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Meurant, Laurence

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Put another way

Reformulation as a window into discourse and interaction in LSFB (French Belgian Sign Language)

Laurence Meurant

University of Namur, NaLTT & LSFB-Lab

Reformulation involves saying an utterance again in a different way. Because of its metalinguistic nature (Rabatel, 2017), combined with its general aim of clarifying the utterance, we propose to consider the act of reformulation as offering a window to the way interlocutors process and adjust themselves and their utterances in their social language practices. More specifically, this study proposes a set of four analytical criteria to characterize interlocutors' investment in discourse and interaction via the observation of their use of reformulations. These criteria concern the frequency of reformulations within a production, the proportion of self- and other-reformulations (Güllich and Kotschi, 1987; Ursi et al., 2018), the type of adjustment that the act of reformulation seeks to achieve (Authier-Revuz, 1996) and the type of semiotic strategies used, namely descriptive, indicative and depictive ways of meaning making (Clark, 1996; Ferrara and Hodge, 2018). The paper draws on the exploratory analysis of the productions of two dyads of deaf LSFB signers across three tasks extracted from the LSFB Corpus. It illustrates how describing the reformulations signers produce according to the combination of the four criteria presented in this study, reveals distinctions between different patterns of pragmatic attitude and involvement of the signers according to their own discourse and the interaction they engage in. This approach opens new avenues for the pragmatic descriptions of LSFB and signed discourses in general, as well as for comparative analyses of the language practices of signers and speakers across different languages.

Keywords: reformulation, discourse, interaction, language heterogeneity, semiotic complexity, LSFB (French Belgian Sign Language)

1. Introduction

Reformulation is intrinsically linked to the communication process and prevalent in our language practices. Whether in monological or dialogical, prepared or unprepared, oral or written discourse, we frequently feel the need to come back to what we (or the interlocutor) have/has been saying in order to re-express it in a different way. Retelling in another way gives us the opportunity to adjust or clarify the initial statement, or to give a new interpretation of it (Murillo, 2016).

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The attention of linguists to reformulation first appeared in the field of French linguistics in the early 1980s (Güllich and Kotschi, 1983). The definition of reformulation, as well as the delimitation of its scope, are still the subject of much debate. The narrowest conceptions limit reformulation to cases of ‘paraphrastic’ reformulation, which are often introduced by a marker such as *autrement dit* (in other words) or *c’est-à-dire* (that is to say). They provide a correction or a clarification on what has previously been said. Broader conceptions extend reformulation to ‘non-paraphrastic’ types. These are introduced by markers such as *en fait* (in fact), *en réalité* (in reality), *bref* (in short), and signal that the locutor is distancing him or herself from what has been said in the first formulation. They result in modifying, specifying, generalizing, correcting, defining or giving another perspective on the first expression (Güllich and Kotschi, 1983; Murillo, 2016). Despite the variety of these definitions, reformulation has emerged as a key notion for a wide variety of studies on language and meaning, at the intersection of the fields of language acquisition (Martinot, 2010), conversational analysis (Roulet, 1987), languages comparison (Cuenca, 2003), translation (Baker, 2018), and automatic language processing (Eshkol-Taravella and Grabar, 2018).

A broad definition of reformulation will be adopted here. In line with Murillo (2016), reformulation will be considered as a discursive process whereby a locutor restates something that has already been said in another way, in order to expand, adjust, specify, clarify, define, correct or modify different aspects, often using reformulation markers to signal these operations. In this sense, reformulation will be used as an umbrella term for cases of definition, denomination, clarification, correction, repair, recapitulation, summary, etc. Beyond the variety of all these functions, however, the reformulation process is commonly characterized by its reflexivity: the speaker rephrases the words previously used, be it his or her own words, in cases of ‘self-reformulations’, or the interlocutor’s words, in cases of ‘other-reformulations’ (Güllich and Kotschi, 1987; Ursi *et al.*, 2018). In that respect, reformulation is considered a metalinguistic process (Rabatel, 2010). Example (1), shown in Figure 1, gives an illustration in LSFB (French Belgian Sign Language) of what will be considered here as a reformulation structure. It shows how discourse unfolding is paradoxically based on the signer rephrasing what she has already said. Indeed, the signer expresses herself in two steps: she first says that for her beautiful sign language (SL) is a language that is as visual as possible, and then goes on to rephrase the same idea in other words, i.e., ‘a language that helps me visualize’. Both parts of the reformulation are linked by the sign same, which acts as a reformulation marker, since it explicitly signals the reformulation act.

- (1) <SIGN-LANGUAGE VISUAL MORE> SAME <GIVE IMAGINE INDEX THERE>¹

¹ For all the examples presented in this paper, the glosses printed in capital letters represent LSFB signs. The figures that illustrate the example are composed of four lines: the pictures from the video clip, the LSFB glosses or the French transcription, the reformulation components and the English translation. The caption of each figure situates the example in its respective corpus: e.g., Corpus LSFB_1205_00:00:08.090-00:00:13.226, where ‘12’ is the number of the recording session, ‘05’ is the task number and where the last part indicates the time code of the example within the video. The LSFB Corpus is available online (www.corpus-lsfb.be).

“<A sign language that is as visual as possible> I mean <a language that helps me visualize>”








						
SIGN-LANGUAGE	VISUAL	MORE	SAME	GIVE	IMAGINE	PT THERE
<X>			marker	<Y>		
a sign language that is as visual as possible			like	a language that gives to see		

Figure 1. Reformulation in LSFB (example (1)). Corpus LSFB_1205_00:00:08.090-00:00:13.226

As example (1) shows, reformulation is not necessarily the same as repair (Shegloff *et al.*, 1977), even though these two notions are related and partially overlapping. Repair is a core mechanism of linguistic interaction that participants use to address some trouble in communication and to resolve it. The trouble that triggers the repair phenomenon can be a problem of speaking, hearing or understanding (Shegloff *et al.*, 1977), or, similarly in signed language, a problem of signing, seeing and understanding (Manrique, 2016). Repair is initiated either by the speaker/signer (in this case, it is called ‘self-initiated repair’) or by the addressee (‘other-initiated repair’). A repair can be both implicitly or explicitly initiated. Three categories of explicit initiators have been attested across a range of spoken languages: open class, for example *sorry?*, *huh?*, or *what?*; restricted requests, as for example questions like *who?*, or repeating the trouble-source portion that was not understood; and restricted offers, which offer a suggestion such as *do you mean...?* (Buyn *et al.*, 2018). In sign languages, the use of non-manual components as well as the combination of manual (question words) and non-manual markers have been described as open explicit initiators; restricted types include content question words such as *who?*, *where?*, *when?*, which ask for clarification, and offers which ask for confirmation (Manrique, 2016). Reformulation and repair have in common that they are reflexive, or metalinguistic, in nature, that they are intrinsically related to (social) linguistic practices, and that they are associated (even if not necessarily) with the use of explicit markers. Both phenomena partially overlap, since reformulation of a prior utterance is one of the strategies available to solve the communication problem that triggers a repair (examples (8), (9) and (10) below illustrate this possibility). But reformulation is not necessarily rooted in communication troubles, nor is it restricted to real-time resolution of problems in interaction. Written expression, prepared oral discourses and monological productions include reformulations. The functions of correction and repair only partially cover the functions of reformulation, as example (1) shows: the signer is not correcting herself, but developing her idea by reformulating it.

This study is interested in reformulations for the potential insight they can offer into the speaker’s attitude and involvement in the discourse and interaction. Our starting point is that, when speakers revisit their words to rephrase them, they offer the observer a window into the efforts they make and the resources they exploit to make their speech clear and to adjust it during the discursive process. Does the speaker reformulate often? Does he/she reformulate his/her own utterances only, or also those of the interlocutor? Why does the speaker reformulate what has already been said? Where does this need come from, what kind of adjustment triggers this effort? What kind of resources does

he/she use to adapt his/her speech? The aim of this article is to verify, on a sample made up of the productions of four deaf signers of LSFB (2 dyads), the relevance of this set of questions in view of a more general qualification of the attitude of the signers in relation to the unfolding discourse and interaction.

