What Can Discourse Markers Tell Us about Genres and Vice Versa? A Corpus-Driven Study of French Belgian Sign Language (LSFB)

Qu'est-ce que les marqueurs de discours peuvent nous dire sur les genres et réciproquement ? Une étude de corpus sur la langue des signes de Belgique francophone (LSFB)

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1. Introduction

1   The study of sign languages (SLs) as natural languages started in the second half of last century (Stokoe, 1960; Stokoe, Casterline & Croneberg, 1976). Phonology and morpho-syntax were the first linguistic levels to receive the attention of scholars, and the interest in discourse started later. Although the advent of SL corpora in the 2000s greatly contributed to the development of discourse studies as large datasets became available, there is still little research on genres and discourse markers (DMs) as compared to other topics. The genres that are best described in the SL literature so far include conversation (e.g., Baker, 1977) and narration (e.g., Winston, 1999), but there are still very few studies that compare genres (e.g., Meurant & Sinte, 2016).

2   DMs have been investigated in American SL (ASL) (Roy, 1989; McKee, 1992; Metzger & Bahan, 2001; Hoza, 2011), Venezuelan SL (LSV) (Pérez, 2006) and Spanish SL (LSE) (Villameriel, 2008, 2010). If we look into the items examined in each paper, we can roughly divide these publications into those that take an onomasiological approach (i.e., all discourse relations are identified, as in the studies of LSV and LSE) and those that take a semasiological approach (i.e., they focus on a closed list of specific markers, as in the studies of ASL). McKee (1992) is in between the two approaches, as she tackled

all DMs expressing footing shifts; that is, changes in the "speakers' voice". Regardless of the approach, these seven papers are restricted to one genre: lectures in Roy (1989) and McKee (1992), a conversation in Metzger & Bahan (2001) and narratives in Pérez (2006) and Villameriel (2008, 2010). Furthermore, the functional description of DMs is frequently less fine-grained than in other papers tackling DMs in spoken languages (SpLs).

3   This paper aims to contribute to bridging these two gaps in the SL literature. We focus on three DMs—namely list buoys, PALM-UP[1] and SAME—in French Belgian SL (LSFB), which is the natural language of deaf and deafblind people in Brussels and Wallonia (the Southern region of Belgium). The choice of these three items was motivated by their different degrees of conventionalisation in LSFB and their existence in other SLs (see section 2), which will allow for future cross-linguistic research and advancements in this unexplored field. The goals of the study are threefold: (i) to investigate the distribution of the three DMs across genres, (ii) to examine their functions using different degrees of granularity, and (iii) to analyse whether some types of discourse relations are attracted by a particular genre.

4   In order to achieve these goals, we follow a corpus-driven approach and use a protocol designed for the annotation of DMs in oral data (Crible, 2017; see sub-section 3.2). This protocol defines DMs as a grammatically heterogenous category including coordinating conjunctions (e.g., *and*), adverbs (e.g., *also*), verbal phrases (e.g., *I mean*), subordinating conjunctions (e.g., *because*), pronouns (e.g., the French *quoi*), adjectives (e.g., the French *bon*), noun phrases (e.g., *sort of*), prepositional phrases (e.g., *in fact*) and interjections (e.g., *yeah*). The core features of DMs are syntactic optionality, non-truth-conditionality and constraining effects on inference mechanisms in interpretation processes. As a highly polyfunctional category, DMs can signal discourse relations, make explicit the structural sequencing of discourse segments, express the speaker's meta-comment on his/her phrasing or contribute to interpersonal collaboration (Crible, 2017, p. 337).

5   The three core features of this comprehensive definition can be found in the use of list buoys, PALM-UP and SAME in signed discourse (see section 2), whereas their functions are to be identified in this paper (see section 4).

2. Theoretical background on the three discourse markers

6   List buoys were first described in ASL by Liddell (2003) as numeral signs that are held in one hand while the other keeps on signing or refers to the digits of the list buoy. They work at discourse level (i.e., ordering sets or making associations), but the author does not specify whether or not they function as DMs. An example of a list buoy is shown in Figure 1. The signer is articulating a two-digit list buoy with her left hand and her right hand touches the second item of the list.

Figure 1. – Example of list buoy.

7   Villameriel (2008), going one step further, suggests that list buoys may well be DMs. He illustrates their form in LSE and hypothesises that they could be the equivalents of sequencing DMs in Spanish such as *en primer lugar* (firstly), *en segundo lugar* (second), etc., calling for future research on this topic.

8   In LSFB, list buoys may also have this sequencing function, as shown in (1).[2] The two tokens of the list buoy present the core features of DMs: optionality (they can be removed and the clauses remain syntactically complete), non-truth-conditionality (they do not alter the truth conditions of the propositions) and constraining inference (they make explicit the order in which things need to be done).

(1)
<LIST-BUOY:ONE> [WOOD NAIL MUST TAKE] **<LIST-BUOY:TWO>** [TAKE SAW]
'**First**, you need to take a nail and a piece of wood. **Second**, you take a saw.'

(LSFB Corpus, session 21, task 15, signer S045, 01:42–01:48)

9   PALM-UP is articulated with open lax hands with the palms facing upwards in front of the signer, as in Figure 2. This form can be one-handed or two-handed.

Figure 2. – Example of PALM-UP.

