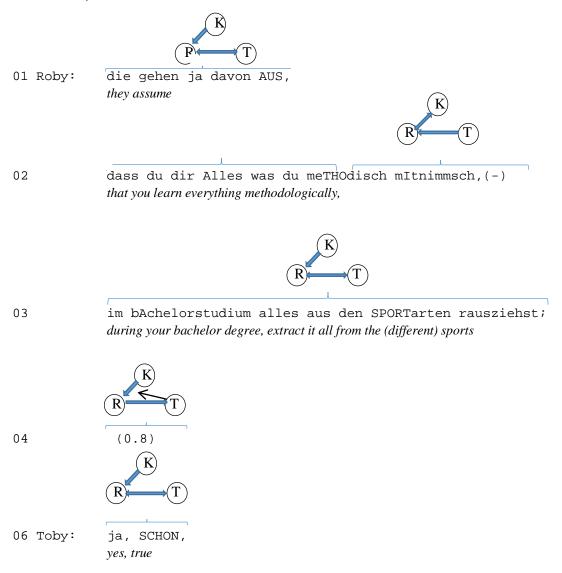


Nanni addresses both Hanni and Anni by gaze when she talks about the things she wrote in her first diary (01-06). The co-participant who is looked at last, however, is Anni (from the end of line 04 onward). Anni indeed takes the turn, and she does so well before Nanni has ended hers, but at a point where the remainder is more or less predictable (see Jefferson 2004 on such "recognition points"). Of course, for such an early onset to occur, the sequential structure must be one in which terminal overlaps make sense, such as in 'enthusiastic agreements'. But the question of who produces these 'enthusiastic agreements' when several co-participants are addressed is not settled by this sequential structure alone. Rather, the early timing of Anni's turn in 07-08 seems to be licensed by the fact that she is looked at by the speaker toward the end of her turn.

In Extr. (13), the opposite of a terminal overlap is observed, i.e. a delayed uptake. When the current speaker's gaze remains on a particular co-participant during such a delay, this

becomes a particularly strong cue, not only inviting, but also urging the looked-at participant to take the turn:

### Extr. (13) DREIER-Jungs II, 9:31 (about the bachelor program the participants are enrolled in)



Roby selects both co-participants as his addressees (cf. the gaze shift to Koby in line 02), but toward the end of his turn (line 03), he looks at Toby. Toby, however, does not produce any response but looks away (putting on a 'thinking face') for 0.8 seconds (line 05). During this time, Toby keeps his gaze fixed on him. It is this sustained gaze that finally elicits a response in the end: Toby agrees with Roby's opinion, albeit without much enthusiasm (line 06). Roby's gaze has "mobilized" response (in the sense of Rossano & Stivers 2010).

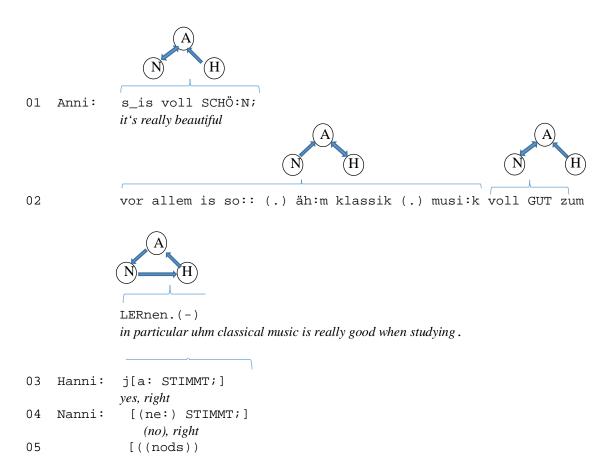
# 6 Why speaker's gaze is not always strong enough to select the next speaker

As shown in the previous section, speaker's gaze at one participant at the end of a turn is an interactionally relevant cue for the selection of next speakers. Nevertheless, there are also cases in which the co-participant selected by current speaker's gaze is not the next speaker;

rather, another participant self-selects. <sup>18</sup> Some of these cases can be accounted for by the sequential unfolding of the conversation. An interesting sequential context is, for instance, emphatic agreements.