The remainder of this paper is structured as follows. Section 2 gives a brief overview of the works that have been conducted on reformulation beyond written and oral data, namely on pluri-semiotic reformulations in spoken languages (Section 2.1) (Rabatel, 2010) and, more recently, on sign language data (Section 2.2). Then, Section 3 introduces two theoretical frameworks that will be used for the analyses. The first one, developed by Authier-Revuz (1996), concerns language heterogeneity, and will serve as a model in order to categorize the reformulations according to their pragmatic function, i.e., to the adjustment they seek to achieve. The second one conceives language activity as semiotically composite (Clark, 1996; Enfield, 2009; Ferrara and Hodge, 2018), in the vein of neo-Peircean semiotics. Section 4 presents the data used for this preliminary study and describes how reformulations were identified and annotated in the considered sample. The analysis of the data comes in Section 5, and consists of the identification and description of four patterns of reformulation uses that reflect four profiles of involvement in discourse and interaction. The paper closes with a section that discusses the implications and broader potential of such a description of reformulation as a revealer of the way interlocutors regulate their discourse and the interaction.

2. Reformulation beyond written and oral data

The study of reformulation began with the description of reformulation markers. Since the seminal work of Gülich and Kotschi (1983), reformulation markers have traditionally been classified in two groups, according to the general type of reformulation they connect, namely paraphrastic and non-paraphrastic (see Section 1). Many studies have identified these two types in different languages (Schiffrin, 1987 in English; Cuenca, 2003 in a contrastive analysis of English, Spanish and Catalan; Murillo, 2016 in a contrastive analysis of English and Spanish). The attention paid to the reformulation markers has given rise to an essentially linear approach to reformulation structure (first formulation <X> – [marker] – second formulation <Y>), for which written or oral data suffice. The study of reformulation has seldom relied on multimodal data. But it is striking to note that in the few cases where multimodality has been taken into account, it raises the question of semiotic complexity.

2.1 Pluri-semiotic reformulations in spoken languages

The book edited by Rabatel (2010) and titled '*Les reformulations pluri-sémiotiques en contexte de formation*' (Pluri-semiotic reformulations in training context) includes different studies that integrate reformulations, multimodal (speech/text, gesture, actions) and pluri-semiotic (language, pictures, figures) productions. The works gathered in this book have in common the context of education. They deal with the way in which diagrams and texts reformulate each other; the reformulations between written text, oral commentary and Powerpoint-type supports; and with school interactions in different types of courses involving multimodality (speech, prosody and gestures) and semiotic complexity (language, images, manipulation of objects and mime).

All the articles and described contexts support a broad conception of reformulation, where a gesture or a visual document is considered as reformulating speech and vice versa, where reformulating involves both saying and showing. However, the introductory chapter seems at least to qualify, if not contradict this conception. Rabatel states that it is only “by way of a shortcut that a gesture (or visual document) can be said to be ‘reformulated’ by discourse”. The author clarifies that the gesture or the visual document is not reformulated but commented on by discourse, and that it is the complex set formed by the two types of semiotic resources that constitutes one or the other of the two parts of the reformulation (Rabatel, 2010: 12). The question therefore remains open: can we consider that two formulations belonging to different semiotic systems reformulate each other? This issue is at the core of our approach, since it is in line with a broader conception of language practices as semiotically complex (see Section 3.2).

2.2 Reformulation in signed languages

Cuxac (2007) explores in LSF (French Sign Language) exactly the same question that Rabatel (2020) raised about French. Cuxac (2000) demonstrated that LSF offers two different but complementary ways of meaning making, or two different ‘semiologic intents’: ‘telling without showing’ (non-illustrative intent), on the one hand, and ‘telling by showing’ (illustrative intent), on the other hand. The former draws on the use of standardized lexicon and structures, while the latter produces the so-called ‘highly iconic structures’ or ‘transfers’ (Sallandre, 2007). The rich alternation and combination between (more) iconic and (less) iconic structures has been discussed in many other signed languages (Engberg-Pedersen, 1993 for DSL [Danish Sign Language]; Vermeerbergen, 2006, Beukeleers and Vermeerbergen, 2022 for VGT [Flemish Sign Language]; Metzger, 1995 and Quinto-Pozos, 2007 for ASL [American Sign Language], Bergman and Dahl, 1994 and Nilsson, 2004 for SSL [Swedish Sign Language] and Meurant, 2008 for LSFb, among many others), even with other terminologies². From various angles and in different sign languages, these numerous studies highlight the abundant presence of structures expressing the same thing in different ways. For example, Nilsson, in her study of pointing towards the chest in SSL, identifies structures that she calls ‘narrative repetition’ of verbs. Her description of this structure assimilates it to the principle of reformulation as defined above (see Section 1): “Looking at the examples that contain instances of [reduced index towards the chest], *what is told from a textperson’s perspective has already been told – but from a narrator’s perspective – and is then repeated again from a textperson’s perspective*” (Nilsson, 2004: 21 [italics are ours]). Cuxac (2007) is the only one who explicitly relates the coordination between different strategies of meaning making (i.e., the non-illustrative and the illustrative semiological intents) to the process of reformulation. Cuxac (2007) highlights that the possibility for LSF signers to show while telling is potentially productive for the process of reformulation, since the iconic structures provide another formulation of what is told without showing. However, the paper closes with the question still open: since both types of meaning making belong to two different semiological intents, can we consider one as a reformulation of the other?

² Beukeleers and Vermeerbergen (2022) provide a comprehensive and critical view on the history of the (terminology) of depiction in signed linguistics.

The phenomenon that has been described as ‘chaining’ in the literature falls under the concept of reformulation as it is defined here. Quinto-Pozos and Reynolds (2012: 214) consider chaining as a contextualization strategy (Gumperz, 1982) that consists of “referencing an object or a concept with more than one communicative technique (e.g., signs, fingerspelling, writing, pointing), thereby creating associations between different ways of communicating”. A common way to chain elements consists of producing a sign, then a fingerspelled word, then repeating the sign (e.g., DISCOURSE D-I-S-C-O-U-R-S-E DISCOURSE). The concept has been studied in teaching contexts, and especially in bilingual situations, where it makes explicit equivalencies between the sign and the spoken languages in use in the class (Humphries and MacDougall (1999/2000: 90). In that sense, chaining would promote metalinguistic awareness (Bailes, 2001).

The form and use of reformulation in LSFB data was first studied by Meurant and Sinte (2016). Their study showed that reformulations are prevalent in all signers’ productions and are distributed throughout the duration of the three studied tasks (i.e., for each signer, a narration, an explanation and a conversation task). Both local and distance reformulation were considered, which revealed that long stretches of speech are organized and signposted by reformulations. The majority of the reformulations identified in this study did not contain a reformulation marker, but lexicalized connectors such as MÊME (same), C-EST (that is), and C-EST-À-DIRE (that is to say) were identified as reformulation markers. The authors showed that the repetition of a sign or a sequence of signs, between the first and the second reformulation, can also play the role of a marker.

In Meurant *et al.* (2022), the authors undertake to compare the use of reformulation in signed and spoken language through the productions of LSFB signers, Belgian French speakers and interpreters. Given the novelty of the multimodal and comparative approach, one issue was to ensure the comparability of the phenomena observed across languages and settings. To this end, the study was limited to reformulations that were made explicit by a marker, which worked as a *tertium comparationis*. The main results of this work consist in 1) the development of a cross-linguistic and multimodal typology of reformulation markers (that includes lexical forms, gestural components and repetition structures); and 2) the description of the semiotic composition of reformulation structures, both according to their horizontal (i.e., sequential) and vertical (i.e., simultaneous) arrangement.