10   Hoza (2011) identifies the following DM functions for PALM-UP in ASL: pause filler (indicating the boundary between segments of discourse), indicator of a shift in discourse (change in perspective from reported speech to direct speech), marker of coherence (when there is a digression), turn-taking regulator (offering the floor or encouraging the addressee to go on talking) and mitigator of face threats (especially in requests). The functions of pause filler and turn-taking regulator have also been reported in other SLs such as New Zealand SL (McKee & Wallingford, 2011) and Norwegian SL (Amundsen & Halvorsen, 2011). These four authors also found that PALM-UP has connective functions and underline the need of a closer analysis from the perspective of DMs.

11   Some of these DM uses of PALM-UP can be found in LSFB. In (2), this form—which is used to offer the floor to the other signer—presents the three core features of DMs mentioned before: it is syntactically optional, non-truth-conditional and lets the addressee infer that s/he can take the floor.

(2)
[HAVE ONE A-LITTLE PT:PRO1] **<PALM-UP>**
'It has happened to me, **you see**?'

(Corpus LSFB, session 21, task 4, signer S045, 06:41–06:43)

12   Finally, SAME is articulated with the two index fingers moving contralaterally until they contact each other in front of the signer. This sign (illustrated in Figure 3) exists in several SLs, such as British SL[3] and ASL.[4]

Figure 3. – Example of SAME.

13   To the best of our knowledge, the only source that describes some morpho-syntactic uses of this sign is the Australian SL SignBank.⁵ In LSFB, SAME is mostly used as an adjective meaning "likeness" and as an adverb meaning "also" or "as".⁶ These adverbial uses may have DM functions, as illustrated in (3). SAME is a DM because it is not syntactically obligatory, does not alter the truth conditions of the proposition and makes explicit that the discourse relation to infer is an addition.

(3)
[HAVE SEVERAL BERCHEM COME NAMUR] **<SAME>** [PT:LOC CHARETTE HAVE SEVERAL]
'There are several people from Berchem who have come to Namur. **And** there are several people from La Charette.'

(Corpus LSFB, session 2, task 11, signer S003, 04:49–04:14)

14   The choice of these three DMs was motivated by their different degrees of conventionalisation in LSFB, which allows us to take the first steps towards a comprehensive description of DMs in a SL. Following Johnston (2016), SAME is a fully lexical sign (i.e., a token which is conventionalised in terms of form and meaning, so it could be listed in a dictionary), list buoys are partly lexical signs (i.e., tokens which have conventionalised components in their form, but whose meaning is highly dependent on context; this is why they cannot be listed in a dictionary) and PALM-UP is a non-lexical sign (i.e., it is not a fully lexical sign with a specific meaning and is used by the surrounding SpL community as a co-speech gesture). Furthermore, the three forms exist in different SLs as mentioned earlier, so this paper will set the baseline for future cross-linguistic research on the use of these forms from the point of view of DMs.

3. Methodology

3.1. Dataset

15   The dataset analysed in this paper was extracted from the LSFB Corpus (Meurant, 2015), which is the reference corpus of this language. It contains dialogues of different deaf signers, who were invited in pairs to the studio based at the Université de Namur for the recordings to take place. A deaf moderator guided the dialogues by asking each pair of signers to talk about the same list of questions and tasks.

16   The four questions/tasks selected for this study aimed to elicit four different types of dialogues belonging to the argumentative, explanatory, narrative and metalinguistic genres (see Table 1). This classification of dialogues needs to be understood as flexible. Each dialogue has a set of features that are characteristic of a particular genre (e.g., reformulations in explanatory dialogues in order to describe a new concept or declarative sentences in argumentative dialogues in order to present arguments). However, dialogues may sometimes have sequences that belong to another genre. For instance, there may be narrative sequences in the argumentative genre if the signer is supporting his/her argument using a personal experience or argumentative parts in the metalinguistic genre if at some stage signers have different points of view about sign variation.

17   The definition of genres used in this paper follows Adam (2011). In the argumentative dialogue, signers gave their point of view about the differences and similarities between deaf and hearing culture and supported their claims using arguments. In the explanatory dialogue, signers presented an activity or a hobby to the other signer informing him/her about the actions and materials needed. In the narrative dialogue, signers recounted a childhood memory, presenting a chronology of events starting from an initial situation and ending into a final situation. Lastly, signers talked about LSFB variations depending on the region, age group and other sociolinguistic variables in the metalinguistic dialogue. This genre does not appear in Adam (2011). Although it could be a subtype of the explanatory genre, it was thought to be necessary for the study of LSFB as it witnesses the specificities of deaf people's productions when they talk about their language.

Table 1. – Description of the LSFB dataset.

Genres	Title	Duration (all signers included)
Argumentative dialogue	Deaf culture vs hearing culture	20'51"
Explanatory dialogue	Hobby, job, passion	23'05"
Narrative dialogue	Past memory	22'51"
Metalinguistic dialogue	Variations in LSFB	21'54"

18   These data were produced by six deaf signers, three men and three women. All of them acquired LSFB before the age of seven. Since the LSFB Corpus informants belong to

different age groups, we selected a pair from each group (18–29, 30–49 and 50–85 years old) in order to be representative about this variety. In total, the recordings last 1 hour and 30 minutes and there is a balance in terms of duration for each genre (also, the duration for each pair is roughly similar). The annotation files contain 10,066 ID-glosses, i.e., words of the surrounding SpL that are uniquely and consistently used to label a sign in the corpus (Johnston, 2016).