In the following extract, both co-participants compete (in overlap) for the turn after Anni has delivered a strong assessment, although only one of them (Nanni) has been selected by gaze during the TCU ending. The co-participant who is suggested as the next speaker by the current speaker's gaze – i.e. Nanni – even starts to speak slightly after the non-selected one (Hanni).

### Extr. (14) DREIER-Mädels II, 00:53 (about Aubry's music)



Both Hanni and Nanni want to agree with the current speaker, and for one of them to withhold this agreement until the other one has delivered hers (or to even refrain from delivering it) could be interpreted as disagreement implicative. It seems that the preference for agreements to be delivered quickly wins out here over eye communication: preferred sequential structure overrides gaze. 19

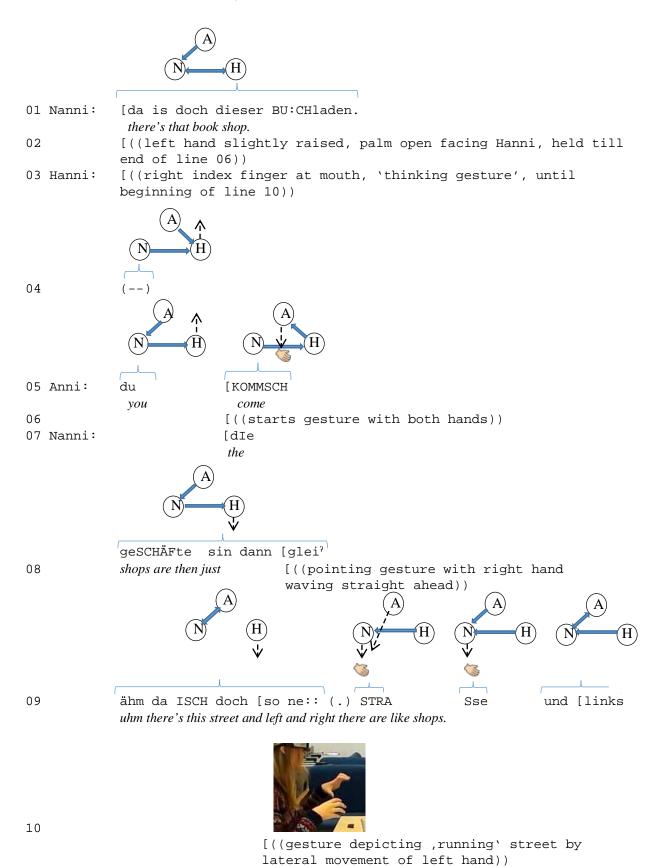
A similar priority of action over gaze can be observed in the following extract from a place tdescription. It is part of a longer sequence in which Nanni explains the location of a friend's

<sup>&</sup>lt;sup>18</sup> An example for this was already given above (Extr. 8, lines 01-02).

<sup>&</sup>lt;sup>19</sup> It will be noticed, though, that even in this case, there is a slight hitch in the temporal unfolding of the sequence which may reflect the privileged status of the last gazed-at speaker: Nanni (who is looked at by Anni at the end of her turn) hesitates slightly to produce her agreement and looks at Hanni during this hesitation (see end of line 02), not at Anni. Hanni then starts about 0.2 seconds before Nanni. This can be interpreted as an instance of micro-coordination in which Nanni suggests that Hanni deliver the first agreement instead of herself, the party who has privileged access to next speakership.

new apartment. Both Hanni and Anni are addressed co-participants and take part in establishing place reference, trying to identify the location:

### Extr. (15) DREIER-Mädels III, 6:06-16



```
11
                                                             [((gesture transforms
                                                             into two separate
                                                             ,putting movements',
                                                              ,left' and ,right'))
             sin und rechts so geSCHÄFte.
12 Hanni:
             also eInfach [die die WEIterführt.
             so just the one that leads on.
13
                            [((gesture with right arm waving to right side))
14
             [nach [litten-
              to (name of neighborhood, broken off within word)
15
                    [((same waving gesture repeated))
16 Nanni:
             [ja.
              yes.
17
              [genau.
              exactly.
18 Hanni:
             [ja.
              yes.
```