In summary, contrary to the phenomenon of repair, which has been the subject of several works in several sign languages (e.g., Manrique, 2016; Buy *et al.*, 2018), and with which reformulation intersects, reformulation in signed languages has been little studied as such. However, many works have reported the frequent use, in many different sign languages, of structures allowing signers to retell something that has already been previously uttered otherwise. The various descriptions of these structures highlight their link with, on the one hand, the phenomenon of repetition and, on the other hand, with the issue of combining different ways of meaning making (diversity of semiological intents, diversity of perspectives and diversity of forms and resources, according to the authors’ approaches). We will not state whether all these structures have the same status and whether they all fall within the scope of reformulation: we do not have the means to decide these questions at this time.

In the following section, we present two theoretical concepts that will guide our investigation in order to contribute to a better understanding (and delimitation) of the reformulation phenomenon: one for the identification of the pragmatic functions of

reformulations (Section 3.1) and the other for the characterization of their semiotic composition (Section 3.2).

3. Discourse heterogeneity and composite utterances

As suggested above, this study considers reformulation as a window to the ways signers engage in discourse and adjust their signing to a particular discourse situation (which includes the topic discussed, the signs used, the interlocutor's reactions, etc.). To investigate reformulations in LSFB, we draw on theoretical concepts that will enable us to reveal the reasons signers reformulate as discourse unfolds (the pragmatic functions of reformulation, or in other words the *why*), and the resources and strategies they exploit to do so (the semiotic forms and functions of reformulations, or the *how*). We will draw on the concept of discourse heterogeneity as developed by Authier-Revuz (1996) in order to identify the *why*, and on the concept of composite utterance as defined by Enfield (2009) in order to describe the *how*. Both these concepts are derived from theoretical frameworks that consider the fundamental complexities of linguistic practices.

3.1 Discourse heterogeneity and its explicit traces in discourse

Many works have proved the irrelevance of the idea of the speaker as a unique source of meaning and of discourse as homogeneous: e.g., Bakhtine's dialogism (1978), Lacan's notion of heterogeneous speech and divided subject (1957) and Ducrot's polyphony (1984), among the most influential ones. Through a great diversity of approaches, it has been shown that the discourse of a speaker is always affected by something external to it, by something other with which the speaker constantly negotiates: the addressee, other discourses, reality and the words themselves when they no longer seem self-evident.

Authier-Revuz's work (1996) does not focus on discourse heterogeneity itself, but on the linguistic traces of this heterogeneity that the locutor makes visible in his/her speech. She investigates the reflexive comments on what they are saying (she calls them *boucles réflexives*, reflexive loops) that the speakers produce in the course of their speech, and she sees them as the explicit manifestation that speakers are grappling with others, other discourses, or the limits of words. For example³:

- (2) Il a pété un plomb, *si vous me passez l'expression*.
"He went nuts, *if you'll pardon the expression*".
- (3a) Ils s'éclatent, *comme disent les jeunes*.
"They're living it up, *as the youth say*".
- (3b) *Ce qu'on appelle* les sciences humaines.
"*What we call* the humanities".
- (4) Il s'agit d'un cas d'enfermement, même si *le mot est inadéquat*.
"It is a case of confinement, even if *the word is inadequate*".
- (5a) Je suis vidé, *au sens propre*.

³ The following examples are loosely based on those of Authier-Revuz (1996), for the sake of brevity. The many original examples presented in the book are taken from authentic texts and conversations.

“I am drained, *literally*”.

(5b) Cette chanteuse brille, *dans tous les sens du terme*.

“This singer shines, *in every sense of the word*”.

Like these comments, reformulations are characterized by their reflexivity, and they are produced spontaneously by the locutors as their discourse unfolds. Based on that, we propose to extend Authier-Revuz’s approach to reformulations, and to consider them as explicit reflections of the way speakers (here, signers), at certain points in their discourse, feel the need to make explicit and overcome these heterogeneities.

Reflexive loops such as those italicized in examples (2) to (5) abound in our language practices, both written and oral, in literary and scientific texts as well as in everyday conversations. According to Authier-Revuz (1996), they can be classified into four types, as per the type of heterogeneity they reveal:

- Interlocutors’ heterogeneity: It is related to the link and the distance between interlocutors. The reflexive comments related to this category express the fear that the meaning will not be well transmitted to the other (*si vous voyez ce que je veux dire*, if you know what I mean), or call for the goodwill of the other (*passez-moi l’expression*, if you’ll pardon the expression), or invite the other to share the same words (*disons, appelons, let's say, let's call*), etc. Example (2) illustrates this category.
- Interdiscursive heterogeneity: It is related to the relationship between the locutor’s words and the words of others. Reflexive comments in this category either explicitly identify the other from whom the speaker borrows words (*comme dit l’autre/la tradition/le philosophe*, as the other/tradition/philosopher says) or only mark a difference in ownership, without making explicit who the other is (*comme on dit, entre guillemets, as one says, in quotation marks*). Examples (3a) and (3b) illustrate this category.
- Words-objects heterogeneity: It is linked to the irreducibility of words and reality. Typical reflexive comments in this category mention the distance between words and objects (*il n’y a pas d’autre mot, le mot est trop vague, par approximation, there is no other word, the word is too vague, by approximation*) or on the contrary declare that it is resolved (*appelons les choses par leur nom, comme le mot le dit bien, let's call things by their name, as the word well says*). Example (4) illustrates this category.
- Words-words heterogeneity: It is related to the polysemy of words. Reflexive comments that fall into this category signal that the speaker has mastered word ambiguity (*dans le sens de, pas dans le sens de, in the sense of, not in the sense of*) or accepts it (*dans tous les sens du terme, in all senses of the word*). Examples (5a) and (5b) illustrate this category.

We will refer to this typology and extend it to distinguish four types of pragmatic functions of reformulations, according to the type of heterogeneity they aim to resolve. Table 1 shows the four pragmatic functions that are derived from this typology of discourse heterogeneities or, in other words, from the type of adjustment they seek to achieve.

Table 1. Pragmatic functions of reformulations (adapted from Authier-Revuz's typology of discourse heterogeneities).

Code	Pragmatic function	Discourse heterogeneity in Authier-Revuz (1996)
INT	Adjustment to the interlocutor	Interlocutors' heterogeneity
DISC	Adjustment to other discourses	Interdiscursive heterogeneity
OBJ	Adjustment of words (signs) to objects	Words-objects heterogeneity
SIGN	Adjustment of words (signs) to themselves	Words-words heterogeneity

Example (1) presented above illustrates a case where the signer reformulates her first utterance (“a sign language that is as visual as possible”) in order to make her signs more adapted to what she means, i.e., in specifying what ‘visual’ means to her (“a language that helps me visualize”). So, the pragmatic function is the adjustment of signs to objects (OBJ). This typology of four pragmatic functions will be systematically applied to our data in order to characterize the signers' reformulations.⁴

3.2 Composite utterances

Following Peirce's (1955) semiotics, the multimodal and composite nature of language has been increasingly recognized, in the study of both spoken languages (Clark, 1996, 2016; Enfield, 2009; Dingemanse *et al.*, 2015) and signed languages (Ferrara and Halvorsen, 2017; Janzen, 2017; Ferrara and Hodge, 2018; Puupponen, 2019; Vandenitte, 2022). Within this perspective, the production of meaning results from three different modes of reference, namely different relationships between a sign and the object to which it refers (Peirce, 1955). These different methods of meaning making have been defined as describing, indicating and depicting (Clark, 1996; Ferrara and Hodge, 2018). Describing consists of telling the meaning, i.e., in referring to objects categorically. In indicating, people anchor the utterance to the real world by locating a referent in time and space. In depicting, people show the meaning by creating a representation of it (Clark, 2016; Beukeleers and Vermeerbergen, 2022). The meaning of an utterance is derived from the holistic interpretation of the diverse methods of producing meaning that compose it. Ferrara and Hodge (2018) demonstrate that description, indication and depiction are integrated and coordinated within composite utterances, both in signed and in spoken language interactions.