19   The size of the sample is comparable to previous studies using spoken data (e.g., about 10,000 words in Taboada & Gómez-Gónzalez, 2012) and is sufficient to obtain a substantial number of occurrences, given the high frequency of use of these tokens (PALM-UP and SAME are in the top ten most frequent ID-glosses of the LSFB Corpus). Furthermore, our dataset is fairly large in comparison to those used in previous studies such as Roy (1989) and Metzger & Bahan (2001), who analysed the DMs NOW and NOW-THAT in 5 minutes of data and the DM FINE in 35 seconds of data, respectively. The number of signers analysed is similar to McKee (1992) and Villameriel (2008, 2010), who took 7 and 8 signers respectively but did not follow a two-step process for the functional description (see the next sub-section).

3.2. Annotation

20   The hand activity in the video files was transcribed by trained deaf annotators using ELAN. In the second stage of annotation, we focused on the functional description of the three DMs which consists of different levels according to Crible's (2017) protocol.

21   The first level is the *domain.* It is a large category which puts together functions that share properties such as linking states of affairs in the world and semantic relations between real events (*ideational domain*), expressing subjective or metadiscursive discourse relations (*rhetorical domain*), structuring discourse segments (*sequential domain*) and managing the exchange between signers (*interpersonal domain*). The second level is the *functions*, which are determined by the surrounding discourse context. While the *domain* gives information about the general type of discourse relation expressed by the DM, the *function* makes explicit the specific coherence relation. Furthermore, two domains and two functions can be assigned to a particular token, as in (4). The DM *d'ailleurs* in French ("by the way" in English) is used to express metadiscursive discourse relations (i.e., *rhetorical domain*), particularly introducing a *comment* and marking *emphasis* (which are the functions).

> (4)
> "c'était euh c'était la fête, une fête **d'ailleurs** qui s'est euh pérennisée"
> 'it was er it was a big party, a party by the way which was er endless'

22   Annotating the domain and the function allows us to have different degrees of granularity in the description of tokens, which is particularly useful when studying the distribution of highly polyfunctional DMs across genres. In Table 2, we present an outline of the two levels of annotation with the definition of the functions and examples copied from Crible (2017).

Table 2. – Domains, functions, definitions and examples (Crible, 2017).

Domains	Functions

Ideational	*Cause*: the DM introduces the reason why something happened. (5) "they do struggle ***because*** sometimes it's their first experience"	
	Consequence: the DM introduces the result of a previous discourse segment. (6) "we also wanted to be a facility which had maximum access, ***so*** we've built it with maximum disability access as well"	
	Temporal: the DM expresses that two events happened synchronously or asynchronously. (7) "and ***after*** Theo was born then, did your husband have…"	
	Contrast: the DM highlights the difference between two discourse segments that share a predicate or a property. (8) "you can do this in a concrete sense ***and*** you can do it in a slightly more implicit sense"	
	Concession: the DM introduces a discourse segment that denies the expectations expressed before. (9) "a place called Sutton which is actually a borough of London ***but*** it's classed as Surry"	
	Condition: the DM signals that one segment of discourse is the condition for something to happen. (10) "In addition, Black & Decker had said it would sell two other undisclosed Emhart operations ***if*** it received the right price"	
	Exception: the DM specifies an exception to the previous context. (11) "there are probably only three counties which are proud as their county, in my opinion, which would be Lancashire, Yorkshire and Cornwall, and ***apart from that*** perhaps not as proud as we are"	
	Alternative: the DM expresses that two utterances are alternatives, either excluding or not. (12) "it isn't allowed to share in the continuing proceeds when the reruns are sold to local stations. ***Instead***, ABC will have to sell off the rights for a one-time fee"	
Rhetorical	*Motivation*: the DM introduces a subjective or epistemic cause. (13) "and you were actually at Birmingham university, ***because*** I understand there are different universities in Birmingham?"	

	Conclusion: the DM introduces an evaluation or a generalisation. (14) "and it talks about different sorts of, well, settings in nature really, ***so*** it's lovely"
	Opposition: the DM signals a pragmatic or subjective contrast or concession when the adversative relation between segments of discourse is unclear. (15) "we have a shooting script. ***But*** also you have time to actually blow up the image and try and work out what's going on"
	Relevance: the DM introduces a pragmatic or subjective condition, which is not causally related. (16) "***if*** you are thirsty, there's beer in the fridge"
	Reformulation: the DM introduces the content of a previous utterance with a change in phrasing. (17) "you're getting more work? ***I mean***, is there an increasing need for translation?"
	Approximation: the DM signals that the next utterance is lacking precision. (18) "I don't teach that ***sort of*** separately"
	Comment: the DM introduces a parenthesis in discourse. (19) "one of the things that I think is changing across all parks ***and*** we're certainly driving here is that we want to go back to those very early stage companies"
	Specification: the DM introduces an example or provides more details. (20) "and that's at all levels. So, ***for example***, I think, while it may be controversial, I think it's actually quite important for students…"
	Emphasis: the DM reinforces the pragmatic value of an utterance or of a previous discourse function (i.e., "actually" in (21) is emphatic of "but"). (21) "but ***actually*** we also will buy expertise in from outside"
Sequential	*Opening*: the DM is used to begin the turn. (22) "— … having the traditional wedding breakfast? — ***So*** a variety of things. So there'll be things like…"
	Closing: the DM is used to end the turn. (23) "and the children and myself are both noticing that, ***so***."

