The role of gaze in the choreography of gestures, signs, speech and actions during family dinners

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INTRODUCTION

Context

- **Family dinners** grounded in commensality are a collective ritual that plays a key role in family members' identity and constitutes an inherent part of their cultural heritage.
- Those shared moments of everyday life present a perfect opportunity to study **how situated multimodal language and interactive practices are transmitted to and used by children.**
- Because the subtle interweaving of these practices while eating fully engages the body, our family dinner project highlights the **semiotic differences between parents and children using a spoken language, and a sign language.**

Overall Aim

Show how family members collaboratively manage the accomplishments of **multiple streams of activity** and coordinate their temporal organizations through the embodied performances of **dining and interacting** (Goodwin, 1984).

THEORETICAL FRAMEWORK

Language socialization practices of families
(Ochs, 1988; Ochs & Schieffelin, 1984; Schieffelin & Ochs, 1986)

Languaging = multimodal language use
"linguistic actions and activities in actual communication and thinking" (Linell, 2009: 274).

Cognitive linguistics
takes into account all semiotic resources (Langacker, 1988).

Construction grammar (Goldberg, 2006; Tomasello, 2003) — **"Multimodal constructions"** (Kendon, 1988; Andren, 2010; Morgenstern, 2014).

"The scope of relevant behaviors"
adjusting to the context of interaction, the activity, the age and identity of the interlocutor, the time of day, etc. (Cienki, 2012, 2015)

Each language provides a certain set of options
for the grammatical encoding of characteristics of objects and events (Slobin, 1987: 443)".

Languaging might not be solely relative to languages and cultures, but also to the mode of expression (Boutet, 2018; Morgenstern, 2022).

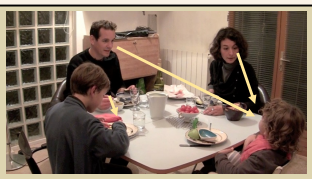


Figure 1: Child B languaging

The role of gaze

A number of constraints are different for **speaking and signing family members** - using the mouth to eat and speak is problematic and it is not easy to cut meat or pour water and be an active addressee of a signer as **gaze** is an essential component of interaction in sign language. But there also are possible activities one learns to combine - chewing can be synchronous with actively listening and gazing at the speaker or signer. Family members deploy a multitude of skillful multimodal variations in the collective coordination of bodies, activities and artifacts.

RESEARCH QUESTIONS

- **Are there differences according to the language used in the amount of co-activity?**
- **Does the amount of co-activity affect the amount of languaging used in each family?**
- **Is gaze used differently in families using a sign/vocal language?**

To study language specific differences in a multi-activity set-up and the differences in the management of gaze, we observe and analyze participants who are engaged in dining together and focus on how

- the language they use, LSF or French,
- the semiotic resources at play
- the body parts involved in their co-activity

shape their **interlanguaging**.

DATA AND METHOD

Data collection

1 LSF-Family 34 minutes — 1 FRA-Family 25 minutes

Figure 2: Filming equipment

- 2 conventional cameras equipped with quality external microphones and arranged to allow a view from the left of the dining scene and a view from the right of the scene;
- a 360° camera placed in the center of the table and offering a front view of all participants;
- a 360° sound recorder placed next to the 360° camera.

Coding

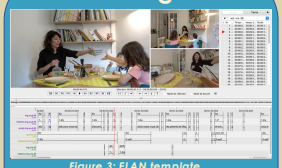
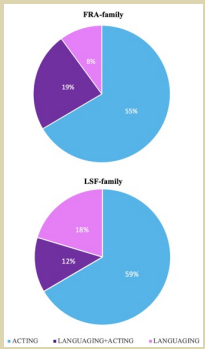


Figure 3: ELAN template

Tiers	Explanation
lang-aud	Segmentation of the auditive *languaging*
interloc	Identification of the interlocutor(s)
script	Transcription of audible language productions
lang-vis	Identification of symbolic gestures and/or sign language production
act-vis	Identification of all acting produced and categorization into dining/non dining activity
interact	Identification of the person the action is oriented towards
gaze	Participant or object gazed at

OVERALL RESULTS ON CO-ACTIVITY

Focus on the time globally spent acting, languaging or doing both at the same time.



Graph 1: Percentage of acting and of languaging (duration) in each family

Graph 2: Percentage of acting and of languaging (duration) of mothers and younger children in the two families

In both families, ***languaging*** (as a mono-activity or a co-activity) represents **27 to 29% of the duration of the dinner**, slightly more in the LSF-family than in the FRA-family.

Difference in the way these two families coordinate their language use and their dining or non-dining activities

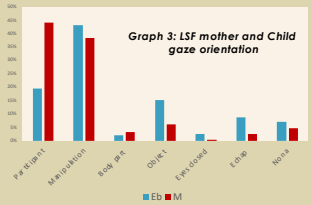
FRA-family: lower proportion of *languaging* alone (8%) than of co-activity (19%) **participants tend to interact with each other without having to interrupt their *acting* and vice versa.**

LSF-family: time spent on *languaging* alone (18%) is higher than in co-activity (12%), **the members of this family tend to alternate *languaging* and *acting*.**

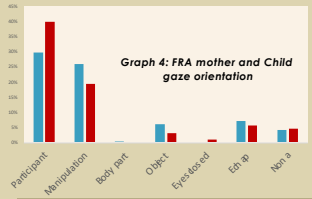
M and Eb of the FRA-family present a higher propensity to co-activity (average at 21%) than the LSF-family (average at 11%). The channel used to communicate thus seems to have an impact on the potential for overlapping activities.

The young children present in both cases a lower proportion of co-activity than their mothers.

GAZE ORIENTATION



Graph 3: LSF mother and Child gaze orientation



Graph 4: FRA mother and Child gaze orientation

- Both mothers gaze at participants 40 to 45% of the time.
- Both children gaze less at participants than their mothers do.
- LSF child gazes less at participants and more at manipulations and objects than FRA child.
- LSF mother and child gaze more at manipulations than FRA mother and child.

Scan QR code for additional information and videos

Among other characteristics

- LSF mother gazes at her interlocutors around 88 % of the time, FRA mother around 68%.
- LSF child gazes at her mother when speaking to her 89% of the time, FRA child 66% of the time.

QUALITATIVE ANALYSES

Figure 2: LSF signing Mother's alternating activity and gaze

Figure 3: French-speaking Mother's fluid co-activity and gaze

Figure 4: French-speaking Mother speaking without gazing at addressees and addressees not gazing at her

CONCLUDING DISCUSSION

The simultaneous **orchestration of language and dining practices** requires a particular mastery acquired and developed over the years. The gap is less important for the FRA-family than for the LSF-family, suggesting that it is more complex for the youngest child signer to acquire the skill to use sign-language and actions simultaneously as the same body segments are mobilized more often. However **that does not seem to impact their overall amount of languaging during dinner time.**

Our first analyses indicate **differences in gaze management according to participants' language modality and age**. In our hearing family, the mother can simultaneously monitor her activities without mutual gaze: she can direct her attention towards her current eating activity using her hands while interacting using her voice. In our deaf family, however, mutual gaze is crucial to maintain the simultaneity of the two activities: participants constantly need to secure the gaze of their addressees in order to interact in a continuous flow. Deaf parents can further socialize their children to co-activity thanks to gaze management.

Our study demonstrates how **family members become expert at coordinating semiotic resources** within the framework of everyday experience and how they deploy a multitude of skillful multimodal variations, including the affordances of gaze management, in the collective coordination of bodies, activities and artifacts.

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