Each semiotic function (i.e., describing, indicating and depicting) has traditionally been associated with specific forms: lexicalized words and signs for describing; indexes, pointing signs and indicating verbs for indicating; and iconic gestures and prosody, constructed actions and classifier constructions for depicting (Beukeleers and Vermeerbergen, 2022). However, several authors have shown that there is no direct

⁴ According to this typology, the phenomenon of chaining (Quinto-Pozos and Reynolds, 2012) presented in Section 2.2 would be considered as illustrating the adjustment to other discourses (DISC).

association to be made between a category of forms and a specific semiotic function (Dingemanse, 2015; Ferrara and Halvorsen, 2017; Beukeleers, 2020; Beukeleers and Vermeerbergen, 2022; Capirci *et al.*, 2022). In our analyses, we will adopt this distinction between form and semiotic function, and draw on Beukeleers and Vermeerbergen (2022) in order to analyze the resources that signers engage when reformulating.

Considering the semiotic complexity of language practices opens a new perspective on the discourse phenomenon of reformulation. Indeed, it raises the question of whether ‘saying differently’ when reformulating can be related to the act of ‘signalling differently’. And, conversely, whether the fact of signalling differently (i.e., with different semiotic resources and functions) suffices to identify a reformulation. Here, we come back to the question left open by Rabatel (2010) for French and by Cuxac (2007) for French Sign Language: if two formulations belong to two different semiotic settings, can we (or must we) consider them as reformulating each other? The concept of composite utterance provides a partial answer to this issue: each utterance (and even each sentence, each phrase, each sign) is fundamentally composite (see e.g., Beukeleers and Vermeerbergen, 2022). Therefore, the fact of ‘saying differently’ is not sufficient to conclude the presence of a reformulation. Another part of the answer probably lies in the notion of ‘holistic interpretation’, mentioned above. The difference between a reformulation structure (i.e., X – Y) and a composite utterance lies in the holistic interpretation of the latter, while the former is composed of two (semantically and/or pragmatically autonomous) utterances. Until we have more evidence to answer this question, we establish a methodological choice that will allow us to identify the reformulations and only the reformulations in our data (see Section 4.1).

4. Methodology

This work draws on the analysis of a small sample of LSFB data extracted from the LSFB Corpus (Meurant, 2015). The 28-minute data selected was previously used for comparatively exploring reformulation forms and uses in LSFB and spoken French (Meurant *et al.*, 2022). For the present study, the reformulation annotation scheme was completed by identifying the pragmatic functions of the previously extracted reformulations (see Section 3.1). The data has then been used here as a pilot sample to test the applicability and the relevance of our set of four criteria (i.e., frequency of reformulations, proportion of self- vs other-reformulations, pragmatic functions and semiotic forms and functions) for describing reformulations. Before presenting the data and the annotation scheme and procedure, we will clarify how and why we delimited the reformulations under focus in this study.

4.1 Reformulations with marker

Our study will be limited to a sub-category of reformulations, namely to the ones that are made explicit by a marker. As mentioned above (see Section 2.2), this choice was previously justified by the need for common ground for the cross-linguistic study between LSFB and French. However, the analyses of this comparative study highlighted that taking into account multimodality (i.e., the use of several articulators in the production of meaning) and semiotic complexity (i.e., the use of several meaning

making strategies: descriptive, indicative, and depictive) sometimes makes it difficult to distinguish between a composite utterance on the one hand, and a reformulation structure on the other. That is, the annotator may wonder, looking at certain cases, if the signer (or speaker) is saying a second time what has already been said, but relying on another semiotic strategy; or if the two modalities of meaning production he/she observes together constitute one unified composite utterance, which may itself be integrated within a reformulation structure – as the first or the second formulation.

For this reason, we have replicated here the choice to focus only on reformulations explicitly signalled by a reformulation marker, be it a lexical sign (such as SAME in example (1)), a gestural movement (a PALM-UP gesture or a hesitation gesture), or a repetition of one or several signs between the two parts of the reformulation structure. Examples of these markers will be given throughout Section 5; see also Meurant *et al.* (2022) for a detailed inventory of the markers found in the sample.

4.2 Data sample

The sample contains data produced by two pairs of deaf LSFB signers from the LSFB Corpus, namely S028-S029 (Session 12) and S059-S060 (Session 29). All four signers are between 18 and 25 years old. All but S029 are native signers, i.e., they grew up with LSFB at home; S029 is considered a near-native signer, i.e., she did not acquire LSFB at home, but attended a school with other deaf pupils and acquired LSFB before the age of seven. For each pair, three different tasks from the LSFB Corpus have been used, representing three different genres, i.e., conversation, explanation and narration:

- Task 5, in which signers had to converse about what signing good or bad LSFB means.
- Task 9, in which signers explained polemical or enigmatic pictures to their addressees.
- Task 12, in which signers had to narrate the beginning of a story which was given on paper or video and their addressees had to finish it. Only the first part of the task, namely the story telling of the beginning of the story, was focused on and annotated here.

The choice of these three tasks was copied from the previous comparative study mentioned above (Meurant *et al.*, 2022). It has the advantage of allowing the present analysis to be tested on a variety of productions. For each task, we annotated either the whole task or a portion covering at least 2 minutes of production per signer. In Session 12, however, signer S029 expresses herself only during 1 min. 40 sec. in the conversation task (Task 5). The distribution of the data duration across genres is presented in Table 1.

Table 1. Distribution of data across the LSFB sample according to the four signers and the three tasks under study.

	Narration	Explanation	Conversation	Total
S028	1 min. 58 sec.	2 min. 16 sec.	2 min. 17 sec.	6 min. 31 sec.
S029	2 min. 20 sec.	2 min. 18 sec.	1 min. 40 sec.	6 min. 18 sec.
S059	2 min. 15 sec.	2 min. 49 sec.	3 min. 00 sec.	8 min. 04 sec.

S060	2 min. 20 sec.	2 min. 42 sec.	2 min. 02 sec.	7 min. 04 sec.
Total	8 min. 53 sec.	10 min. 05 sec.	8 min. 59 sec.	27 min. 57 sec.

4.3 Annotation scheme and coding process

The six tasks under study were loaded in ELAN (Wittenburg *et al.*, 2006), which is an annotation tool developed at Max Planck Institute for Psycholinguistics (The Language Archive, Nijmegen, The Netherlands) for the study of multimodal data. It allows the user to create a partition-like template within which the annotations inserted on each tier are aligned with the audio and video data. Besides the lines devoted to the glosses of the signs produced by each signer and with each hand, the template for this study is composed of five tiers for each participant, as well as the same set of five tiers for the cases of other-reformulations, where both signers are involved. The data from each task were systematically scrutinized for all occurrences of reformulation structures made explicit by a marker.

First, the two parts of each reformulation structure were identified in the tier called ‘Refor_XY’: the source utterance was assigned the code ‘X’ plus a number, while the rephrasing was assigned the code ‘Y’ plus the same number. In cases of other-reformulations, the specific tier (‘SA&B_Refor_XY’) was used in the same way; the respective sign glosses allow for the attribution of each part of the reformulation to its signer. Second, we coded the reformulation marker on a separate tier (‘Refor_Marker’). When the marker is a lexical sign, the gloss of the signs is used as the code of the annotation; when the marker is gestural, a short description or denomination is given as a code (‘palm-up’, or ‘fingers wiggling’, etc.). If the marker is or includes a repetition, the repeated sign(s) are coded as Ra (in the X part) and as Rb (in the Y part).

Third, we summarized the content of each X and each Y in French to facilitate navigation across the data (tier ‘Refor_Content’). Fourth, we identified the semiotic function (or the combination of semiotic functions) of each X and Y interval (see Section 3.2).

