

RESEARCH OUTPUTS / RÉSULTATS DE RECHERCHE

When hands stop moving, interaction keeps going

Lepeut, Alysso

Published in:

Languages in Contrast : International Journal of Contrastive Linguistics

DOI:

[10.1075/lic.00021.lep](https://doi.org/10.1075/lic.00021.lep)

Publication date:

2022

Document Version

Publisher's PDF, also known as Version of record

[Link to publication](#)

Citation for pulished version (HARVARD):

Lepeut, A 2022, 'When hands stop moving, interaction keeps going: A study of manual holds in the management of conversation in French-speaking and signing Belgium', *Languages in Contrast : International Journal of Contrastive Linguistics*, vol. 22, no. 2, pp. 290-321. <https://doi.org/10.1075/lic.00021.lep>

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

When hands stop moving, interaction keeps going

A study of manual holds in the management of conversation in French-speaking and signing Belgium

Alysson Lepeut

University of Namur (Belgium)

This study explores moments in signed and spoken conversation when manual production is on hold and its resulting interactive ramifications. Typically, the temporal structure of gesture and sign can be decomposed into a stream of distinct manual phases. There are moments, however, when this activity is stopped. This may happen for various reasons, e.g., when seeking attention, holding the floor or during overlaps. Holds have mostly been examined in sign languages regarding prosody, syntax, and corresponding to vowel lengthening in spoken languages. In gesture studies, they have been overlooked for not deemed relevant in the gesture-speech interface. By combining contrastive and multimodal analyses, this paper examines the relevance of holds as potential meaning-making practices deployed by LSFB signers and its comparison to Belgian French speakers. In 3 hours of video-recorded material drawn from 3 multimodal corpora, the following question is addressed: what are the roles of holds in the management of interaction within and across languages/modalities? While most of linguistic work considers manual movements to express referential content, the observations here push to reconsider the common boundary set between what constitutes gestural/linguistic phenomena in one language and what does not.

Keywords: gesture, contrastive analysis, multimodality, interaction, Belgian French/LSFB

1. Introduction

For a long time, sign languages (henceforth, SLs) were considered as simpler forms of gesture, which left no room for contrastive and multimodal approaches of gesture in relation to SLs. As exposed in the introduction of this volume, the early works on SL were characterized by prioritizing grammatical and lexical descriptions of signs (Cibulka, 2015), leaving the building blocks of social interaction largely overlooked. One reason for this was the emphasis on finding analogues to spoken languages (henceforth, SpLs) at all levels of linguistic structure, on the one hand, and establishing differences between SLs and gesture, on the other (Vermeerbergen and Nilsson, 2018). There were different reasons underlying this impetus. First, there was the pressing concern for grounding SLs as any other SpLs along with the fact that early linguistic theories tended to take what was “spoken or written as their main domain of investigation and [were] mostly occupied with aspects of language that denote things arbitrarily and categorically” (Özyürek and Woll, 2019: 68). In later years, studies gradually shifted focus to unveil specific properties of SLs (e.g., the use of space and eye gaze), giving rise to several contrastive analyses including more (related and unrelated) SLs, and comparisons with gestural features of SpLs. For the last two decades, SLs have begun to be treated as heterogeneous systems where gestural components are considered to co-exist (Vermeerbergen, 2006).

Gesture and sign have a long – complicated – history together (see Kendon, 2008) and making sense of that history has turned out to be a thorny endeavor. On the one hand, for SL researchers, integrating gesture as part of SLs poses theoretical and analytical challenges as to how to explain the nature of gesture against attested language systems like SLs. Therefore, a long-standing position has been to differentiate gesture from sign (e.g., Emmorey, 1999). On the other hand, for gesture researchers, placing SLs within their frameworks and understand their linguistic functioning (Lepeut and Shaw, 2022) has raised important concerns about expanding the relation of gesture towards language beyond speech.

In the current state of affairs, two views co-exist within the gesture and SL research field:¹ one that integrates gesture as part of SL and one that differentiates gesture from it. While the former argues for exploring gestural phenomena in signing and speaking side-by-side (e.g., Cibulka, 2015; Kendon, 2008; Müller, 2018; Shaw, 2019), the latter posits a divide between the two (e.g., Goldin-Meadow

1. Scholars differ in their approach as they depart from different theoretical frameworks, disciplines toward “gesture” and pursue different research objectives (see Müller, 2018; Shaw, 2019).

and Brentari, 2017; McNeill, 1992).² The latter excludes *a priori* certain gestural components (e.g., interactive gestures) from the scope of analysis, which are part of the wide range of visible bodily actions (Kendon, 2004) that speakers and signers rely on to create and express meaningful composite utterances (Enfield, 2009).

The view adopted in the present paper, as throughout this volume, is to address the need – as highlighted by Müller (2018) and Kendon (2008) – to compare phenomena directly in speakers' and signers' discourses by favoring common ground between the perceivable communicative bodily behaviors that occur in a SL, i.e. LSFB (French Belgian Sign Language) and a SpL, i.e. Belgian French (henceforth BF) in the present case, through the exploration of manual holds.

Comparing SLs and SpLs invites scholars to “reconsider the linguistic status we ascribe to meaningful, nonverbal behaviors that emerge when [...] people engage in face-to-face interaction” (Shaw, 2013: 31). The current analysis aims neither at finding analogues in each language nor at investigating the diachronic changes between gesture and sign. Rather, it takes a synchronic comparative approach to signed and spoken data to reveal a more thorough picture of how interaction is managed when focusing on a similar manual component, holds. Moreover, this study responds to the call for more “systematic cross-linguistic research on the multimodal use of language in its signed and spoken forms” (Müller, 2018: 2).

After a state of the art of holds (Section 2), the methodology and the annotation process are outlined (Section 3). Section 4 will survey the results. A last section is devoted to discussion of the findings and their contributions to language theory.

2. Gesture and Sign in Interaction: The case for manual holds

Since Stokoe's (1960) work on the linguistic structure of ASL, many linguists have largely focused on the grammatical and lexical descriptions of signs (Cibulka, 2015), examining certain parts of signs and leaving the rest of the manual stream largely unexplored. Similarly, comparatively little work has been conducted on the interactional mechanisms of SL discourse (e.g., but some exceptions, Baker, 1977; Cibulka, 2015; de Vos *et al.*, 2015; Lepeut, 2020; Mesch, 2016; Parisot, 1998; Shaw, 2019). The same holds true for gesture studies, in which the tight integration of

2. Some of the reasons preventing the side-by-side systematic comparison of gesture and sign in language originate in that these competing views depart from distinct initial conceptions as to what gesture is and what gesture does in language (see Kendon, 2008; Müller, 2018; Shaw, 2019).

the gesture-speech system as *a window onto the mind* of speakers has prevailed (Goldin-Meadow and Brentari, 2017; McNeill, 1992) and where greater attention has been given to the meaning bearing part of the gesture, viz., the stroke.

Consequently, phenomena as holds have been overlooked because they happen “for reasons other than the production of lexical items” (Cibulka, 2015: 449). At first, holds seem easy to define as moments when hands stop moving but when do we consider the cessation of movements as legitimate holds? How can these motionless moves play an actual role in conversation? While the former issue is addressed in Section 3, the role of holds in language use has been demonstrated by several scholars. For instance, Cibulka (2015: 459) has shown how they can be regarded “as part of an established interactional practice rather than as failure or incomplete signs” as well as means to establish collaboration during word searches, regulate turn taking, and prompt for responses in SpLs and SLs.

2.1 Manual holds as part of the gesture and sign structure

When people articulate a particular manual move, it is to be conceived in terms of temporality consisting of a stream of distinct manual phases displaying different dynamic characteristics that come to describe the movement in question. These manual phases have been described extensively (e.g., Kendon, 2004; Kita *et al.*, 1998; McNeill, 1992). Particularly, Kita *et al.* (1998) provide a comprehensive account of all phases. The signer (Soo1) articulates the sign RIGHT in the LSFB Corpus (Meurant, 2015), which can be seen in Figure 1.

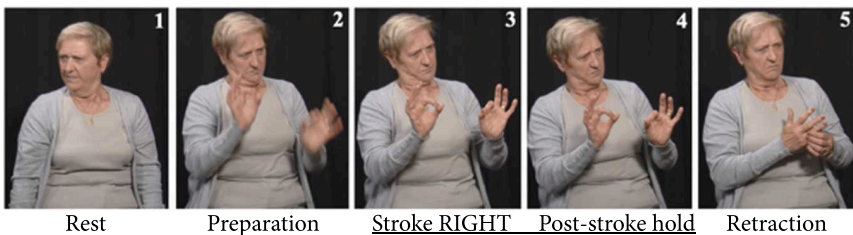


Figure 1. Illustration of a post-stroke hold in LSFB, Task 18, Soo1 (1:12.000–1:14.483)

First, Soo1’s hands are resting on the chair and her gaze is away from her addressee but as soon as she wishes to take the turn, her hands leave simultaneously their rest position to reach the correct starting spatial position of the expressive phase of RIGHT (pictures 2–3). Then, as the hands reach the conventional location and display the appropriate handshape and orientation to produce the sign (picture 3), the stroke occurs in picture 4 where both hands are accompanied by a downward move, bringing both hands in front of her chest. Following the

stroke, Soo1 holds her hands for 377 ms in the exact same location, orientation and handshape. Once the addressee provides feedback, the hands retract themselves in the neutral space (picture 5), followed by self-adaptors. Similar manual phases have also been reported for SpLs (Kita *et al.*, 1998).