	Resuming: the DM links the upcoming segment to previous discourse after a digression. (24) "particular types of reactions and a particular sensory experience. ***So*** in relation to poetry of course, you can do this in a concrete sense"
	Topic-shifting: the DM signals a change of topic. (25) "that's how practices work, is on a partnership of people of equals. ***And*** you want you asked me about the support staff. Traditionally…"
	Quoting: the DM introduces a reported speech segment. (26) "well Matthew's saying ***oh*** I'll take them on the back of my bike"
	Enumeration: the DM indicates the ordering of discourse events. (27) "the site that we're using here for surrey sports park. ***Firstly***, it's slightly off the main campus so that helps. ***Secondly…***"
	Addition: the DM is used to introduce more information about the topic of discourse. (28) "it's a very play based curriculum, ***and*** they do pick up the English language very quickly"
	Punctuation: the DM stresses the end or the beginning of a discourse segment. (29) "and then the science park, ***well***, it can be for life of the company"
	Planning:[7] the DM is used to hold the floor while preparing upcoming discourse. (30) "… a little bit more off the beaten track are, ***I don't know***, are quite special"
Interpersonal	*Monitoring*: the DM is used to check for attention and comprehension. (31) "most people learn to drive by the time they're seventeen ***you know***"
	Face-saving: the DM is used to express deference and to prevent face-threats. (32) "I come from a background where, ***you know***, now I guess my family you would say is middle class"
	Disagreeing: the DM expresses a disagreeing response. (33) "— so you are the Cantona equivalent? — ***Well***, I'm not quite as great as him"

| |
|---|
| *Agreeing*: the DM expresses understanding. |
| (34) |
| "— So the regeneration isn't just about building places and buildings, it's also about building green parks and looking towards a more environmentally friendly future as well? |
| — Absolutely, yes. [...] by 2015 so *yeah*, it has very much a view of the environment" |
| *Elliptical*: the DM is used to include other members of a previous category without naming them. |
| (35) |
| "There was a lot of trade, I think a lot of spices and tobacco *and things like that* so obviously…" |

4. Results

23 We found 14 list buoys, 347 tokens of PALM-UP and 110 tokens of SAME that functioned as DMs in the sample. We describe their frequency of use across genres in 4.1. Afterwards, we present their functional description (4.2) and examine the distribution of the discourse relations conveyed by the three DMs across genres and to what extent this distribution differs from one genre to another (4.3).

4.1. Distribution of the three discourse markers across genres

24 List buoys, PALM-UP and SAME are found in the four genres with different distributions, as shown in Figure 4. Of the three DMs, PALM-UP is the most frequent in the four genres followed by SAME. List buoys also appear in all genres, but the numbers are very low as compared to the other two DMs. The lower frequency of use of list buoys in all genres may be due to a lower semantic density as compared to the other two DMs, which are semantically richer (see sub-section 4.2).

Figure 4. – Distribution of the three DMs across genres.
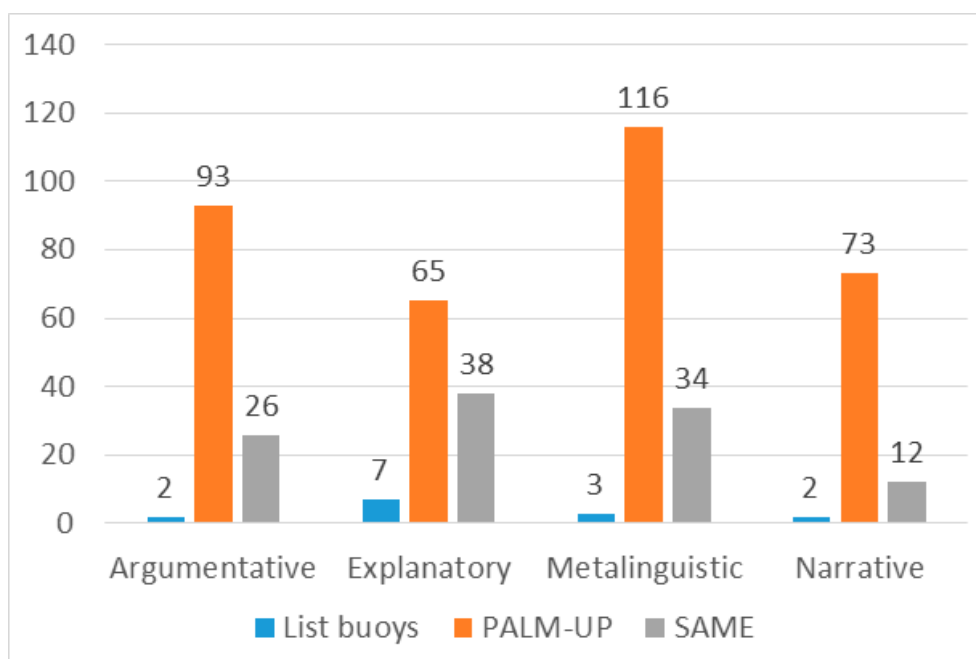
25   In our dataset, the explanatory genre attracts the highest proportion of list buoys and tokens of SAME, whereas the metalinguistic and argumentative genres present more PALM-UP particles. These three genres have a similar total number of tokens of the three DMs: 121 in the argumentative dialogues, 110 in the explanatory dialogues and 153 in the metalinguistic dialogues. In the narrative genre, there is the lowest representation of the three DMs, with 87 tokens. Previous studies in which genres were compared in LSFB (Sinte, 2015; Meurant & Sinte, 2016) noted that narratives are rather distinct from other genres in several ways. For instance, the narrative genre contains fewer signs expressing a temporal value than conversations or descriptions. The narrative genre also displays fewer fully lexical signs to introduce reformulations than conversations or explanations. The lower number of tokens of the three DMs under analysis in narrative dialogues could be another distinctive feature of this genre.[8]