The fifth tier (‘Refor_Adjustment’) was devoted to the identification of the pragmatic function of the reformulation (see Section 3.1). The labels presented in Table 1 were used as controlled vocabulary and were applied to the whole reformulation structure: INT for reformulations that manifest an adjustment to the interlocutor, for example to prevent his/her disagreement or misunderstanding; DISC for reformulations mentioning the link or the distance between the signers’ discourse and the discourse of others; OBJ when the reformulation manifests an adjustment (be it declared as easy, approximative or impossible) between the signer’s signs and the objects he/she is talking about; and SIGN for cases where the reformulation is prompted by the polysemy of the signs themselves.

After having worked on the template and trained on one task with two other annotators, the author of this study annotated the whole sample. Difficult cases were discussed with the two other annotators. The identification of the pragmatic functions of reformulations raised some hesitations, mostly between the function coded as OBJ and the one coded as SIGN. These cases were decided after discussion with one of the two annotators mentioned above, who is familiar with both LSFB and Authier-Revuz’s model and typology. Each of the six tasks of our sample will be studied by combining the observation of reformulation frequencies (including of other-reformulation) with the qualitative description of their pragmatic and semiotic functions. The next section

presents four patterns of reformulation (and discourse) practice which have emerged from the analysis.

5. Analysis

As a preliminary to investigating a wide set of LSFB data and of LSFB–French data in light of this hypothesis, here we will scrutinize the exploratory sample presented in Section 4 in a qualitative way. We aim to test the applicability and relevance of a set of four criteria to characterize interlocutors' involvement in discourse via the observation of their use of reformulation. These criteria concern: 1) the frequency of reformulations within a production; 2) the proportion of self- and other-reformulations; 3) the pragmatic function; and 4) the type of resources and semiotic functions of the reformulation structures.

Our sample includes 63 reformulation structures (i.e., X – Y plus a reformulation marker), which represents on average 2.25 reformulation structures per minute. All signers produce reformulations and they appear in the three genres represented (narration, explanation, conversation). Of the 63 reformulations identified, 49 are 'self-reformulations', i.e., the signer reformulates his or her own utterances. The remaining 14 are 'other-reformulations', i.e., the signer reformulates the words of his or her interlocutor. Beyond these averages, important variations appear between tasks/genres and between signers, as shown in Table 2.

Table 2. Overview of the frequency of reformulation (average per minute) across signers and discourse genres. SR = self-reformulations; OR = other-reformulations (attributed here to the dyad of participants without distinction between the signers).

Signer	Narration	Explanation	Conversation	Average
S028	1.53/min.	1.76/min.	3.94/min.	2.46/min.
S029	0.43/min.	2.61/min.	3.00/min.	1.90/min.
S028-S029	0.00/min.	1.31/min.	0.51/min.	0.62/min.
S059	3.11/min.	2.49/min.	2.00/min.	2.48/min.
S060	0.00/min.	0.00/min.	1.97/min.	0.57/min.
S059-S060	0.00/min.	0.00/min.	0.60/min.	0.20/min.
Average SR	1.24/min.	1.69/min.	2.67/min.	1.86/min.
Average SR+OR	1.24/min.	2.28/min.	3.23/min.	2.25/min.






The important individual variation that is reported in Table 2 echoes the general impression that the styles of expression of the four signers are relatively different from each other, and that the interaction between the participants does not produce the same kind of connection in both dyads and in the different tasks. However, in order to be able to link the frequency of reformulations and a certain stylistic profile in the language practices of signers, it is necessary not only to extend the study to a larger number of participants, but also to refine what qualitatively characterizes and differentiates the reformulations of different signers in each particular discourse situation.





The remainder of this section contributes to this specification of reformulations. It presents four patterns that emerged from the interplay of the four criteria mentioned above. First, two patterns specific to individual signers will be studied, then two patterns describing signers as interlocutors in social interaction. It is in these last two cases that the other-reformulations will be studied.

5.1 Pattern 1: Intense (depictive) involvement in the conversation topic

Signer S028 achieves the highest frequency score of reformulations per minute in a task: in the conversation task, she produces 9, which corresponds to an average frequency of almost 4 reformulations per minute. In the other two tasks, she also uses reformulations, but less frequently. All her reformulations identified in conversation have the pragmatic function of adjusting the signer’s signs to what she wants to say. Example (1) above is an illustration of this. The conversation is about what it means to sign well for the interlocutors. S028 begins her answer by mentioning the visual character of the language, which she then reformulates by specifying that she means a language that produces images. A little later in the exchange, she speaks about the style of sign language that she does not like: this corresponds to example (6) (Figure 4). The signer first says that she doesn’t like exaggeration, and then goes on to detail what she means by exaggerated style. Note that, in addition to the SAME marker, the repetition of A-LOT at the end of X5 and Y5 emphasizes and flags the reformulation process.

- (6) <X5 – PT:PRO1 HATE SAME PERSON SIGN-LANGUAGE WITH EXAGGERATE A-LOT>
SAME <Y5 – PT [gesture] EXPRESS FACIAL-EXPRESSION_[strong facial expression] A-LOT>
“<X5 – I hate people who sign in a really exaggerated way> like <Y5 – large signs like that with a too strong expression>”

				
PT:PRO1	HATE	SAME	PERSON	SIGN-LANGUAGE
<X5				
I hate people who sign in a really exaggerated way				

			
WITH	EXAGGERATE	A-LOT	SAME
X5>			marker
			like




				
PT	[word-searching gesture]	EXPRESS	FACIAL- EXPRESSION	A-LOT
<Y5>				
with large signs like that with a too strong expression				

Figure 2. Illustration of pattern 1: intense (depictive) involvement in the conversation topic (example (6)). Corpus LSFB_1205_00:00:58.816-00:01:04.156

In examples (1) and (6), the signer describes what she wants to say in the first formulation (X), then reformulates by adding a demonstration of what she has just said (Y). In (1), X is made up of lexical signs (SIGN-LANGUAGE, VISUAL, MORE), used fully for their descriptive dimension; Y is made up of the indicating verb GIVE which is modified by a movement towards the signer, of the lexical sign IMAGINE and of the sign THERE articulated in height (at the level of the signer's head in the case of IMAGINE) and accompanied by the gaze in the same direction. In addition to their descriptive meaning, these signs depictively represent the interlocutor who receives images in front of her eyes. Similarly, in example (6), X is composed of a pointing at the signatory's chest and lexical signs (HATE, PERSON, SIGN-LANGUAGE, A-LOT etc.) used descriptively. In Y, on the contrary, the lexical signs (EXPRESS, FACIAL-EXPRESSION, A-LOT) are performed with widened, repeated movements, an intense facial expression, the eyes of the signer being closed; all these modifications put in the foreground the depictive function of these signs, which are used here to give a representation of the way of signing, while describing it.



In this task, the signer is strongly dedicated to the conversation and makes sure that her words are clear and striking. While mentioning that quality sign language for her is a particularly visual sign language, she demonstrates this within her reformulations. Her tendency is to first say descriptively, then retell by adding a depictive dimension. To do this, she modifies lexical signs and indicative verbs to emphasize a depictive interpretation of these signs. The combination between the frequency of reformulations, their main pragmatic function (adjusting words to referents), the semiotic composition of reformulations (descriptive X; descriptive and depictive Y) and the use of LSFB linguistic resources (spatial modifications of conventional signs) consistently reflects the profile of this signer's discourse involvement within this task.