2.2 Defining moments of gestural holds

While holds have thus been formally acknowledged as part of the temporal structure of a sign/gesture, the attention regarding their roles in language have been examined from different perspectives. In SpL research, gestural holds have been described to work in close temporal synchronization with speech, and with “different levels of prosodic structuring of the discourse” (Kita *et al.*, 1998: 29). Other studies have found that holds co-occur with speech pauses (De Stefani, 2005) and disfluency markers (e.g., Graziano and Gullberg, 2018; Navarretta, 2015).

There are times, however, when roles of holds extend beyond the ones of synchronizing with speech or associating with speech cognitive processes. There is another set of functions that is linked to the management of interaction. Some scholars, on analyzing turn-at-talk in spoken conversation, have found that gestural holds are consistently performed to signal the end of speaking turns (Duncan, 1972), to extend questions beyond turns (Bavelas, 1994), and to project next turns (Mondada, 2007).

These findings have been taken up in other work. Sikveland and Ogden (2012) examine holds across turns. They show how speakers convey problems of understanding to their addressees and that such holds are maintained as long as this problem is left unresolved. Park-Doob (2010: 137) also provides an interesting case for the interactive roles of holds arguing that they work as a way for speakers to maintain “expression across spans of time as well as maintenance of control and a claim to ‘speakership’”. Lastly, De Stefani (2005) distinguishes between suspended *vs.* held gestures. The former occurs when trouble emerges during the conversation, causing the gesture to remain on hold until the conversational trouble is solved. The latter corresponds to holds that often go beyond the boundaries of the speech utterance that are not interrupted but maintained by the primary speaker.

2.3 Holds in signed discourse

Holds have been recognized as recurrent elements in signed discourse for which various linguistic functions have been described, some of which are briefly introduced below (see Notarrigo, 2017, for a review of the linguistic functions of holds).

Holds can be addressed from a twofold perspective: as a lengthening phenomenon at the beginning and/or ending of signs or as a pause phenomenon to

mark syntactic boundaries. Sign lengthening has different functional implications at the level of coordination, semantics, structure of discourse segments, management of cognitive processes and hesitations, and interaction.

Similar to the phonological function of post-stroke holds in SpLs, holds may take place on one of the hands waiting for the other one to synchronize with it. Hold can also be used to add a specific meaning to a sign (e.g., TO WATCH to mark the duration of the activity) and signers can produce holds on their non-dominant hand while signing with their dominant hand. This has been described as weak hand holds or BUOY (Liddell, 2003), playing a structuring and guiding role in discourse. Moreover, holds also occur when signers cope cognitively with higher information content. Thus, holds have rarely been studied as a strategy to manage conversation, except for the following studies.

Baker (1977), working on ASL interaction, pinpointed uses of holds on the last sign of a proposition signaling turn continuation or shifting. More comprehensively, Groeber and Pochon-Berger (2014) examined the placement of holds within turns as well as the timing of their release in DSGS (Swiss-German Sign Language). They found additional turn-related uses: (1) a speaker who did not release his hold despite the fact that the next speaker had already taken the floor, and (2) a hold that was not released “but maintained throughout the responsive turn” (Groeber and Pochon-Berger, 2014: 9). This was particularly noticeable in holds occurring at the end of turns with a strong next action projection, such as found in questions.

Pariset (1998) described holds to occupy conversational space. She compared the neutral phonetic characteristics of the schwa to the open relaxed hand hold in conversational space in front of the signer in LSQ (Quebec Sign Language). According to her description of turn-taking signals, maintaining a turn by leaving a hand in space while looking for one’s words or sharing a turn with addressees, are communicative strategies that can occur in a competitive or a collaborative conversational setup. The association of a hold with other communicative turn taking signals, such as gaze for collaborative purpose, or gaze avoidance for competitive purpose, could define the nature of the conversational space.

Other SL studies have addressed the different roles of holds when changes in the trajectory lines of conversation occur and difficulties arise (e.g., de Vos *et al.*, 2015; Floyd *et al.*, 2016; Manrique and Enfield, 2015). Floyd *et al.*’s (2016: 199) research is particularly interesting as they make a parallel between their results and similar SpL outcome, claiming that “the cross-linguistic similarities uncovered by this comparison suggest that visual bodily practices have been semiotized for similar interactive functions across different languages and modalities due to common pressures in face-to-face interaction”.

Cibulka's (2015) analysis of Japanese SL covers a wider range of functions. His work focuses on moments when holds occur for purposes such as sequence suspension during joint word searches. He emphasizes how holds "should be accounted for as being part of an established interactional practice rather than as failure or incomplete signs" (Cibulka, 2015: 459).

These studies show how the hands cannot only be perceived as means of expressing propositional content or in tight affiliation with speech and signing but also as important mechanisms in regulating interaction and enabling participants to reach intersubjective understanding (Sikveland and Ogden, 2012). All of this underlines how individuals construct their talk-in-interaction moment-by-moment through various embodied strategies that also include other gestural phases to create meaningful composite utterances (Enfield, 2009).

3. Methodology

The following sections are devoted to the description of the methodology adopted for the forthcoming analyses (including data presentation and annotation), which will plunge the reader into the interactive nature of the bodily behavior of LSFB signers and BF speakers under study, manual holds, and their resulting functions in conversation.

3.1 Data Presentation

3.1.1 Corpora

This study is based on three corpora, namely, the CorpAGEst Corpus (Bolly and Boutet, 2018), the LSFB Corpus (Meurant, 2015) and an ongoing corpus project, FRAPé (Meurant *et al.*, submitted). The first two corpora that were directly available at the time for analysis were the LSFB and CorpAGEst corpora. However, they were not directly comparable. Therefore, FRAPé was created, and new data were collected in order to compare the LSFB Corpus with the corresponding multimodal data from its ambient spoken counterpart (see Meurant *et al.*'s contribution to this volume for another comparative study drawing on these two corpora). The selection of these three datasets allows, on the one hand, to study a wider range of participants and contexts, and on the other hand, to put the results of the direct BF-LSFB comparison into perspective, revealing unique insights into the behavior of certain interactional practices.

The CorpAGEst Corpus (Bolly and Boutet, 2018) comprises 18 face-to-face interviews of 16.8 hours in total (60 min. on average per interview) of approxi-

mately 250,000 words in BF recorded from nine older speakers in their home. Its originality lies in its innovative research topic (viz., the pragmatic language ability of non-pathological older adults), its corpus-based multimodal approach to linguistic data, and its reliance on data elicited in an authentic environment rather than in experimental conditions.

The LSFB Corpus³ (Meurant, 2015) is an open online database created between 2012 and 2015 of approximately 150 hours of LSFB productions of 100 signers from 18 to 66 years of age (and over), coming from diverse areas of Belgium. To provide a representative sample of LSFB, several varieties including different genres (not only narratives), registers (from formal to informal styles), and signers (with various sociolinguistic backgrounds) were collected (see Meurant and Sinte, 2013, for a thorough description of the LSFB Corpus). Participants came in pairs to LSFB-Lab at the University of Namur to be recorded. A deaf moderator guided the recording sessions in LSFB. Out of the 88 hours of video data available online, 26 hours have so far been manually glossed sign by sign, according to the ID-glossing principle (see Johnston, 2010). This represents 220,000 glosses (tokens) and 3,621 signs (types). All information is available at <https://www.corpus-lsfb.be/>.

The FRAPé Corpus is currently being collected following the same protocol as the one used to build the LSFB Corpus to make these two corpora directly comparable. Designed as its BF counterpart, the FRAPé Corpus comprises the same set of tasks and covers the same variety of text types (narratives, explanations, descriptions, argumentations, and conversations). To date, 10 complete sessions have been recorded (along with three shorter sessions conducted with elderly participants (see Meurant *et al.*, submitted).

3.1.2 Participants

In total, 12 participants (eight in BF and four in LSFB) were ultimately selected. Participants chosen for this study are older adults. The impetus behind this is that few studies have investigated the interactional practices of non-pathological older individuals without adopting a longitudinal perspective or a direct comparison with younger participants. The current study does not aim at making any conclusions regarding the impact of age on the current findings but rather aims at documenting how signers and speakers from a certain age range use a similar bodily strategy, viz. manual holds, to regulate the flow of their conversation with their conversational partner.

3. The LSFB Corpus is the result of an Incentive Grant for Scientific Research (n° F.4505.12) entitled *Creation of a referential corpus for the study of French Belgian Sign Language (LSFB)*.

In CorpAGEst, four female speakers (aged between 75 and 89 years old) were selected. The choice was made based on the data and annotation already available at the time of analysis.

From the LSFB Corpus, two pairs of signers were chosen. Participants at the time were between 67 and 83 years old. Both dyads were equally divided by gender and each pair came from the same region in Belgium (Liège/Woluwe). Signers were chosen regardless of their linguistic competence. Instead, external factors were considered: the presence of ID-gloss annotations available.