26   Two tentative explanations that may justify these differences are that in narratives, there may be a lower concentration of DMs or that there may be a different way of marking discourse. For instance, implicit discourse relations (i.e., there is no DM between two segments of discourse and the relation between them relies on pragmatic inference) may be preferred over explicit discourse relations in narratives as compared to the other three genres. An example of implicit discourse relations is given in (36).

      (36)
      [PT:PRO1 PREPARE FAST CLOTHES] [WHEN LEAVE CAMPING WHEN] [JULY LEAVE] [PT:PRO1 GO ON PLACE] [FIRST DAY FINE] [SECOND DAY CRY].

      'I prepared my clothes fast. "When are we leaving for the camping?", I asked insistently. I left in July. I went to the camping site. The first day was fine. I started to cry on the second day.'

            (LSFB Corpus, session 27, task 3, signer S056, 00:39–00:47)

27   In this sequence, no DM has been used and the reader infers that the relation between utterances is a succession of events. The signer also uses other linguistic cues to mark that one event happens after the other, i.e., "the first day" and "the second day", but

these are not DMs. As the other narrative dialogues examined, this excerpt was elicited by the moderator's request of telling each other a past memory. Since the informants participating in the dialogues know that a chronology of events will be recounted, it may not be necessary to make this succession explicit using discourse relations.

4.2. Functional description of the three discourse markers

4.2.1. List buoys

28   The 14 list buoys analysed in this paper are quite homogeneous in terms of domain (see the first graph of Figure 5). Most of their functions belong to the *sequential domain*, that is, they are used to structure discourse segments. On occasion, list buoys have functions of the *ideational domain*, which means that they are used to connect utterances whose content is about real world events.

Figure 5. − Functional description of list buoys.
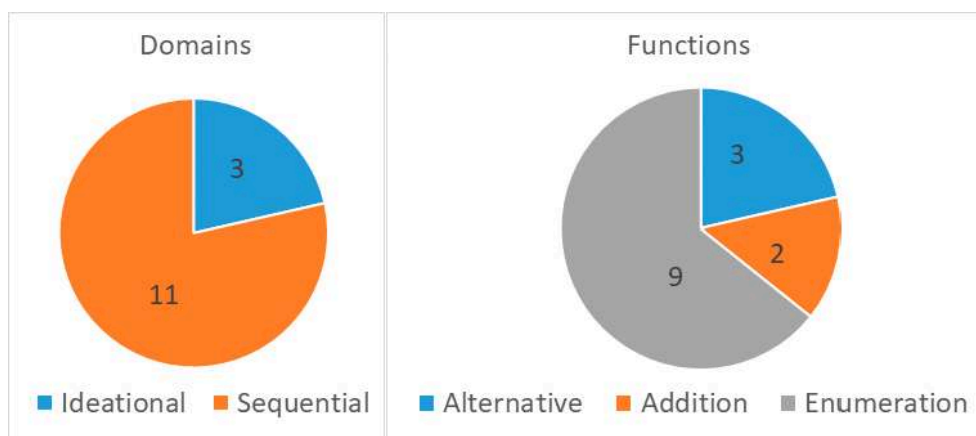
29   From the three different functions expressed by list buoys (see the second graph of Figure 5), *enumeration* is the most frequent function (see example (1) above) and has already been mentioned elsewhere (e.g., Villameriel's (2008) paper about LSE). By contrast, we have not found the two other functions in the SL literature so far. Furthermore, one digit of a list buoy expressing *enumeration* combines with the function of *planning* and one digit of a list buoy expressing *alternative* combines with the function of *emphasis*, as in (37). The list buoy is used to introduce the alternative to kitesurf (i.e., powerkite) and to reinforce the contrastive value of the DM BUT.

>   (37)
>   [IF KITE <UHM> IT-IS ON WATER] <THAT-IS-IT> <BUT> [HAVE SAME **<LIST-BUOY:TWO>** POWERKITE]
>   'When uhm it is on the water, it is called kitesurfing. But, **on the other hand**, there is also the powerkite.'
>
>   (LSFB Corpus, session 27, task 15, signer S055, 03:17–03:22)

4.2.2. PALM-UP

30   PALM-UP expresses functions that belong to the four domains (see the first graph of Figure 6), but the *sequential domain* is predominant, followed by the *interpersonal domain* (i.e., managing the exchange between signers). The *rhetorical domain* (i.e., expressing subjective or metadiscursive discourse relations) is the least represented, while the

ideational domain (n = 29) and the tokens that combine two domains (n = 27) are equally represented. The *sequential domain* combines with the other three domains, and the *rhetorical* and *interpersonal domains* are also found in a particular token.