5.2 Pattern 2: Sign accuracy, at the expense of the fluidity of the story

Signer S059 stands out by the frequency of her reformulations on all the tasks studied. She produces the most reformulations on average. But what is most striking is the frequency with which she reformulates in the narration task, while the other signers hardly do so. Looking more precisely at the 7 reformulations she produces in her narration, we notice moreover that the first 4 have for pragmatic function the adjustment of the signer's words to themselves. In the specific communication situation of the narration task (she has viewed an extract of the *Paperman* cartoon and has to tell it to

her interlocutor who has not seen it, she has to recall the story, she is being filmed, etc.), she reformulates her storytelling in order to adjust the precision of her signs, to remove the ambiguities and the approximations they contain. At the beginning of her story, she describes the character at the train station waiting for his train on a breezy platform. Example (7) reproduces this passage (Figure 4).

(7) <X2 – HAIR DS:HAIR-BLOWING_{2-hands} > [HANDS IN NEUTRAL SPACE] <Y2 – DS:HAIR-BLOWING_{left hand} MAN DS:HAIR-BLOWING_{left hand}>
“<X2 – His hair is blowing> well <Y2 – his hair like that, because he is a man>

			
HAIR	DS:HAIR-BLOWING _{2HANDS}	[HANDS IN NEUTRAL SPACE]	DS:HAIR-BLOWING _{1HAND}
<X>	marker		<Y
His hair is blowing			his hair like that,

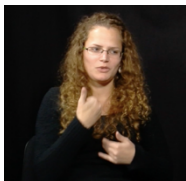

	
MAN	DS:HAIR-BLOWING _{1HAND}
Y>	
because he is a man	

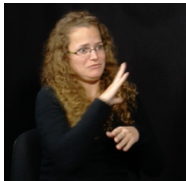

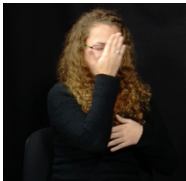

Figure 3. Illustration of pattern 2: sign accuracy, at the expense of the fluidity of the story (example (7)).
Corpus LSFB_2912_00:03:47.412-00:03:51.392

To express that the character is in the wind, she says that he feels his hair blowing. As she is about to continue, she goes back to her sign describing the hair to redo it not with two hands but with one hand, while specifying that the character is a man. This example illustrates a reformulation that is also a repair (see Section 1): the signer notices an error in the form of her sign, which prompts a correction. By her reformulation, therefore, the signer aims to remove the ambiguity of her sign which could have suggested a character with long hair. By articulating it again with one hand, she specifies its meaning, she limits its interpretation; she adjusts her signs by thwarting their polysemy.

Just after that, the same concern pushes the signer to reformulate her remarks again in order to reinforce the meaning of her signs and to limit the ambiguity of them. This is illustrated by example (8), shown in Figure 5. First, she says that the character to the left of the man gets something flat on her face. Just before that, she introduced the character of the woman who stood to the left of the man, and mentioned sheets of paper flying in the wind. Her first formulation (X) is therefore perfectly correct in LSFB, grammatically and semantically autonomous. However, she feels the need to say the same thing again by making the referents ‘woman’ and ‘paper’ explicit.

(8) <X3 – MAN LOOK DS:FLAT-OBJECT-ON-FACE> <Y3 – WOMAN DS:FLAT-OBJECT-ON-FACE PAPER>

“<X2 – The man looks at [the sheet] flying over her face> <Y3 – the sheet of paper flies over the woman’s face>

			
MAN	LOOK	DS:FLAT-OBJECT-ON-FACE	WOMAN
<X		X>	<Y
The man looks at [the sheet] flying over her face			the sheet of paper



	
DS:FLAT-OBJECT-ON-FACE	PAPER
	Y>
flies over the woman’s face	

Figure 4. Illustration of pattern 2: sign accuracy, at the expense of the fluidity of the story (example (8)).
Corpus LSFB_2912_00:04:16.389-00:04:19.845

These examples illustrate that the signer first (X) spontaneously resorts to indication (via the indicative verb LOOK), and depiction (via the spatial modifications of the movement of LOOK and via the classifiers referring to the sheet of paper and to the hair) before (Y) correcting a depictive element (the classifier for hair, but with one hand) or to descriptively make explicit (via the lexical signs WOMAN and PAPER) referents that were implicitly signified by the spatial representation of the relations between actants and objects.

In the narrative task, signer S059 is highly attentive to the way she signs. She does not hesitate to interrupt the flow of the storytelling in order to refine or correct her signs, to limit their ambiguity. While she spontaneously uses and combines various types of language resources to describe, indicate and depict, she feels the need to reformulate even if it means reducing or losing the semiotic complexity of her original statement. In general, this cautious and controlled attitude of the signer with respect to her signs, even within a narrative, is traceable in the analysis of her reformulations.

5.3 Pattern 3: Dynamic and balanced interaction

Signers S028 and S029 reformulate on average as much as each other, and from one task to the other the frequency of their reformulations varies in a similar way: more in the explanation task than in the narration task, and even more in the conversation task.

This balance goes hand in hand with the presence of several other-reformulations, both in the explanation task (n=6) and in the conversation task (n=2); the monological character of the narration task excluding a priori other-reformulations. When they

reformulate each other, they do so to disambiguate their signs (adjustment of the signs to themselves), or to make them more adequate to what they want to say (adjustment of the signs to the objects), as in example (9) (Figure 5).

- (9) [S029] <X2 – ON ROAD PT:LOC SAME DS:SQUARE-SIGN MARCHER WALK PT:DET DS:WALK-ON-ROAD SAME PICTURE DS:WALK-ON-ROAD ARROW_{right} ARROW_{left} >
[S060] <Y2 – ON ROAD PICTURE DS:TWO-OBJECTS-IN-SPACE THAT’S-RIGHT>

“[S059] <X2 – On the road, there is like a traffic sign for pedestrians but as if the traffic sign was on the road surface, like a picture with two arrows, one toward the right and one toward the left>

[S060] <Y2 – So, two pictures side by side on the road, is that what you mean?>”

ROAD	PT:LOC	DS:SQUARE-SIGN	WALK	DS:WALK-ON-ROAD
<X				
On the road, there is like a traffic sign for pedestrians but as if the traffic sign was on the road surface,				

SAME	PICTURE	DS:WALK-ON-ROAD	ARROW _{right} ARROW _{left}
<X>			X>
like a picture with two arrows, one toward the right and one toward the left			

ROAD	PICTURE	DS:TWO-OBJECTS-IN-SPACE	THAT’S-RIGHT
<Y>			
So, two pictures side by side on the road, is that what you mean?			

Figure 5. Illustration of pattern 3: dynamic and balanced interaction (example (9)). Corpus LSFB_1209_00:00:29.949-00:00:40.430

Signer S029 is explaining to her interlocutor S028 (without showing her) the image she has chosen for this task. It is a picture of signs painted on a pavement, like usual road signs, but which invite fat and thin pedestrians to use two different parts of the pavement. Signer S028 has already interrupted her because she did not understand the sign she was using to designate the pavement (which corresponds to a case of ‘other