In total, four speakers from the FRAPé Corpus were chosen: two pairs of hearing female participants (aged between 65 and 85 years old). The participants were all native speakers of French (Belgian variety).

3.1.3 Tasks

The CorpAGEst Corpus gathers language material collected at the participant's home and includes speakers engaged in semi-directed interviews with a familiar addressee (mostly a family member) discussing present and past events in their life. Despite the semi-directed nature, addressees were free to engage in the conversation. Approximately 45 min. of data were annotated and analyzed.

Four conversational tasks were chosen from the LSFB Corpus (out of 19 constituting the corpus). These tasks explored the following topics: childhood memories (task 3), differences between deaf and hearing culture (task 4), hobbies, work, and passions (task 15), and the comparison between past and present events (task 18). In total, 1 hr. 25 min. of data (8,317 signs) were annotated and analyzed in LSFB. The same tasks were chosen in the FRAPé dataset, except for task 4, where speakers discussed the relationships between the Flemish and the Walloon. A total of roughly 1 hr. and 20 min. of data were annotated and analyzed (representing 18,187 words and 2,390 gestural strokes together with the CorpAGEst data).

3.2 Data annotation

3.2.1 Annotation procedure

The samples outlined in the previous sections were transcribed and annotated using ELAN (Wittenburg *et al.*, 2006). Pre-existing annotations were already available in the corpora, including transcription of speech and the attribution of ID-glosses⁴ (Johnston, 2010) in LSFB. In addition to these, the following ELAN tiers were created for each hand, respectively: markers identifying turn-at-talk

4. This technique consists of attributing a label to identify the value of a specific sign, which corresponds to a French word written in capital letters (see Johnston's annotation guide for the use of ID-glosses in SL annotation).

as belonging to the main speaker/signer (L₁) or the addressee (L₂), overlapping talk/signing, gaze direction (based on Notarrigo, 2017), types of holds, and their function (see Appendix B for a full description of the functional typology).

3.2.2 *Formal identification of holds*

The first step consisted in watching the video and stopping when there seemed to be a visible prolonged halt on a manual movement to verify whether this was concretely followed by a succession of fixed frames. Stemming from that, came the issue of determining a threshold for holds. Relying on Notarrigo's (2017) results of Cohen's Kappa, a threshold of 200 ms was applied. Holds were first annotated on an independent tier for each hand. Then, on a dependent tier, the different types were distinguished based on Notarrigo (2017):

- <S₁:ST> were holds at the beginning of a sign/gesture while <S₁:EN> occur at the end. These matched the pre- and post-stroke holds (Kita *et al.*, 1998). A freeze of the hands at either the initial stage or the end of the handshape and the location of the sign/gesture characterizes these holds.
- <S₂:NE> occurred in neutral space between signs/gestures in front of the signer/speaker's body.
- <S₃:IN> characterized holds with the shape of an extended index finger, identified as a floating index in front of the signer's body without any grammatical meaning in itself (see Notarrigo, 2017). These forms of hold turned out to be a unique feature of signed discourse (Lepeut, 2020).

3.2.3 *Functional annotation of holds*

Holds with an interactive function were then categorized following previous functional typologies for interactive gestures (Bavelas *et al.*, 1992) and discourse markers in speaking and signing (Bolly and Crible, 2015). Bolly and Crible's protocol comprises three main domains: ideational (content-oriented), structuring (text-oriented), and interpersonal level (with the expressive: speaker-oriented, and the interactive function: addressee-oriented). These four macro language functions (Funct-D) can be further decomposed into specific functions called "micro-" functions (Funct-C). For instance, the interactive domain can be decomposed into the following micro functions: opening, suspending, or closing a turn; showing agreement; monitoring addressees; or marking common ground. Thus, each token was attributed to a main domain and a specific function. These categories were subsequently revised and were expanded following more recent endeavors on the interactive usage of gestural phenomena in signing and in speaking (see Ferrara, 2020). As Ferrara (2020: 7) claims, "This type of iterative and rec-

iprocal interaction between the data annotation and literature/theory is common in studies employing corpus methods”.

All tokens of holds were checked multiple times for their function based on their context of use and other linguistic cues (e.g., activation of non-manuals) that sometimes helped assigning specific functional categories (e.g., planning and the role of eye gaze).

The sections of the results will provide a quantitative and qualitative panorama of the data processed within and across LSFb and BF. First, results are introduced with descriptive statistics related to holds analyzed in each corpus, including mean, standard deviation (SD), and frequency distribution. The raw and relative frequencies for manual holds are provided. To establish relative frequencies, two types of measures – following Notarrigo (2017) – during calculation were used: a measure per minute and a measure per 100 tokens (including the number of signs for LSFb and the number of words and gestural strokes for BF, see Vermeerbergen and Demey, 2007). This will give the reader a more thorough picture of the results. Then, detailed instantiations of the interactional design of holds in the discourses of BF and LSFb individuals are discussed to demonstrate their relevance for their integration in language theorizing.

4. Results

4.1 Overview of the data

Participants produced 1,120 hold tokens in total in the three corpora in roughly 3 hr. 09 min. of video-recorded material. Most holds are found in the LSFb Corpus (49%), followed by its spoken counterpart (37%), and CorpAGEst (14%). These results are visually displayed in Figure 2.

Table 1. Counts and dispersion of holds across speakers and signers in each corpus

C1				C2				C3			
LSFB				FRAPé				Corp AGEst			
	N	/100 Tokens	/min		N	/100 Tokens	/min		N	/100 Tokens	/min
Soo1	106	5.97	6.54	Foo1	126	7.01	8.53	Coo1	33	3.17	3.95
Soo2	267	11.11	10.44	Foo2	23	1.20	2.01	Coo2	2	.19	.27
Soo3	59	4.48	5.02	Foo3	91	2.02	3.60	Coo3	24	1.69	2.23
Soo4	115	4.07	3.88	Foo4	175	4.31	6.73	Coo4	94	7.35	10.70
Total C1	547	25.63	25.88	Total C2	415	14.54	20.8	Total C3	158	12.4	17.15
Mean	136.75	6.4075	6.470	Mean	103.75	3.635	5.2175	Mean	39.5	3.1	4.2875
SD	90.238	3.239	2.86	SD	63.913	2.606	2.95	SD	39.24	3.08	4.53

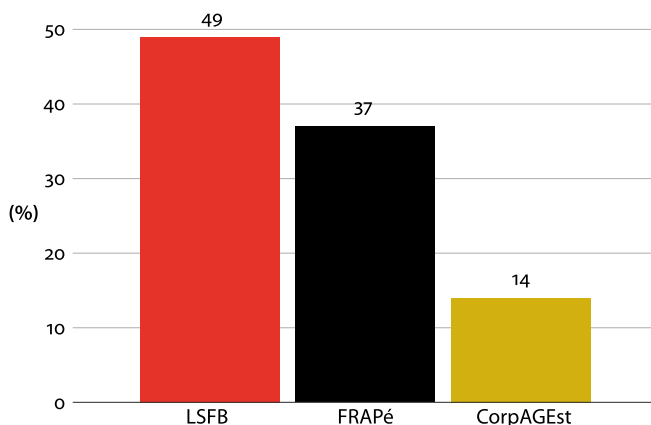


Figure 2. Distribution of holds/corpus

The results show that 547 hold tokens are produced in the discourse of LSFB signers (in approximately 1 hr. 25 min. and 8,317 signs), out of which 390 tokens were <S1:EN>, 55 were <S1:ST>, 80 were <S2:NE>, and 22 were <S3:IN>. In the BF corpora (FRAPé and CorpAGEst) revealed 573 holds in 2 hrs. and 06 min., 18,187 words and 2,390 gestural strokes. Out of the total amount of holds in BF, 480 were <S1:EN> (337 in FRAPé vs. 143 in CorpAGEst), 36 were <S1:ST> (30 in FRAPé vs. 6 in CorpAGEst) and 57 were <S2:NE> holds (48 in FRAPé vs. 9 in CorpAGEst). No occurrence of <S3:IN> was found in the BF corpora, which suggests that such a phenomenon may be specific to signed discourse. Although this kind of behavior awaits further work, the finding concurs with a previous work on disfluency in LSFB (Notarrigo, 2017). Notarrigo (2017:84) found this type of floating, vague index without any grammatical value to be a sporadic phenomenon in LSFB, whose highly idiosyncratic use does not occur among native LSFB signers.