Eye communication is highly complex in this extract, as gaze is not only used for turn-taking. Participants also follow some of their gestures by gaze (see lines 05 and 09), and one of them puts on a ,thinking face', among other things by looking up at the ceiling (Hanni in 04, 05). Nevertheless, a gaze pattern is visible that contradicts our claim that the last looked-at participant will take the turn next. During her spatial description, Nanni first looks at Hanni who, instead of acknowledging the place reference to 'that book shop', signals through her facial expression that she cannot identify the referent (lines 01- 04). After a short silence and an attempt by Anni to reformulate the place description (which Nanni interrupts), Nanni turns to Anni (07-11). During her next, densely structured multimodal turn component ('uhm there's this street and left and right there are like shops') Nanni mostly looks at Anni, occasionally also at her own gesture and away. Hanni is not addressed by gaze. Nevertheless, it is she who eventually volunteers an understanding check by reformulating Nanni's description (lines 12-14) and who is finally successful in establishing reference.

Again it seems that the task at hand – establishing joint reference – is given priority over speaker's gaze in turn allocation. Both Hanni and Anni are visibly engaged in finding the place reference. Both have been addressed by Nanni. It is the participant who can solve the interactional problem at hand who speaks (first), not the one who was addressed by gaze by the previous speaker toward the end of the turn.

### 7 Discussion

In this paper, it has been argued that in three-party interaction, gaze is systematically used for addressee selection and for next-speaker selection (turn-allocation). These two functions of gaze overlap, but are not the same. In multi-party conversations, current speakers regularly look at co-participants alternatingly in order to select them as addressees of the turn. For next-turn allocation, on the other hand, it is only the current speaker's gaze at the end of the TCU that counts. More often than not, it is the gazed-at co-participant who will speak next. Gaze at the TCU's end was shown to be used by current speakers to elicit the gazed-at party's production of minimal responses, but also of full next turns. Gaze as a current-speaker-selects-next technique also increases the chances that this co-participant will start speaking before the current speaker has finished the turn (terminal overlap). Sustained gaze at a co-participant who withholds a response after a possible completion point is a particularly efficient technique to elicit this response.

However, it is not always the participant thus selected by the current speaker who takes the turn. For instance, participants who are offered the turn can be observed to 'hand on' the offer to speak to the third party by gaze. In a more competitive vein, a next speaker may self-select even though s/he is not invited to speak by current speaker's gaze. Further research is needed to investigate the sequential contexts in which this happens. It seems that the rule that the last gazed-at co-participant should be the next speaker is rather weak and that the contingencies of sequence structure can license speaker self-selection relatively easily.

Taking gaze into account as a technique for next-speaker selection has several consequences for the turn-taking system as described in conversation analysis. It clearly offers the turn to a co-participant, but when used alone, it is less effective than verbal or multimodal techniques of next-speaker selection (such as the use of names as address terms or second person pronouns in tandem with gaze). Gaze is a ubiquitous resource in face-to-face interaction, and not restricted to turns in which certain actions are performed (such as first parts of adjacency pairs). As such, it shifts the boundary between next-speaker selection by current speaker, and self-selection. Self-selection in the sense of Sacks et al. (i.e. as a hierarchically subordinated option only in play once the current speaker has not used his or her rights to select a next speaker) becomes considerably less frequent. On the other hand, the number of competing cases becomes much higher, since a participant may self-select although the current speaker has suggested another participant as next speaker. As the force of gaze as a selection technique is comparatively weak, the boundary between step (rule) one and two of the turn-taking system becomes blurred.

This paper has presented a preliminary investigation of some aspects of how gaze can become relevant for turn-taking. Many aspects remain to be investigated in more detail.

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### Transcription conventions for gaze (the remainder of the segmental and multimodal transcription follows GAT2, see Selting et al. 2011).

Direction of gaze from one participant at another.Mutual gaze between two participants.

Gaze not directed at another participant (top-down perspective).

Gaze up or down.

Gaze down at an object (here: the participant's own hands).

Extension of a gaze constellation with respect to the transcription below it.

### Examples:

K and R mutually gaze at each other, while T looks at R.

A gazes at N, H gazes at A, N looks away to the right of H.

R and T look at K, while K looks away between R and T.

A looks at N, and N looks at H. H looks down at an object (here: at a bottle).