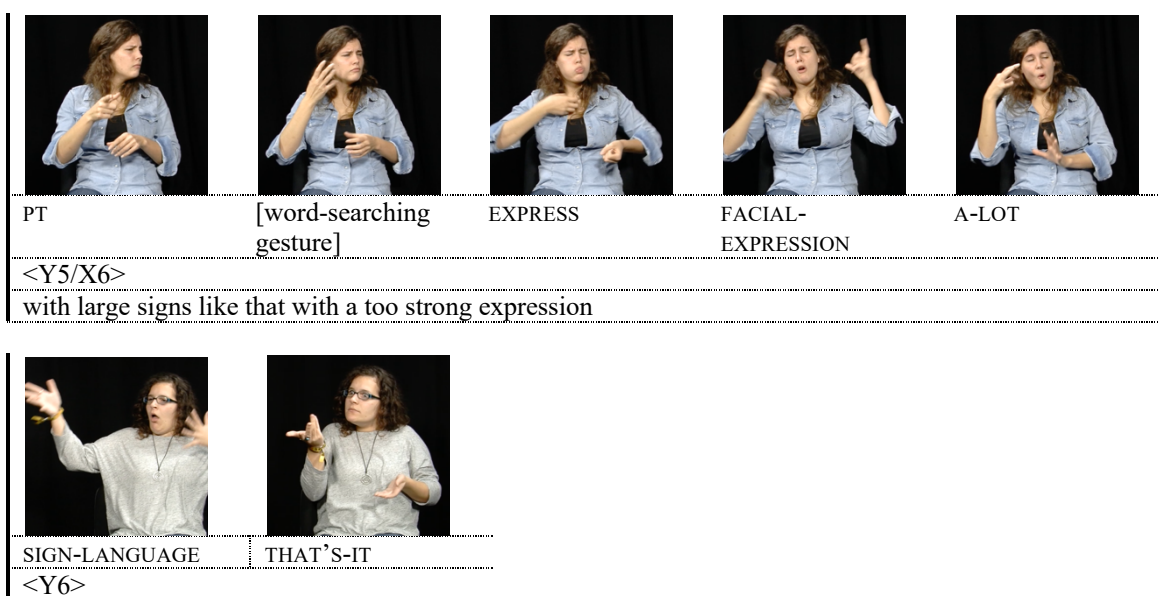
initiated repair', initiated through a question, see Buyn *et al.*, 2018). Then S028 intervenes again to reformulate S029's explanation (in terms of repair analysis, this reformulation corresponds to an offer that S028 proposes to S029 to solve her trouble in understanding): she uses a horizontal space, thus representing and locating the paintings on the ground, to express more clearly what S029 had just explained by speaking about arrows and signs. Both signers resort to composite utterances made up of description, and above all of depiction and indication, by representing the shapes and sizes of the road signs and by positioning them in space.

Another similarity between these two interacting signers concerns the variety of pragmatic functions of their reformulations: both reformulate sometimes to adjust their speech to the interlocutor, to adjust their signs to the referents or to adjust their signs to themselves. Within their self-reformulations, 5 have been identified as fulfilling the function of interlocutor's adjustment. In other words, signers S028 and S029 both use reformulations as means of repair: they not only react to the signs of misunderstanding or disagreement via self-reformulations, but they also react to what the interlocutor says, in reformulating it (other-reformulations) more clearly or in disambiguating her signs.

Globally, S028 and S029 are similarly highly engaged in the exchanges. On several occasions, S028 points out to her interlocutor that she does not understand what she is saying, she clarifies S029's formulations by using signs which seems more appropriate to her; S029 reacts to S028's comments by saying that it was precisely what she wanted to say, etc. Their conversation is animated, as illustrated in example (10) and Figure 6, which is the continuation of example (6). Again, this general description of the involvement of the signers in the linguistic interaction can be related to the description of their reformulations in terms of frequency, pragmatic and semiotic functions.

- (11) <Y5 – PT [gesture] EXPRESS FACIAL-EXPRESSION_[strong facial expression] A-LOT <Y6 – SIGN-LANGUAGE_[large signs and strong facial expression] THAT'S-IT>

“<Y5 – large signs like that with a too strong expression> <Y6 – who sign like that, that's it”



who sign like that, that's it

Figure 7. Illustration of pattern 3: dynamic and balanced interaction (example (10), which is the continuation of example (6)). Corpus LSFB_1205_00:01:01.871-00:01:04.145

5.4 Pattern 4: Asymmetric positions and reduced interaction in conversation

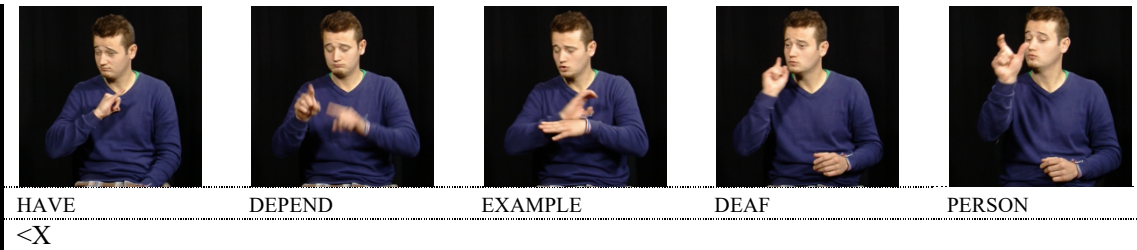
The other two signers, on the contrary, show very unbalanced uses of reformulation in terms of frequency. While S059 is the one who reformulates most on average in our sample, conversely S060 hardly reformulates at all. It is only in the conversation task that he produces a few self-reformulations (n=4) and that he participates in a few other-reformulations (n=3). This asymmetry in the use of reformulations is associated with limited interactions between the signers.

Signers S059 and S060 do not produce reformulations with the pragmatic function of adjusting to the interlocutor. The pragmatic functions of S059's reformulations are balanced between the adjustment of signs to objects and to the signs themselves. Regarding S060, his reformulations are all directed at the adjustment of his signs to the objects he is talking about. Example (12) (Figure 8) gives an illustration.

(11) < X11 – HAVE DEPEND EXAMPLE DEAF PERSON PT:PRO1 MEET ALONE DIRECT NO-ONE PT:PRO3 SIGN-LANGUAGE PT:PRO1 SIGN-LANGUAGE PT:PRO1 DE:WOW PT:PRO3 TODAY THERE HEARING PT:PRO6 PT:PRO3 SIGN-LANGUAGE PT:PRO1 PALM-UP> SAME THAT-MEANS <Y11 – WHAT PT:PRO3 THAT-MEANS SHAME THERE HEARING PT:LOC>

“< X11 – It depends, there are deaf people who sign in a very expressive way when you sign with them in face-to-face, when no one is around, but who sign in a very reduced and sober way when there are hearing people, it's really shocking > <Y11 – it is as if they were ashamed [of their language] in front of hearing people>

Signer S060 is explaining that some deaf signers radically change their way of signing when hearing people are present, in order not to attract their attention. The long X part of the reformulation structure details the example of one person S060 knows and who S060 describes as signing rapidly and energetically, but who suddenly becomes discrete in his signing when hearing people are there. The Y part is comparatively very short. It sums up everything which has preceded it, saying that it is as if he is embarrassed because of the presence of hearing people. It is striking how much the reformulations of S060, be it the X and the Y parts, exploit the combination of description, indication and depiction in composite utterances. All types of signs, i.e., lexical signs, indicating verbs, pointing signs, gestures, etc. seem to be used in a rich combination of semiotic functions.