Figure 6. – Functional description of PALM-UP.
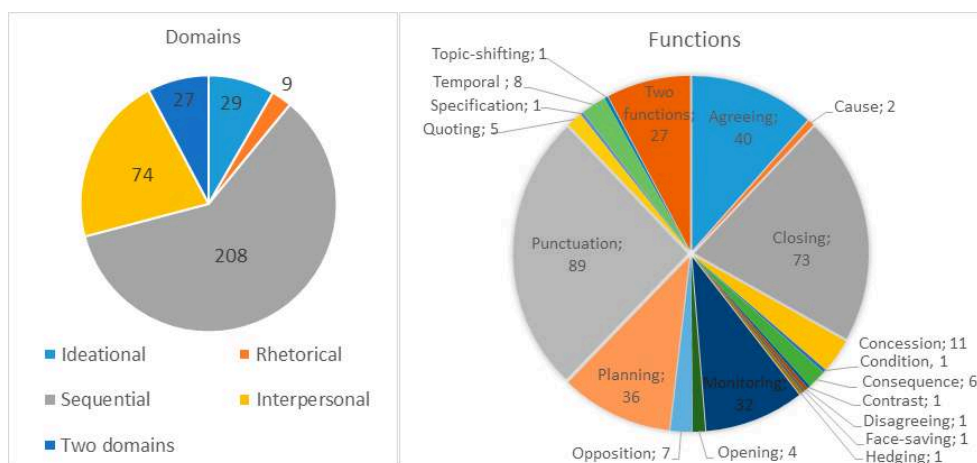
31 PALM-UP is the most polyfunctional DM of the sample. It fulfils 19 functions out of 31 possible functions (see the second graph of Figure 6). The most represented functions are *punctuation*, *closing*, *agreeing*, *monitoring* (see example (2) above) and *planning*. An example of *punctuation* is shown in (38), in which PALM-UP stresses the end of the first clause.

> (38)
> [PT:PRO1 PARTY CHRISTMAS GOOD] **<PALM-UP>** [ONE HAPPY IT-IS SAINT SAINT-NICHOLAS BECAUSE RECEIVE A-LOT GAME DIFFERENT]
> 'My Christmas time was very nice, **indeed**. I was very happy on Saint Nicholas Day because I received a lot of different games.'
>
> (Corpus LSFB, session 2, task 3, signer S003, 01:17–01:24)

32 The other functions are much less frequent, and some of them seem to be idiosyncratic as they are only produced once or twice in the data. Twenty-seven tokens express two functions at the same time. Many combinations are possible, but only appear once or twice in the data.

4.2.3. SAME

33 SAME expresses functions of the four domains, mostly *sequential* and *rhetorical*. SAME can also combine functions of the *sequential domain* with either the *rhetorical* or *interpersonal domains*, whereas the *ideational* and *interpersonal domains* are underrepresented (see the first graph of Figure 7).

Figure 7. – Functional description of SAME.
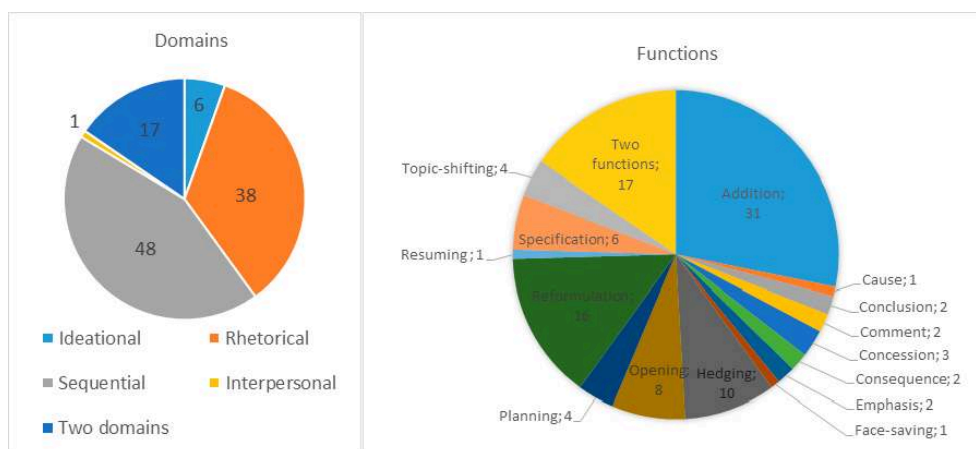
34 SAME is the second most polyfunctional DMs of our LSFB dataset (see the second graph of Figure 7). *Addition* is by far the most frequent function signalled by SAME (see example (3) above), followed by rhetorical functions (*reformulation*, *approximation* and *specification*) and one sequential function (*opening*). The function of *reformulation* is exemplified in (39), in which SAME introduces a clause that paraphrases the previous one.

> (39)
> [LIKE COMPETITION] **<SAME>** [CONFRONTATION-TEAM ALWAYS]
> 'We liked competition, **I mean**, we liked to play Flemish against Walloons.'
>
>   (LSFB Corpus, session 21, task 3, signer S044, 03:48–03:51)

35 Because of the low number of tokens, the other functions expressed by this DM may be idiosyncratic. Two functions were combined in 17 tokens, but generally appeared one or twice in the dataset.

4.3. Combining domains and genres

36 In what follows, we present the distribution of the discourse relations conveyed by the three DMs across the four genres. Since PALM-UP and SAME are highly polyfunctional (see 4.2.2 and 4.2.3), it would be difficult to state the differences and similarities between genres by focusing on the functions of these DMs. Therefore, we will use the domain in order to assess to what extent a type of discourse relation tends to be found in a particular genre.

