The Role of Gaze as Turn-allocational Technique in Spanish-speaking Children-adults Multiparty Conversations

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1. Abstract

The fact of analysing how participants employ diverse non-verbal "turn signals" is an utmost importance to understand the complete machinery of turn-taking system in face-to-face interactions. Our research deals with the way in which Spanish-speaking early age children perceive and use gaze when they take part in multiparty conversations with peers and adults. We have developed a qualitative analysis focused on the study of 60 videos of natural interactions from a Conversation Analysis approach.

2. Context

Sacks, Schegloff & Jefferson (1974) describe two ways in which participants could determine how a next turn will be allocated in conversation: (i) current speaker selects next and (ii) self-selection. Due to the fact that non-verbal language is a key aspect in face-to face interactions, some researchers have observed how gaze works within the turn-taking system. Studies in adults have revealed that affiliating gaze direction to a first pair-part of an adjacency pair can constitute an explicit method of addressing whereby a current speaker selects a next speaker (Lerner, 2003). Moreover, if the speaker looks at the addressee during a turn in multiparty interactions, this can be done in the service of disambiguation to show who is being addressed and selected to speak next (Rossano, 2009). Few researches, especially those based on children's development, have been focused on the crucial role that gaze has in organizing and regulating interaction. Taking these findings into account, our aim is to explore the function of gaze in Spanish early age children-adults multiparty conversations.

3. Data and Method

Data
60 videos and transcripts of multiparty conversations between Spanish early age children and adults included in Koiné Corpus.

Participants
- 36 typically developing Spanish L1 children aged 3;0 to 4;6 years old approximately.
- 5 adults (researchers).

Method
-Use of natural data. We work with records of oral conversations in which researchers took an active part in the interactions.
-Qualitative analysis from an observational approach.
-Conversation Analysis methodology.

Procedure
Semi-conducted child-adults conversations were recorded during approximately 20-25 minutes every 15 days during one and a half year in 5 nursery schools from Galicia, Spain. Participants carried out several activities and games such as storytelling, cards, spontaneous conversation, etc. during these interactions.

4. Analysis and Results

Some evidences in our data reveal that gaze is a key resource of and for interaction. The way in which participants look at each other is a fundamental clue in the course of turn exchanges. We are going to present four examples that illustrate how children perceive and use gaze direction as a turn-allocational technique in multiparty children-adults conversations.

1- Children recognize when other speaker selects them as potential next-speakers by using gaze direction as a turn-allocational technique during conversations with three or more participants.

Transcript: Bre6_03. Participants: ANC (adult), CEC (girl, age: 2;11.12), ELI (girl, age: 3;00.23).

*ANC: a ver (.) Elia (.) empeza o conto (.) había unha vez (.)
qué máis? .

A<->E / C->E
A<->E / C->A   A<->E / C->A
A<->C / E->C

*ANC: pero alto eh que oia +/.
(E,C)->A / A->ø   A<->C / E->A

*CEC: un porquiño!
A<->C / E->A

*ANC: un porquiño (.) era un sólo ?
*CEC: no [>] .

2- Children use gaze direction (with or without a change in body posture and head movements) to address their verbal turns to a particular participant, selecting him/her as the next-speaker in multiparty interactions.

Transcript: Sus4_08. Participants: PIL (adult), GUI (boy, age: 4;01.19), DRI (boy, age: 3;10.18) SAN (boy, age: 4;00.09) .

*PIL: a ver (.) vamos a ver outra carta (.) vale ?
*PIL: enséñalla a todos a ver se sabemos o que é .
*GUI: una culebra .
*PIL: no .
*DRI: una colebra [*] .
(S,G)->D / D->P

*GUI: una serpiente : .
(S,D)->G / G->P (S,D,G)->P

*GUI: sí .
(S,D,G)->P

*SAN: las serpientes <no son así> [>] .
S<->G /D ->S

3- Mutual gaze among listeners at transition relevance places of multi-unit turns - such as storytelling- could be understood by speakers as a reaffirmation of their role of audience from the listeners. The speaker looks at the audience during each transition relevance place (TRP) in order to check if other participants allow him to continue with the ongoing speech turn.

Transcript: Elf4_06. Participants: ART (boy, age :3;10.19), IAG (boy, age: 4;00.20), RIC (boy, age: 3;11.14).

*ART: así (.) si [/] si tomas de esto (..) mira (..) &pue puedes romper muchas piedras (..) puedes levantar muchas piedras (.) &pue puedes romper (.) ladrillos (.) &pue puedes romper cristales (.) puedes romper sillas (.) puedes romper puertas (.) puedes romper esto (.) puedes romper paredes (.) &to [/] &to <todo> [/] todo lo puedes romper.

%act: IAG and RIC (the listeners) look at ART in the course of his speech turns. Moreover, IAG and RIC look at each other in each TRP -labelled as (.) and (..) in the transcript-. ART (the speaker) looks at the listeners in each TRP and at the beggining and at the end of each turn. However, ART looks away several times in the middle of his speech turns.

4- Children repair the vulnerability of gaze direction as turn-allocational technique by touching the addressee in order to obtain his/her attention. This action takes place when participants are not looking at the speaker while he/she is addressing his turn to a particular addressee by using gaze direction.

Transcript: Elf3_06. Participants: MON (adult), ART (boy, age: 3;02.12), IAG (boy, age: 3;04.13), RIC (boy, age: 3;03.06).

*MON: y dónde estaba la silla ?
*RIC: la silla tumbó [*] fuuu@o y me cayó encima de mi ca(beza)[/]+
R->M / I->R / A->ø
de mis (.) ojos
R<->I / A->ø

*MON: la silla ?
(I,R)->M / A->ø

*RIC: sí .
(I,R)->M / A->ø

*MON: uy qué dolor .
R->M / I->R / A->ø
I<->R / A->ø

*IAG: y te dolió ?
R->M / I->R / A->ø

*RIC: si [>] .
I<->R /A ->ø

*ART: <el semáforo está en rojo> [<]

5. Conclusions

The use of gaze in interactions could be considered as part of the growing communicative competence of children as social beings. Studying the function of gaze is not only important in pre-verbal stages, but also analysing its role as a non-verbal device used by speakers to coordinate the distribution of turns is fundamental to understand how the turn-taking system works in children-adults multiparty conversations. Our analysis lets us to conclude the following points:
 (i) Children recognize and use gaze as a turn-allocational technique in this type of interactions.
 (ii) Gaze direction serves as a resource for disambiguation in interactions with multiple participants.
 (iii) Children are able to employ remedial actions (such as touching) when gaze direction fails as turn-allocational technique.

6. References

•Lerner, G. (2003). "Selecting next speaker: The context-sensitive operation of a context-free organization". *Language in Society*, 32, 177- 201.
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•Sacks, H; Schegloff, E; & Jefferson, G. (1974). "A simplest systematic for the organisation of turn-taking for conversation", *Language*, 50, (4), 696-735.

Key
A<->B = Participant A and B look at each other (mutual gaze).
A->B = Participant A looks at participant B.
(A,B,C)->D = The group of participants (A, B and C) looks at participant D.
A->ø = Participant A does not look at any coparticipant. He/she looks away.

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