It depends, there are deaf people



PT:PRO1

MEET

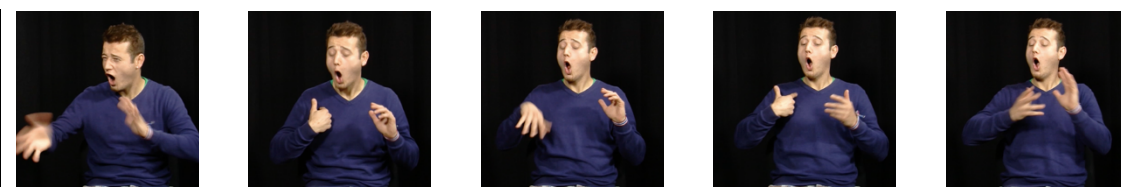
ALONE

DIRECT

NO-ONE

<X>

when you sign with them in face-to-face, when no one is around,



SIGN-LANGUAGE

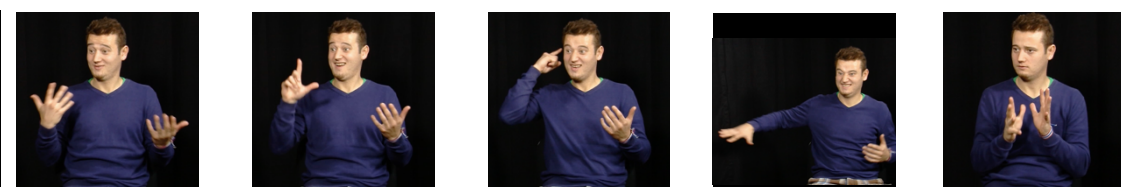
PT:PRO1

DE:WOW

PT:PRO1

SIGN-LANGUAGE

they sign in a very expressive way



NOW

THERE

HEARING

PT:PRO6

SIGN-LANGUAGE

but they sign in a very reduced and sober way when there are hearing people



PT:PRO1

PALM-UP

SAME

WHAT

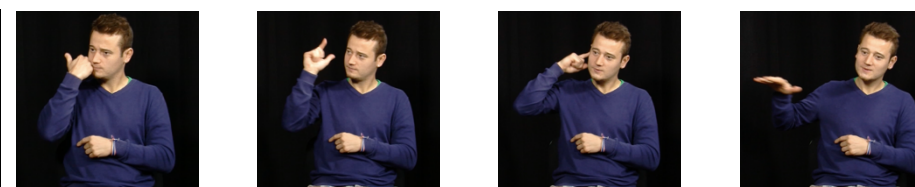
THAT-MEANS

<X>

marker

it's really shocking

it is as if



SHAME

THERE

HEARING

PT:PRO6

<Y>

they were ashamed [of their language] in front of hearing people

Figure 7. Illustration of pattern 4 (in comparison with Figures 4 and 5): asymmetric positions and reduced interaction in conversation (example (11). Corpus LSFB_2905_00:02:31.752-00:02:47.480

Signer S060's expression is globally strongly assured; he seems to be at ease in his way of signing and does not have any difficulty in formulating his ideas and choosing his words. This contrasts with his interlocutor's attitude toward communication, since, as discussed above, S059 is much more attentive to her way of signing and the signs she uses. Such a disparity that appears even in the numbers of Table 2, creates the impression that S060 is more a support for S059 than a peer in the interaction. Once again, the detailed description of the reformulations produced by the signers inform us about the way signers regulate and adjust their language use and their social interaction, according to the specific communicative situation.

6. Reformulation as a window into language use and linguistic sociality

Our study on reformulation is rooted in the hypothesis that, through their use of reformulations, signers (as well as speakers) provide explicit clues on the way they regulate their language use and their interaction according to the communicative situation in which they are involved. Different characteristics of the phenomenon of reformulation support this hypothesis: namely, the fact that it is commonplace in all text types and discourse settings (written, oral and multimodal; monological and interactive; prepared and unprepared); its metalinguistic, or reflexive nature; and its general aim of clarifying and adjusting what is said. In this paper, we undertook to test the reliability of a set of criteria for the analysis of reformulations from the perspective of documenting more generally the involvement of signers in discourse and interaction while they are unfolding.

The results of this exploratory analysis sustain the idea that the analysis of the reformulations produced by each signer and within each dyad of signers offers relevant information on the process of discourse and on the use of language in social interaction in general. More precisely, looking at reformulation reveals which aspects of language and language interaction the signers seek to control, and how they exploit the affordances of their language to do so. According to the pilot sample we used, individual and interactive patterns of discourse management emerge from the description of reformulations in terms of frequency (including frequency of other-reformulations) and in terms of pragmatic and semiotic functions.

The pragmatic functions of reformulation relate to the kind of adjustment that the signer undertakes in putting another way what has already been said. We proposed to establish the typology of these adjustments in extending to reformulations the typology of discourse heterogeneity that Authier-Revuz (1996) established for the reflexive comments (*boucles réflexives*) which speakers produce on their speech while speaking, as for example *vous voyez ce que je veux dire* (you see what I mean), and *ce que certains appellent* (what some call). In categorizing each reformulation as either aiming to control the distance from the interlocutor, the distance from other discourses, the irreducibility of the words and the real, or the non-univocity of words, we reveal what triggers the need to reformulate in each signer. So, looking at these functions we identify what aspects of the discourse situation the attention and the efforts of the signer are directed towards. In other words, we identify the *why* of the reformulation.

In a complementary way, the description of the semiotic functions of each part (i.e., the X and the Y) of the reformulation structure sheds light on the *how* of the reformulation. Based on the conception of language as composite in nature (Enfield,

2009; Ferrara and Hodge, 2018), this criterion reveals to what extent the signers alternate and/or combine the strategies of telling, indicating and showing the meaning of their utterances, which therefore are considered as ‘composite’. For example, a signer may first formulate an idea in foregrounding the descriptive aspect of his/her signs, and then reformulate in giving a depictive representation of the same idea. According to the discourse situation (topic, space and time where/when the discourse takes place, interlocutors, etc.), the signers adapt their semiotic strategies and exploit the affordances of their language accordingly. This component contributes to the identification of patterns and styles of language use and interaction.

The concept of composite utterance (Enfield, 2009), borrowed from this functional semiotic model, highlights that each part of the reformulation structure, i.e., either the X or the Y, may combine strategies of description, indication and depiction. Therefore, it also reminds us that the fact that in a production one meaning can be expressed by two or three different semiotic strategies (e.g., description and depiction) is inherent to language. The semiotic complexity of the utterances, and even each sign that they are composed of, characterizes each part of the reformulation, but it is not a criterion that by itself defines reformulation. This deserves to be noted, as the link between semiotic variety and reformulation remained an open question (see Rabatel, 2010 for French and Cuxac, 2007 for French Sign Language). This statement is also of importance for the identification of reformulations across data, and especially in view of the comparison of data of signed and spoken language, since the linear/simultaneous arrangement of the different resources is not the same in both cases (see Meurant *et al.*, 2022). In the current state of reformulation research, we lack elements to decide whether a structure like the ‘narrative repetition’ of Nilsson (2004) illustrates a composite utterance made up of two verbs expressed by different semiotic strategies, or rather illustrates the reformulation of one verb by the other. In the absence of a reformulation marker linking both verbs, which would make the reformulation process explicit, it should be stated whether or not the narrative repetition is based on a metalinguistic rephrasing by the signer of what he/she has already said, or whether the whole structure, including both verbs, is interpreted holistically. A priori, what we pose here for reformulations, namely that they reflect the adjustments made by the signer in discourse and interaction, does not apply to composite utterances. Further work is still to be done in order to delineate reformulations and disentangle them from other signed language structures that involve both repetition and variation.

In order to avoid the confusion between a composite utterance (e.g., alternating description and depiction) and a reformulation structure (e.g., where X is descriptive and Y is depictive) in this study, we focused only on reformulation structures that are made explicit by the presence of a marker (be it lexical, gestural, or resulting from the repetition of one or several signs from X to Y).

Despite the limits that this restriction and the small size of our data sample impose, this analysis paves the way for further advances in the understanding of reformulation, as well as in the description of discourse process and interaction in signed languages. This work has also contributed to the understanding of how signers negotiate with the affordances and the limitations of their language(s) in discourse. The methodology applied in this pilot study can be replicated for the investigation of bigger samples of data covering more participants and able to compare the use of reformulation across different genres. Since it takes into account the semiotic complexity of language,

the stage is also set to be able to conduct comparative analyses of the language practices of signers and speakers across different languages on an equal footing.

Reformulation is a discursive phenomenon intrinsically linked to the act of communication. It is also, as a result, present in all discourses. However, it remains unknown in the field of signed language linguistics (unlike the phenomenon of repair, with which reformulation partially overlaps). This phenomenon is also totally absent from sign language teaching and interpreter training, even though, if only because of its frequency, reformulation constitutes a linguistic resource of great importance in LSFB. The work presented here lays the methodological groundwork for future research on much larger data sets, in an attempt to compensate for the current gaps in knowledge in the field of signed language pragmatics, and in particular concerning reformulation. These gaps deserve to be filled both for the fundamental research value of this knowledge and for the benefits of its practical applications in the fields of interpretation and language teaching.

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