37 Figure 8 displays the distribution of domains expressed by the three DMs[9] across genres. The most frequent domain in all genres is the *sequential domain*, which also has a similar distribution in terms of percentage (around 60% in each genre). The high frequency of sequential functions across genres has also been reported in different monological and dialogical genres in spoken English and French (Crible, 2017). The predominance of the *sequential domain* over the other domains may be a language and modality-independent feature deserving further research with other signed and spoken datasets.

Figure 8. – Distribution of the four domains across genres.
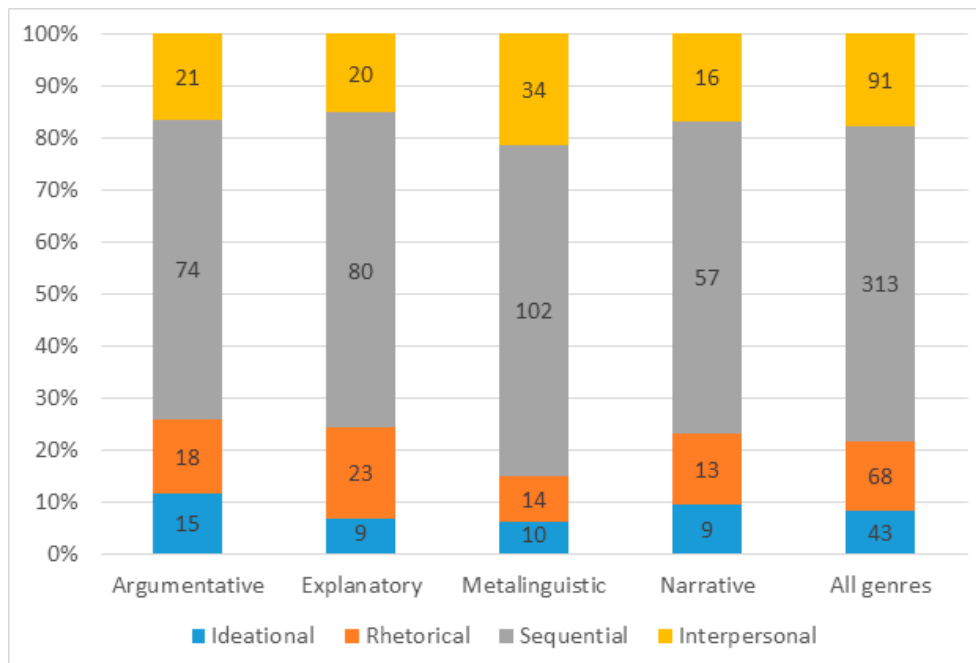
38　Although the narrative genre has a lower number of tokens of the three DMs, the percentages representing each domain are similar to the average distribution of domains across the four genres (see last column of the Figure 8). In our dataset, the argumentative genre has the highest percentage of tokens expressing functions from the *ideational domain* (12%). This may be due to the fact that signers talk about the differences and similarities between deaf and hearing culture, so the discourse relations conveyed relate to the state of affairs in the world. The explanatory genre has the highest percentage of tokens expressing metadiscursive functions (i.e., *rhetorical domain*, 17%). In these conversations, signers have to explain a hobby, an activity or their job. Most of the time, specialised terminology for which there are no signs is used and signers have to paraphrase or instantiate; that is, they have to express their metacomment on their phrasing.

39　Finally, the metalinguistic genre has the highest percentage of DMs representing the *interpersonal domain* (21%). In these dialogues, signers are asked to talk about metalinguistic aspects of their language, which is not something they do not do very often, as one of the signers of our dataset points out during the exchange. Since this type of dialogue is in some ways new for them, signers may rely more on interpersonal DMs to know what the other thinks, to check for understanding, to express their own stance or to backchannel. An additional possible explanation for the higher frequency of interpersonal DMs is that signers are simply more engaged in this exchange than in the other dialogues.

40　Since the two tentative explanations about the higher frequency of interpersonal relations in the metalinguistic genre are not intrinsic (i.e., the novelty of the topic and the engagement of participants are external factors), we cannot claim that interpersonal relations are a characteristic of the metalinguistic genre. Conversely, it may be the case that ideational relations are a specific feature of the argumentative genre and rhetorical relations characterise the explanatory genre. Yet, further research adopting an onomasiological approach in which all DMs in LSFB are analysed,

together with statistical tests that assess the significance of variation, are necessary to corroborate this hypothesis.

5. Conclusion

41   This paper reports on the first study of genres and discourse markers (DMs) in the literature on sign languages (SLs). We found 14 list buoys, 347 tokens of PALM-UP and 110 tokens of SAME that functioned as DMs in our sample. The last two are very polyfunctional (they fulfil 19 and 15 functions respectively), whereas the former is the least versatile DM (only 4 functions). All domains (i.e., four large categories that put together different functions sharing properties) are represented in our dataset. However, the *sequential domain* (which comprises functions that structure discourse segments) is the most frequent in the three DMs. PALM-UP often expresses functions that belong to the *interpersonal domain* (i.e., this form is used to manage the exchange between signers) and SAME signals functions from the *rhetorical domain* (i.e., this sign is used to convey subjective or metadiscursive discourse relations). The *ideational domain* (i.e., functions that relate events in the real world) is found in the three DMs, but it is always the least represented.