Next, the interactive functions of manual holds in LSFB and BF are presented. The following issue is addressed: what is different (or similar) between LSFB signers and BF speakers when holds are used as a mechanism to regulate the ongoing interaction? Figure 3 reveals four key interactive functions in the study corpora, namely, to plan discourse, to monitor addressees, to suspend turns-at-talk, and to hold turns:

While LSFB signers use holds for planning and monitoring purposes to a lesser extent than BF speakers, the most striking difference concerns turn suspension, which occurs when the addressee intervenes in the main line of action. Fewer overlaps are found in BF speakers' discourse as holds barely occur during turn-suspension (only 6%). This may partly be due to the semi-directed interview design of CorpAGEst. CorpAGEst speakers answer questions directly formulated

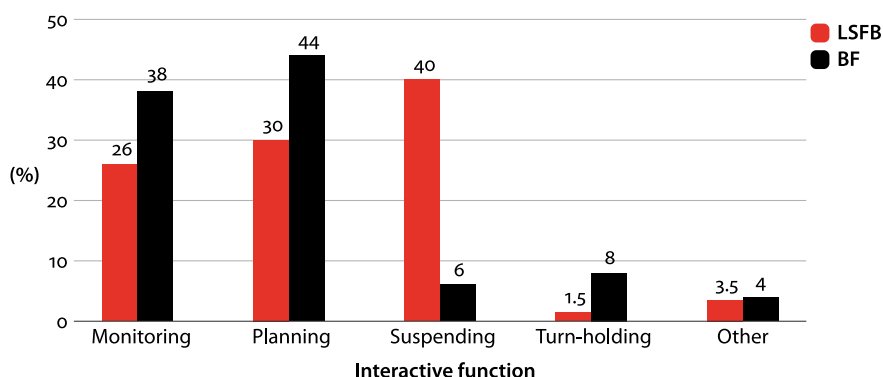


Figure 3. Distribution of the four major interactive functions of holds in LSFB and BF

by addressees, who act as the main moderator within the conversation itself. In contrast, in LSFB and FRAPé, a third actor regulates exchanges between the dyad, from outside. It is highly likely that the freedom left to addressees to jump in at any moment in conversation play a role in the production of these manual holds. The following sections discuss the four key functions in more detail.

4.2 Interactive functions of holds in LSFB and BF conversations

4.2.1 Holds for turn-holding

The example illustrating a hold for turn-holding purposes is displayed in (1) and illustrated in Figure 4. Signers are discussing new approaches regarding the development of new pills that might replace implants in the future. Soo1 responds that it is still better than implants and performs a two-handed palm-up (PU), which is then held for 909 ms during Soo2's entire response. This hold at the end of Soo1's utterance can be construed as a way for Soo1 to show Soo2 that she is not relinquishing her signing turn yet and that as soon as Soo2 is done with her response, she will resume signing.

(1) LSFB: Hold for turn-holding purposes

STILL BETTER PT:DET LESS IMPLANT <PALM-UP> (909 ms)⁵
 "It is still better than the implant"

Soo1's hold in (1) does not function as a simple turn-yielding device as no change in speakership is noted after the hold release. Instead, this phenomenon shows that "the timing of the release is based upon the current speaker's meticulous on-line analysis of the co-participants conduct" (Groeber and Pochon-

5. A transcription table for the examples follows the concluding section.

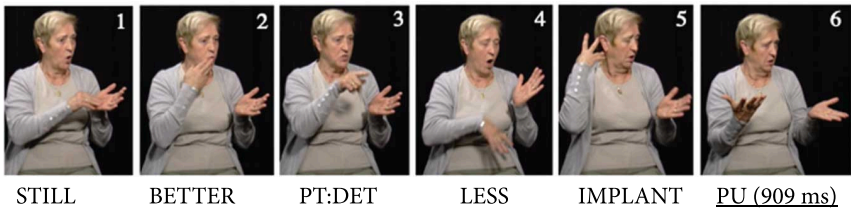


Figure 4. <S1:EN> for TURN-HOLD in LSFB, Task 04, Soo1 (04:57.134–05:00.644)

Berger, 2014: 9), which is “key to understanding the interactional job that the hold performs” (*ibid.*: 10). Such an example displays how Soo1, with a hold, knows what to expect. First, in terms of “what should come next as relevant action (e.g., an answer to a question)”, and “in terms of specific content implemented through this action (e.g., the appropriate answer)” (*ibid.*: 9).

Particular kinds of index pointing actions have been reported (Lepeut, 2020) as reduced forms where only the index finger is discreetly in motion, often performed in the participant’s lower space. In Example (2), Foo3 has just told Foo4 about the photographic style of a Flemish photographer she knows, who appears to be characteristic of Flemish art. As soon as she finishes her anecdote, there is a pause of 919 ms before Foo4 raises her right index – as displayed in (2) – to bounce back on what Foo3 has just explained. She adds, *what you are telling me makes me think of an interview I once heard about the painter, Paul Charlier*, while maintaining her index pointing action in that position for five seconds without releasing the hold as long as she has not finished conveying her point to Foo3, which can be seen in Figure 5.

(2) BF: Hold for turn-holding purposes

“(h) yes I’m/this/what you’re saying makes me think I once heard an interview of of <IFE-G> (5103 ms) Paul Charlier”



Figure 5. <S1:EN> for TURN-HOLD in FRAPé, Task 04, Foo4 (03:43.630–03:50.320)

In line with Cibulka (2015) and others, this kind of bodily behavior (first, the index, and then, the hold), no matter how discreet it may look, is not performed

at random and neither is its release. Rather, these remain visible bodily actions (Kendon, 2004) that work as recognizable semiotic means for interactants to rely on. In this case, this discrete use of the index and its subsequent hold tell the addressee that Foo4's idea has not been completed yet and in this way shows that she is maintaining her role as primary speaker.

4.2.2 Holds for turn suspension

Holds also occur in the regulation of turn taking when addressees intervene into the main line of action, which results in pushing the primary signer/speaker to suspend speakership to enable the addressee's intervention. Consequently, this kind of overlap leaves the main signer/speaker either to ignore the intervention or to momentarily suspend speakership. In (3), reproduced in Figure 6, Soo3 tells Soo4 how many constructions used to be made out of wooden material (Figure 6, picture 1). Soo3 is in the midst of his explanation, producing the two-handed sign TOO (picture 2), when Soo4 intervenes to bring details regarding the type of wood: light and thin. Soo3 repeats these lexical items (pictures 3–4) as to acknowledge Soo4's interruption and then attempts resuming his turn.

(3) LSFB: Hold during turn suspension

WOOD TOO (790 ms) LIGHT THIS AND GSIGN

"There were more wooden objects before. The wood has to be light and this, and..."

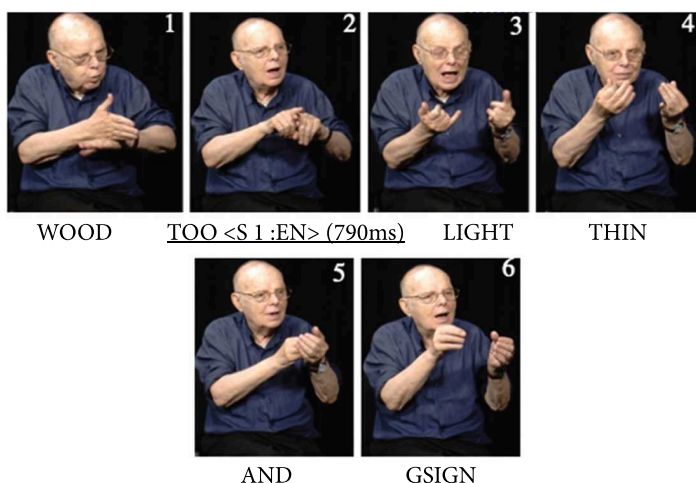


Figure 6. <S1:EN> for SUSP in LSFB, Task 15, Soo3 (06:11.746–06:15.206)

As Soo4 raises his hands in space to interrupt, Soo3's hands freeze retaining the orientation, location, and handshape of the end of the lexical sign TOO

(790 ms). This hold is released when Soo4's contribution is deemed sufficient by Soo3. At the end, Soo3 wishes to resume his story and does so by maintaining his hands on stage and by producing the sign AND accompanied by a repeated gesture (GSIGN) to redirect Soo4's attention to him (pictures 5–6 in Figure 6).

In Example (4), in BF, the overlapping talk results in the suspension of the speaker's turn (Coo3) and the freezing of her PU to allow the addressee to make a comment. Coo3 is telling her granddaughter that after playing pétanque, her whole body is sore. As she is about to add something, her granddaughter has jumped in to comment that it *is a lot of exercise* indeed, overlapping with Coo3's first PU (pictures 1–2 in Figure 7):

(4) *BF: Hold during turn suspension*

"Now <PALM-UP> (415 ms) (.) now <PALM-UP> you feel like you're getting old"

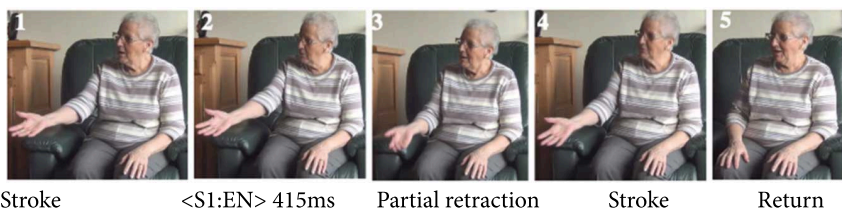


Figure 7. <S1:EN> for SUSP in CorpAGEst, S3, Coo3 (01:18.081–01:21.301)

The overlap makes Coo3's PU freeze for 415 ms. The repair of this sequence is initiated once the addressee finishes her comment, which coincides with Coo3's partial retraction phase (Figure 7, picture 3) and resumes her utterance by repeating the exact same gesture, a PU, restarting her speech with the same word she uttered before the interruption.

These interventions by Soo4 in (3) and the granddaughter in (4) outline the multiple back-and-forth of conversations. These examples make visible the case of manual holds allowing the insertion of a sequence into a main line of action. Furthermore, in performing holds, speakers and signers show that they have not yet completed their utterances. In keeping their hands on hold, both participants acknowledge their addressee's contribution as a point aside the main line of action, which is "interruptive to or inserted into [his] anecdote rather than as the beginning of a completely different activity: In this way, [they] manage to put aside [their] own project for the moment while allowing [their] coparticipant to contribute" (Cibulka, 2015: 460).

Such instances reveal relevant differences with holds occurring within the turn-taking system. If the holds performed by signers (Soo1 in (1) and Soo3 in (3))

and speakers (Foo4 in (2) and Coo3 in (4)) were to work as a unique turn-yielding mechanism, then the subsequent unfolding of the line of action would result in the immediate release of the signer's and speaker's hold as the next participant directly takes over the turn. This is not the case in neither of the examples above. Instead, the hold is maintained, and its release is not random thanks to the locally fine-tuned online coordination and monitoring of the signer/speaker-addressee partnership.

4.2.3 *Holds during collaborative word searching activities*

There are times when individuals suspend their utterance to search for what they wish to communicate, which, as a result, often implies that the hands stop for a certain timespan. This type of hold with a planning function represented 30% of all interactive holds in LSFB *vs.* 44% in BF. The following examples show how the momentary halt of a sign (and gesture) acts as a way for participants to seek help from addressees while searching for words, and the resulting interactional implications of this collaboration.

In (5), signers are engaged in a joint word search, or rather Soo2's utterance suspensions make Soo1 join the search. Soo2 talks about past kitchen amenities and how past kitchen stoves used to work with charcoal. Yet, she has difficulties recalling the sign COAL. This is expressed with a series of different manual holds that are going to serve as an invitation to Soo1 to actively participate in the process of providing the missing item. After several failed attempts, Soo1 shows Soo2 the sign for it, which is displayed in Figure 8.

- (5) *LSFB: Turn suspension during collaborative word searching activity*
 BEFORE PT:LOC <HOLD> (338 ms) COAL (534 ms) <HOLD> (434 ms)
 STOVE+ COAL [COAL (301 ms)]
 "Do you remember charcoal stoves?"

The first hold emerges in neutral space in front of Soo2's body (308 ms) after producing the locative pronoun without yet adopting the handshape of the sign COAL. Yet, as she is about to perform the conventional sign for COAL, her hands stop at the beginning of it (534 ms) signaling her hesitation (Figure 8, picture 4), and slightly change their orientation and remain motionless for 434 ms (picture 5). This last hold is accompanied by an interesting vague gaze direction that, together with the hold, adds meaning to the status of the word search activity: still pending. Then, Soo2 changes tactics and articulates the sign STOVE to provide Soo1 with a hint for the missing lexical item. Soo2 is going to repeat the sign STOVE twice (picture 6), immediately followed by placing once more her hands in the shape of the beginning of the sign. This hold is constituted of the beginning of the sign COAL and a simultaneous mouthing for the corresponding French word

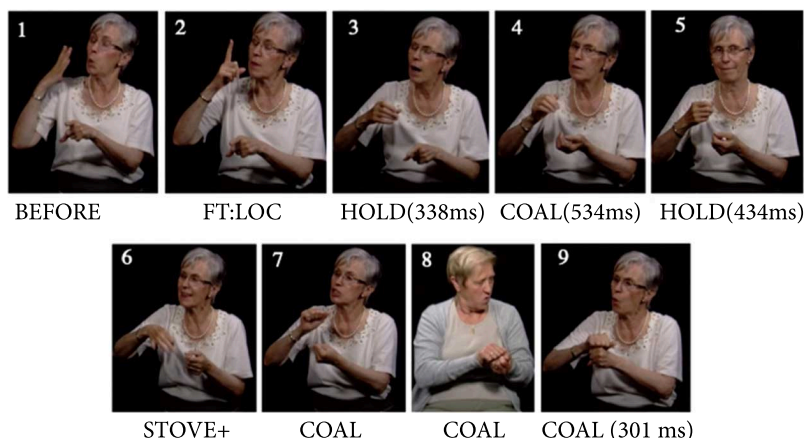


Figure 8. SUSP during word searching in LSFB, Task 15, Soo1 (07:02.554–07:09.059)

charbon (picture 7). Following all this information, Soo1 finally intervenes and shows Soo2 the end of the movement (picture 8) for the sign *COAL*, which Soo2 repeats five times as if to anchor the lexical item into her memory. Once given the conventional form, Soo2 resumes her story.

Example (6) in BF shows how the speaker, Foo4, is trying to tell Foo3 that everyone reads the same book and then discusses it in her book club. After uttering *we all read*, there is an unfilled pause in her speech of (0.5 s), and her hands stop for 690 ms. The manual suspension along with the disruptions in her speech and the addressed gaze are visible cues that inform her addressee she is having word trouble, which results in Foo3's intervention. As her addressee begins to complete her words, Foo4 finishes her utterance by releasing the hold and by reformulating Foo3's words more specifically: *the same book*, which can be seen in Figure 9.

- (6) BF: *Turn suspension during word searching activity*
 “We all read (.) the same book (690 ms)”

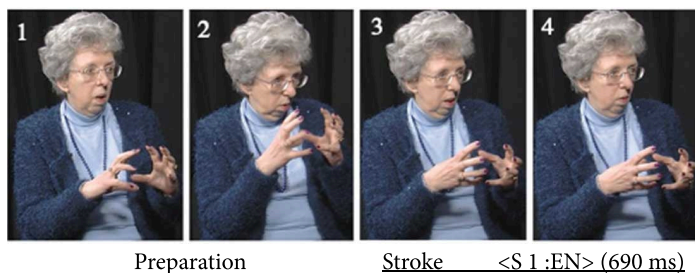


Figure 9. SUSP during word searching in FRAPé, Task 15, Foo4 (07:23.585–07:27.207)

Despite the differences in the kinds of holds observed above, participants (speakers and signers) still signal to their conversational partner that, by keeping their hands on stage, the main line of action is soon resuming. These holds serving a planning function bring out how participants deploy manual and non-manual strategies in word searching activities, which indicate to their addressee that they are planning parts of their utterance while seeking help from them, making the planning activity more communicative and interactive.

The instances discussed here provide compelling qualitative evidence that the planning process in speakers' and signers' discourses can be "other-oriented, more communicative, contributing to the fluency of the interaction" (Kosmala *et al.*, 2019: 5) and supports previous findings (see Graziano and Gullberg, 2018).

4.2.4 *Holds for monitoring addressees*

Dialogical exchanges are bilateral, and each participant is active, such as by monitoring not only the speaker/signer's actions but also the addressee's understanding and attention.

The next example in LSFB (7) is a continuation of the topic discussed in (1) where Soo2 is telling Soo1 about the effects those pills would have on the internal structure of the inner ear. She claims that they would make it possible to grow back cilia, inside the cochlea. Soo2 is going to clarify what she means by that by making a comparison with its shape, viz., the part that looks like a snail, as expressed in Figure 10.

(7) *LSFB: Hold for monitoring the addressee*

PILL.MEDICINE IN-1H PT: LOC+ LIKE SNAIL (1280 ms) CILIA

"Those pills would make it possible to grow back, inside the ear, inside the cochlea, you know the part in snail-shaped cilia"

As Soo2 produces the sign SNAIL, she stops her hands (Figure 10, pictures 6–7) to ensure that Soo1 understands what she is talking about. Soo2's suspension of her own signing shows thereby that she is attending to her addressee's needs, viz., the smooth following of the conversation and understanding of the topic. Additionally, throughout the sequence, Soo2 does not stop looking at Soo1 to ensure the good reception of the information.

Acknowledging the hold, Soo1 keeps Soo2 informed by producing a head nod as feedback. Once more, the fine-tune association of the hold and its release are temporally coordinated. In this case, the hold is seen as monitoring and not as a turn-hold strategy as the hands stop in mid-utterance production and not at the end of the turn, as in (1). In fact, the release of both holds bears similarities in the timing of their unfolding but the holds themselves differ in that the one presented in (1) displays a stronger projectional strength, as discussed in Groeber and

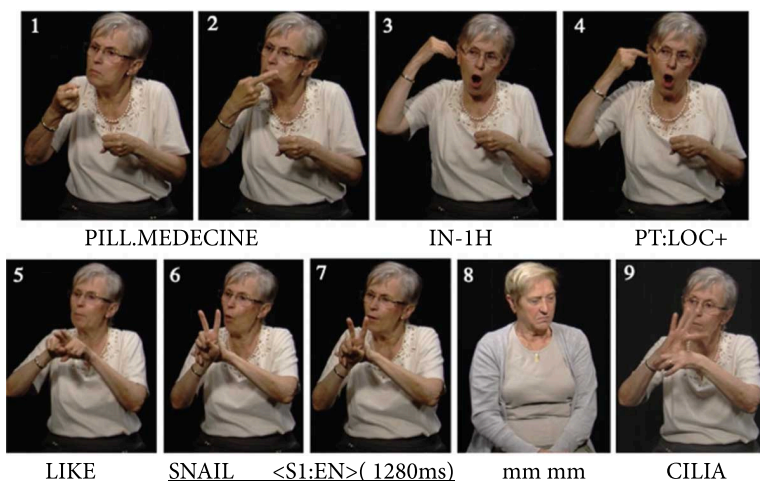


Figure 10. <S1:EN> for MONI in LSFB, Task 04, Soo2 (04:30.703–04:38.777)

Pochon-Berger (2014). The hold in (1), thus, has a stronger projection for occurring at the end of a turn projecting an answer to a question than the hold in (7) occurring in mid-utterance position to ensure Soo1's smooth understanding.