42   After examining the use of the selected DMs in the four dialogues, we can point out some differences and similarities in their distribution across genres. On the one hand, the three DMs appear in all four genres of our sample. The argumentative, explanatory and metalinguistic genres have a similar concentration of the three DMs (i.e., more than 100 tokens in total). However, the narrative genre is below this average with 87 tokens. We suggested that this difference might be due to a lower concentration of DMs in narratives or to a different way of marking discourse in this genre. On the other hand, we also found that the four domains are represented in the four genres. The *sequential domain* is the most frequent in all genres of our dataset, whereas each of the other three domains is slightly more frequent in a particular genre. Specifically, the percentage of DMs belonging to the *ideational domain* is higher in our argumentative dialogues, the *rhetorical domain* is more frequent in our explanatory dialogues, and the *interpersonal domain* has a higher percentage of tokens in our metalinguistic dialogues.

43   In short, the frequency and the functions of the three DMs present some differences across genres in our LSFB dataset, but further research needs to be conducted. Our study adopted a semasiological perspective in which only three DMs were analysed, so the results are not generalisable to the whole category and do not allow us to differentiate one genre from another. The next step is to adopt an onomasiological perspective in which all DMs in LSFB are analysed. This type of study would not only cast light on our questions about why narratives attract less DMs, but it would also allow us to find out to what extent the form, frequency and functions of all existing DMs vary according to genre in LSFB.

44   Further studies could also be developed from a more sociolinguistic perspective. Examining the distribution of the three DMs across signers was beyond the scope of this paper due to constraints on space and the number of informants in the sample. The distribution of all DMs across a larger group of signers from the LSFB Corpus could be investigated in order to assess intra- and inter-signer variation across genres. From a cross-linguistic perspective, it would be interesting to reproduce the same research with data from other SLs to see whether the frequency of use and functions of DMs

across genres is similar or not. The outcomes of such a project would be informative from a typological perspective and would contribute to a better understanding of the DM category.

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NOTES

1. The convention establishes that SL glosses must be written in capital letters. In this article, we use the gloss PALM-UP because it is the annotation used in the LSFB Corpus (Meurant, 2015) as well as in most SL corpora to name this form. Although the form that we gloss as SAME is annotated in the LSFB Corpus as AUSSI, we use the English word 'same' to label this sign for three reasons. First, the form also has a meaning of resemblance and likeness in LSFB (see <http://dicto.lsfb.be/dico/aussi_1>). Second, SL glosses do not reflect the meaning of the word but they are a consistent way of labelling a sign. Since this paper is in English, the word is translated into this language for the reader's convenience. Third, SAME is the ID-gloss used in other SL dictionaries and sign banks to name a sign articulated in the same way with a similar meaning (see section 2). If future cross-linguistic research is to be carried out, it may be more convenient to use this ID-gloss to indicate that we are referring to this particular sign.

2. In the SL examples, square brackets are used to delimit clauses and angle brackets are used to delimit elements which do not belong to the dependency structure of the clause. When ID-glosses are separated by a hyphen as in PALM-UP, it means that two words are used to annotate them. PT:PRO1 stands for first person singular pronoun and PT:LOC for a pointing sign that establishes a locus.

3. <http://bslsignbank.ucl.ac.uk/dictionary/words/same-1.html> (accessed on 1st October 2018).

4. <https://aslsignbank.haskins.yale.edu/dictionary/gloss/2066.html> (accessed on 1st October 2018).

5. <www.auslan.org.au/dictionary/words/same-2.html> (accessed on 1st October 2018).

6. <http://dicto.lsfb.be/dico/aussi_1> (accessed on 1st July 2019).

7. This function is an addendum taken from Bolly & Crible (2015). For us, *planning* and *punctuation* are two separate functions that are mixed under a single label (i.e., punctuation) in Crible (2017).

8. Since no statistical tests have been carried out in this paper, this finding is not generalisable and must be understood as a hypothesis that deserves further research.

9. This graph contains all domains that were assigned to the tokens. In other words, although 471 DM tokens were analysed, there is a total of 515 domains. This total includes those tokens which were only assigned one domain and those which were assigned two domains.

ABSTRACTS

This paper focuses on the use of three discourse markers—namely list buoys, PALM-UP and SAME—across genres in French Belgian Sign Language. Our sample contains argumentative, explanatory, metalinguistic and narrative dialogues produced by six signers. We present a functional description of the three discourse markers and their distribution across genres. PALM-UP and SAME are highly polyfunctional, whereas list buoys express fewer functions in the dataset. In our sample, there are few differences in frequency of use of the three discourse markers and their functions across genres.

Cet article étudie l'utilisation de trois marqueurs de discours — les balises-liste, le PALM-UP et le signe AUSSI — à travers les genres en langue des signes de Belgique francophone. Notre échantillon est composé de dialogues argumentatifs, explicatifs, métalinguistiques et narratifs qui sont produits par six signeurs. Nous présentons une description des fonctions des trois marqueurs de discours et de leur distribution à travers les quatre genres. PALM-UP et AUSSI peuvent exprimer des fonctions variées, tandis que les fonctions des balises-liste sont plus restreintes. Dans notre échantillon, nous observons qu'il y a peu de différences dans la fréquence d'utilisation des trois marqueurs de discours et de leurs fonctions à travers les genres.

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