In BF, Example (8) illustrates Coo4 while telling her granddaughter a conversation she had with her son who told her he hoped she still played the piano. She then tells her granddaughter that for a while she was not able to play because of her fingers. This sequence is marked by very interesting attempts for Coo4 to establish and sustain joint attention through her use of gestural holds, as in Figure 11.

(8) *BF: Hold for monitoring the addressee*

"Because at some point I couldn't eh (751 ms) (.) my fingers were closed eh (516 ms) (.) look (1247 ms) (.) well this one was big like that (.) you see? (1980 ms)"

The first hold occurs when Coo4 brings her right hand to make a first attempt at establishing joint attention (Figure 11, pictures 1–2–3). She is trying to solicit her granddaughter's reaction by looking at her while producing this hold and the discourse particle *eh*. Without success, Coo4 resumes by producing a second gestural stroke (picture 4) and by maintaining its ending for 516 ms (picture 5).

For the remaining of the sequence, Coo4 brings her hands to make her addressee look at her fingers and sustains her gesture for 1247 ms as if to wait for her granddaughter to agree and/or manifest attention. Finally, Coo4 obtains some minimal feedback *yeah yeah*, which she understands as a signal showing following and, therefore, releases her holds. The sequence ends on the speaker trying



Figure 11. <S1:EN> for MONI in CorpAGEst, S3, Coo4 (03:46.891–03:57.305)

one last time to get her granddaughter to attend to her gesture (pictures 8–9). This time, she utters the words *you know* concurrent with her gestural hold of almost two seconds to prompt the addressee’s reaction, who provides yet another minimal feedback: *mh*.

In (8), the monitoring of the addressee represents a strenuous task where cooperation is difficult to create and maintain. Indeed, the addressee does not attend to the speaker’s speech nor gestures. This, in turn, results in the production of several holds and discourse particles such as *eh* and *you know* as attempts in seeking the addressee’s attention. Additionally, the speaker takes her addressee’s eye gaze aversion as a disruptive element she needs to address for the smooth unfolding of her story. As Clark and Krych (2004: 64) claim, “speakers monitor their addressees’ eye gaze, and when the addressees are not gazing in return, they may alter the course of their utterances to obtain the return gaze”, which is visible in the many monitoring strategies developed by Coo4.

5. Discussion and conclusion

This study adopted a comparative approach towards signed and spoken interaction to address the roles of manual holds in the interactional management of LSFb signers’ and BF speakers’ conversations. The findings present implications for the general organization of human language interaction and language theory. They are summarized below.

First, participants deploy manual holds to plan for upcoming discourse segments, such as during individual or collaborative word searches while simultaneously signaling that they are not yielding the turn (Navarretta, 2015). In practice, this allows participants “to re-establish themselves as speakers in a smooth and

quick manner and with minimal resources” (Groeber and Pochon-Berger, 2014: 14). Therefore, keeping the hands in space displays an action in progress that will soon be resumed once the word search activity has been resolved. One finding for this function was a floating index finger (<S₃:IN>) without grammatical value per se in the LSFB sample analyzed. By leaving their index in midair position, it seems cost effective and less risky in terms of speakership for the signer who needs less time for a potential (re-)activation of their next move (Cibulka, 2015; Mondada, 2007). This index can be seen as a means for filling this need in conversation. Moreover, research on gesture in spoken interaction (e.g., Esposito *et al.*, 2001; Navarretta, 2015) has found that during speech planning processes, hand gestures concurrent with English filled pauses involving fillers such as *uh*, *um* are accompanied by manual holds. Their role is interpreted as “parallel to that of the speech pauses with which they co-occur” (Navarretta, 2015: 55). The floating index by the LSFB signers might function as a filler in signed interaction (such as palm-up, see Volk and Herrmann, 2021). Although this practice for planning may appear as a specificity of SL discourse, more data need to be analyzed to corroborate this claim.

LSFB and BF participants also performed holds to seek a responsive action from addressees. In conversation, people closely monitor each other’s turn-at-talk (Goodwin, 2007) and this coordination is precisely negotiated on a moment-by-moment basis within the interaction. As a result, by means of manual holds, signers and speakers demonstrate their shared, online understanding of each other’s conducts while cautiously monitoring the progress of such actions. Such a pattern for holds has been previously attested in research on gesture (Mondada, 2007; Sikveland and Ogden, 2012) and SL interaction (e.g., Cibulka, 2015). Bavelas (1994: 203, citing personal communication with A. Kendon) points out that “when a gesture is held longer than would be needed simply to convey information, it becomes a kinetically held question”. A case in point was visible in (1) in LSFB where Soo1 executed a hold with a PU at the end of her utterance, closely monitoring for the addressee’s response. In turn, the return phase of the hand(s) exhibits the participant’s understanding of the addressee’s responsive action and can be seen as the completion of the action that was on hold. As Groeber and Pochon-Berger (2014) concur, it seems that the “intrinsic feature of holds embodies the non-termination, or rather suspension, of a current course of action, hence allowing for the on-line management of relevant courses of action”, or what Cibulka (2015: 19) has labeled a “not-yet-ness” or “bound-to-be-closed-ness”.

Additionally, the examples reveal the fine-tuned timing of the signer/speaker’s hold release, precisely coordinated with the addressee’s response. This shows that addressees are de facto active in the co-construction of meaning in interaction, and not passive recipients as advocated in unilateral models on language pro-

cessing. Instead, holds sustain collaborative accounts of language by highlighting the dynamic back-and-forth of conversation (Beukeboom, 2009). Future research should investigate the effects of holds on addressees and the impact on the subsequent trajectories of conversation.

The most striking difference concerned turn suspension, occurring when addressees intervened in the main line of action resulting in overlaps. While this study did not systematically investigate the timing and proportion of overlaps in signed interaction (see de Vos *et al.*, 2015; Girard-Groeber, 2015), the examples revealed that overlapping signing was organized and signers continued “while simultaneously signing for longer stretches than it ha[d] been shown for spoken interaction” without resulting in conversational trouble (Girard-Groeber, 2015: 211). This last aspect should be the topic of future comparative work.

The analysis of holds has important ramifications for language theory and raises relevant questions regarding the structure of the human turn-taking engine. Linguists interested in interaction often describe conversations as jointly constructed. This idea calls into question who ‘owns’ the ideas expressed in the turns. When people meet face-to-face, the meeting of the minds can be seen through the participants’ bodies. The raised hands in midair position between two co-participants activate the space between them – they do not contribute substantive propositional content (McNeill, 1992). Rather, they signal attunement, a visible presentation of intersubjectivity (Lepeut and Shaw, 2022; Sikveland and Ogden, 2012). Holds at first glance may appear as moments of communicative insignificance in the eyes of the researcher but also in those of the beholder. As Kendon (1978) pointed out and as reminded by Cibulka (2015), language users themselves perform certain actions that make them stand out as meaningful (*viz.*, strokes) and others that appear less significant (*viz.*, holds). Regardless, these moments of holds and their release, whether during overlaps or in courses of action for planning and monitoring purposes, emerge directly within and from the local contingencies of the interaction itself, whether signed or spoken. They invite us to reconsider the organization of turns-at-talk as flexible rather than fixed, interactionally negotiated rather than without any communicative significance.

With the analytical focus chosen for this study, the results draw an initial picture of the interactional roles of manual holds in signed and spoken interaction. Indeed, it is worth emphasizing that there are a few limitations regarding the number of participants and the kind of discourse analyzed. Whether the same panorama of functions for manual holds can be found with a larger sample of participants (first acquaintances, male individuals, younger people) in other contexts (storytelling) and for other kinds of bodily actions (e.g., non-manuals) remain an open question that requires further investigation.

Through the analyses in the language samples under study, LSFB and BF, the findings challenge the common status quo that meaning making in language is inherently propositional and embodied in the gesture/sign stroke. Aligning with arguments developed earlier, further work should adopt a holistic approach to language use (see Ferrara, 2020; Shaw, 2019). This position advocates for a view of language where participants rely on semiotic resources “independently of their nature, to make sense of their actions” (Groeber and Pochon-Berger, 2014:14). It is therefore by letting aside the initial binary between the sign vs. gesture that scholars discover how individuals in SLs and SpLs choose to draw on similar strategies in specific interactional contexts to manage their conversations.

Ultimately, this paper adds supporting evidence in this direction. All in all, conducts that might have been seen as mere parts of the excursion of a gesture/sign do work as efficient tools to achieve several interactive goals in conversation. It is hoped that these results have shown the legitimacy for these other (less) attended forms to be further considered as part of the meaningful practices used by individuals, and how their investigation across languages and modalities will ultimately lead to a better understanding of the human multimodal ability for doing language.

References

- Baker, Ch. 1977. Regulators and Turn-Taking in American Sign Language Discourse. In *On the Other Hand*, L.A. Friedman (ed.), 215–236. New York: Academic Press.
- Bavelas, J.B. 1994. Gestures as Part of Speech: Methodological Implications. *Research on Language and Social Interaction* 27(3): 201–221. https://doi.org/10.1207/s15327973rlsi2703_3
- Bavelas, J.B., Chovil, N., Lawrie, D. and Wade, A. 1992. Interactive Gestures. *Discourse Processes*, 15: 469–489. <https://doi.org/10.1080/01638539209544823>
- Beukeboom, C. 2009. When Words Feel Right: How Affective Expressions of Listeners Change a Speaker's Language Use. *European Journal of Social Psychology* 39: 747–756. <https://doi.org/10.1002/ejsp.572>
- Bolly, C. T., and Crible, L. 2015. From Context to Functions and Back Again: Disambiguating Pragmatic Uses of Discourse Markers. Paper presented at the Fourteenth International Pragmatics Conference (IPra): Anchoring Utterances in Co(n)text, Argumentation, Common Ground. Antwerp, Belgium, 26–31 July 2015.
- Bolly, C. T. and Boutet, D. 2018. The Multimodal CorpAGest Corpus: Keeping an Eye on Pragmatic Competence in Later Life, *Corpora* 13(2): 1–39. <https://doi.org/10.3366/cor.2018.0151>
- Cibulka, P.M. 2015. On How to Do Things with Holds: Manual Movement Phases as Part of Interactional Practices in Signed Conversation. *Sign Language Studies* 16(4): 447–472. <https://doi.org/10.1353/sls.2016.0015>
- Clark, H. H. and Krych, M.A. 2004. Speaking while Monitoring Addressees for Understanding. *Journal of Memory and Language* 50: 62–81. <https://doi.org/10.1016/j.jml.2003.08.004>

- De Stefani, E. 2005. La Suspension du Geste comme Ressource Interactionnelle. *Proceedings of the Second International Society for Gesture Studies Conference (ISGS 2005) – Interacting bodies*. Lyon, France, 15–16 June 2005. Available at http://icar.cnrs.fr/ecole_thematique/contacti/documents/de_stefani/DeStefani2007.pdf
- de Vos, C., Torreira, F. and Levinson, S. C. 2015. Turn-Timing in Signed Conversations: Coordinating Stroke-to-Stroke Turn Boundaries. *Frontiers in Psychology* 6(268): 1–13. <https://doi.org/10.3389/fpsyg.2015.00268>
- Duncan, S. Jr. 1972. Some signals and rules for taking speaking turns in conversations. *Journal of Personality and Social Psychology* 23(2): 283–292. <https://doi.org/10.1037/h0033031>
- Emmorey, K. 1999. Do Signers Gesture? In *Gesture, Speech, and Sign*, L. Messing and R. Campbell (eds), 133–159. New York: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780198524519.003.0008>
- Enfield, N. J. 2009. *The Anatomy of Meaning: Speech, Gesture, and Composite Utterances*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511576737>
- Esposito, A., McCullough, K. E. and Quek, F. 2001. Disfluencies in Gesture: Gestural Correlates to Filled and Unfilled Speech Pauses. *Proceedings of IEEE International Workshop on Cues in Communication*. Kauai, Hawaii, 9 December 2001.
- Ferrara, L. 2020. Some Interactional Functions of Finger Pointing Actions in Signed Language Conversations. *Glossa: A Journal of General Linguistics* 5(1):88. 1–26. <https://doi.org/10.5334/gjgl.993>
- Floyd, S., Manrique, E., Rossi, G. and Torreira, F. 2016. The Timing of Visual Bodily Behavior in Repair Sequences: Evidence from Three Languages. *Discourse Processes* 52: 1–30. <https://doi.org/10.1080/0163853X.2014.992680>
- Girard-Groeber, S. 2015. The Management of Turn Transition in Signed Interaction through the Lens of Overlaps. *Frontiers in Psychology* 6(741): 1–19. <https://doi.org/10.3389/fpsyg.2015.00741>
- Goldin-Meadow, S. and Brentari, D. 2017. Gesture, Sign, and Language: The Coming of Age of Sign Language and Gesture Studies. *Behavioral and Brain Sciences* 39: 1–60. <https://doi.org/10.1017/S0140525X15001247>
- Goodwin, C. 2007. Participation, stance and affect in the organization of activities. *Discourse & Society* 18: 53–73. <https://doi.org/10.1177/0957926507069457>
- Goodwin, M. H. and Goodwin, C. 1986. Gesture and coparticipation in the activity of searching for a word. *Semiotica* 62(1/2), 51–75.
- Graziano, M. and Gullberg, M. 2018. When Speech Stops, Gesture Stops: Evidence from Developmental and Crosslinguistic Comparisons. *Frontiers in Psychology* 9(879):1–17. <https://doi.org/10.3389/fpsyg.2018.00879>
- Groeber, S. and Pochon-Berger, E. 2014. Turns and Turn-Taking in Sign Language Interaction: A Study of Turn-Final Holds. *Journal of Pragmatics* 65: 121–36. <https://doi.org/10.1016/j.pragma.2013.08.012>
- Johnston, T. 2010. From Archive to Corpus: Transcription and Annotation in the Creation of Signed Language Corpora. *International Journal of Corpus Linguistics* 15(1): 106–131. <https://doi.org/10.1075/ijcl.15.1.05joh>
- Kendon, A. 1978. Differential Perception and Attentional Frame in Face-to-Face Interaction: Two Problems for Investigation. *Semiotica* 24(3–4): 305–316. <https://doi.org/10.1515/semi.1978.24.3-4.305>
- Kendon, A. 2004. *Gesture. Visible Actions as Utterances*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511807572>

- Kendon, A. 2008. Some Reflections on the Relationship Between 'Gesture' and 'Sign'. *Gesture* 8(3): 348–366. <https://doi.org/10.1075/gest.8.3.05ken>
- Kita, S., van Gijn, I. and van der Hulst, H. 1998. Movement Phases in Signs and Co-Speech Gestures, and their Transcription by Human Coders. In *Gesture and Sign Language in Human-Computer Interaction*, I. Wachsmuth and M. Fröhlich (eds), 23–35. Berlin: Springer. <https://doi.org/10.1007/BFb0052986>
- Kosmala, L., Candea, M. and Morgenstern, A. 2019. Synchronization of (Dis)fluent Speech and Gesture. *Proceedings of the Sixth Gesture and Speech in Interaction Conference (GESPIN 2019): A Multimodal Approach to (Dis)fluency*. Paderborn, Germany, 11–13 September 2019. 56–61.
- Lepeut, A. 2020. Framing Language Through Gesture: Palm-Up, Index Finger-Extended Gestures, and Holds in Spoken and Signed Interactions in French-Speaking and Signing Belgium. PhD Thesis, University of Namur.
- Lepeut, A. and Shaw, E. 2022. Time is Ripe to Make Interactional Moves: Bringing Evidence from Four Languages across Modalities. *Frontiers in Communication* 7: 1–18. <https://doi.org/10.3389/fcomm.2022.780124>
- Liddell, S.K. 2003. *Grammar, Gesture, and Meaning in American Sign Language*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511615054>
- Manrique, E. and Enfield, N.J. 2015. Suspending the Next Turn as a Form of Repair Initiation: Evidence from Argentine Sign Language. *Frontiers in Psychology* 6(1326):1–21. <https://doi.org/10.3389/fpsyg.2015.01326>
- McNeill, D. 1992. *Hand and Mind: What Gestures Reveal about Thought*. Chicago: University of Chicago Press.
- Mesch, J. 2016. Manual backchannel responses in signers' conversations in Swedish Sign Language. *Language & Communication* 50: 22–41. <https://doi.org/10.1016/j.langcom.2016.08.011>
- Meurant, L., Lepeut, A., Vandenitte, S. and Lombart, C. (submitted). Spoken and Sign Languages Hand in Hand. Building and Using Parallel and Directly Comparable Corpora of LSFB and Belgian French. *Corpora*.
- Meurant, L. 2015. *Corpus LSFB. First Digital Open Access Corpus of Movies and Annotations of French Belgian Sign Language (LSFB)*. University of Namur, LSFB-Lab. Available at <http://www.corpus-lsfb.be>
- Meurant, L. and Sinté, A. 2013. Towards a Corpus of French Belgian Sign Language (LSFB) Discourses. In *Across the Line of Speech and Writing Variation, Corpora and Language in Use*, C.T. Bolly and L. Degand (eds), 199–212. Louvain-La-Neuve: Presses Universitaires de Louvain.
- Mondada, L. 2007. Multimodal Resources for Turn-Taking: Pointing and the Emergence of Possible Next Speakers. *Discourse Studies* 9(2): 194–225. <https://doi.org/10.1177/1461445607075346>
- Müller, C. 2018. Gesture and Sign: Cataclysmic Break or Dynamic Relations? *Frontiers in Psychology* 9(1651):1–20. <https://doi.org/10.3389/fpsyg.2018.01651>
- Navarretta, C. 2015. The Functions of Fillers, Filled Pauses and Co-Occurring Gestures in Danish Dyadic Conversations. *Proceedings of the Third European Symposium on Multimodal Communication*. Dublin, Ireland, 17–18 September 2015. 55–61.
- Notarrigo, I. 2017. Les Marqueurs de (Dis)Fluence en Langue Des Signes de Belgique Francophone (LSFB). PhD Thesis, University of Namur.

Özyürek, A. and Woll, B. 2019. Language in the Visual Modality: Co-Speech Gesture and Sign Language. In *Human Language: From Genes and Brain to Behavior*, P. Hagoort (ed.), 67–83. Cambridge: MIT Press.

Parisot, A.-M. 1998. Description de l’Organisation du Système des Tours de Parole en Conversation LSQ. Master’s Dissertation, Université du Québec à Montréal.

Park-Doob, M.A. 2010. Gesturing through Time: Holds and Intermodal Timing in the Stream of Speech. PhD Thesis, University of California, Berkeley.

Shaw, E. 2013. Gesture in Multiparty Interaction: A Study of Embodied Discourse in Spoken English and American Sign Language. PhD Thesis, Georgetown University.

Shaw, E. 2019. *Gesture in Multiparty Interaction*. Washington: Gallaudet University Press.

Sikveland, R. O. and Ogden, R. A. 2012. Holding Gestures across Turns: Moments to Generate Shared Understanding. *Gesture* 12(2): 166–199. <https://doi.org/10.1075/gest.12.2.03sik>

Stokoe, W. C. 1960. *Sign Language Structure: An Outline of the Visual Communication Systems of the American Deaf*. New York: University of Buffalo.

Vermeerbergen, M. and Nilsson, A.-L. 2018. Introduction. In *A Bibliography of Sign Languages, 2008–2017*, A. Aarssen, R. Genis and E. van der Veken (eds), 9–24. Leiden: Brill.

Vermeerbergen, M. and Demey, E. 2007. Sign + Gesture = Speech + Gesture? Comparing Aspects of Simultaneity in Flemish Sign Language to Instances of Concurrent Speech and Gesture. In *Simultaneity in Signed Languages: Form and Function*, M. Vermeerbergen, L. Leeson and O. Crasborn (eds), 257–282. Amsterdam: John Benjamins. <https://doi.org/10.1075/cilt.281.12ver>

Vermeerbergen, M. 2006. Past and Current Trends in Sign Language Research. *Language & Communication* 26: 168–192. <https://doi.org/10.1016/j.langcom.2005.10.004>

Wittenburg, P., Brugman, H., Russel, A., Klassmann, A. and Sloetjes, H. 2006. ELAN: A Professional Framework for Multimodality Research. *Proceedings of the Fifth International Conference on Language Resources and Evaluation (LREC ’06)*. Genoa, Italy, 22–28 May 2006.

Appendix A

1. Transcription conventions

Speech Annotation for CorpAGest & FRAPé Corpora

Label	Meaning
house	Transcription of words in line with conventional spelling rules
<G>	Onset-Offset boundaries of a gesture
LH/RH	Left Hand/Right Hand
[]	Onset-Offset of overlapping talk
(.) and (2.4)	(.) for micro-pauses less than 200 ms vs. (2.4.) stands for “2 seconds and 400 milliseconds”
?	Intonation marker in questions

Label	Meaning
/	False starts
(.h) vs. (h)	Breathing in: inhale vs. exhale
((laugh))	Indicating laughter
(xxx)	Inaudible

See Bolly, C.T. & Kairet, J. (2016). CorpAGEst (2013–2015): A corpus-based multimodal approach to the pragmatic competence of the elderly. *Speech Annotation Guidelines, version 1.3* (last accessed on July 16, 2018).

Gloss Annotation for the LSFB Corpus and Guidelines

Label	Meaning
<G>	Onset-Offset boundaries of a gesture
<PALM-UP> (909 ms)	PU is on hold for 909 ms
LH/RH	Left Hand, Right Hand
++	Indicators of the number of sign repetition (here: twice)
[]	Onset-Offset of overlapping signing/speaking
DEAF-CLUB	Gloss for a sign consisting of two words
WANT-NOT	Gloss for sign negation
FS:MANDE	Finger spelled sign for MANDE (name of a village)
PT:PRO ₁	Pointing sign for 1st person singular
PT:DET	Pointing sign for determiners
PT:LOC	Pointing sign establishing a locus
PT:POSS	Pointing sign for possessing personal pronoun
PT:LBUOY	Pointing BUOYS
DS	Depicting signs

See Johnson's annotation conventions for the Auslan Corpus: Johnston, T., Auslan Corpus Annotation Guidelines, available at http://media.auslan.org.au/attachments/Johnston_AuslanCorpusAnnotationGuidelines_14June2014.pdf (Last accessed on July 16, 2018).

Appendix B


	Interactive function [Funct-C]	Definition	Paraphrases	Extra references
INTERPERSONAL DOMAIN OF LANGUAGE > Interaction	Agreeing [AGR] (incl. Feedback)	It expresses understanding in terms of an agreeing response or indicates approval of what has previously been said. It excludes positive responses that are content-based like “yes” and semantically linked to an open question.	“I agree”, “indeed”, “okay”, “I understand”	Ferrara (under rev.)
	Common Ground [COGR]	It expresses the participant’s understanding that the information being conveyed is shared by the addressee. It includes Bavelas’ “shared information” gestures, which mark information that the addressee probably already knows. It also includes “general citing” gestures revealing that the point the speaker is now making had been contributed by the addressee.	“as you know” or “as you said earlier”	Holler and Bavelas (2017)
	Delivery [DELIV]	It consists of the presentation of a topic as new or salient to the addressee. For instance, the palm-up delivery with the giving/offering function.	“Here’s my point”	Kendon (2004), Müller (2004)
	Digression [DIG]	It marks information that should be treated by the addressee as an aside from the main point, as part of a parenthesis.	“by the way”, “back to the main point”	Bavelas et al. (1992, 1995)
	Disagreeing [DIASGR]	It expresses a disagreeing response. This function will not be coded when it IS expressed by a response signal like “no”.	“I disagree”, “no”	

	Interactive function		Paraphrases	Extra references
	[Funct-C]	Definition		
	Elliptical [ELL]	It marks information that the addressee should imagine for himself/herself; the speaker will not provide further details.	“And tilings like that”, “or whatever”	Bavelas et al. (1992, 1995)
	Monitoring [MONI]	It expresses cooperation or checks the addressee's reaction for understanding and attention by an explicit address to the interlocutor. It includes Bavelas': (1) “acknowledgement” of the addressee's response (viz., the speaker saw or heard that the addressee understood what had been said; (2) “seeking agreement” asks whether the addressee agrees/disagrees with the point made; and (3) “seeking following” asks whether the addressee understands what is said.	“I see that you understood me”, “do you agree?”, “you know?”, “eh?”	Bavelas et al. (1992, 1995)
	Planning [PLAN]	It indicates that the participant is making a cognitive effort in editing a term or in the processing of speech (e.g., hesitation, word searching, and pause fillers). Planning can be interactively designed as the participant can request help from the addressee during word search activities	“euh”	Goodwin and Goodwin (1986)
	Turn Opening [TURN-OPEN]	The item opens a new turn, in which case it indicates floor-taking, or a new sequence within the same topic, namely an introduction to an enumeration or a narrative sequence.		Bavelas (1992, 1995)

	Interactive function		Paraphrases	Extra references
	[Funct-C]	Definition		
	Turn Giving [TURN-GIVE]	Turn yielding includes Bavelas' "giving turn" and "leaving turn open". It is used to hand over the turn.	"your turn"	Bavelas (1592, 1995)
	Turn Holding [TURN-HOLD]	The current participant produces a given gesture/ sign, then holds it without relinquishing the floor while the other participant responds. This function has a strong projection.		Groeber and Pochon-Berger (2014)
	Turn Closing [TURN-CLOSE]	It indicates the intention to close a list, a thematic unit, or a turn. It must be in final or autonomous position.	"This topic is now closed"	Bavelas (1992, 1995)
	Suspension [SUSP]	It indicates a suspension of the main participant's turn because the addressee interrupts the main frame of speakership. L1 then stops, suspending his/her turn.	Hold gesture	Cibulka (2015, 2016)

ELAN controlled vocabulary with the description for the Function Tier.

Address for correspondence

Alysson Lepeut
NaLTT-LSFB-Lab
Université de Namur
Rue de Bruxelles, 61
5000 Namur
Belgique
alysson.lepeut@unamur.be
 <https://orcid.org/0000-0002-0271-1282>

Publication history

Date received: 20 December 2020

Date accepted: 6 November 2021

Published online: 3 June 2022