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**SIMULTANEITY IN
POLYPREDICATIVE
CONSTRUCTIONS IN RUSSIAN
SIGN LANGUAGE**

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While spoken languages primarily make use of the acoustic-auditory modality, sign languages use visual-gestural modality. This results in structural differences between those languages. Sign language properties are especially intriguing due to three domains used to convey linguistic information: simultaneity, iconicity and use of space (Meier 2012).

The main purpose of my research is to define modality-specific strategies of marking overlapping events in Russian Sign Language (RSL), e.g. simultaneous production of two predicates. I will show what types of syntactic constructions are used to mark simultaneity and what are the criteria for fully-simultaneous production of predicates.

JEL Classification: Z.

Keywords: simultaneity, polypredicative constructions, Russian Sign Language, sign language syntax.

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1. Introduction

In sign languages, hands are claimed to be relatively independent articulators (Kimmelman et al. 2016), which allows to convey linguistic information simultaneously. That makes SLs to contrast spoken languages, because in spoken languages entirely different devices are used. Moreover, simultaneous marking of simultaneous events is highly iconic. Generally, sign languages are claimed to rely on iconicity on the lexical level, see, for instance, Wilbur's (2003; 2008; 2010) Event Visibility Hypothesis. This Hypothesis presumes that the internal logical structure of an event is reflected by the phonological structure of a sign, denoting this event.

One might expect that RSL would express simultaneous events by means of producing two verb-signs simultaneously. Thus, implementing the iconicity patterns Zajceva (2000) was the first who has analyzed simultaneously produced signs in complex sentences in RSL. She gave evidence, that simultaneity shows up in RSL in causative (1) and attributive (2) constructions, and in constructions indicating spatial reference (3).

(1) h1: IRON FOR.A.LONG.TIME TEXTILE
h2: IRON-----FLAME.UP

‘Textile flamed up because of overheating of the iron.’

(2) h1: CUPBOARD-----MIRROR
h2: CUPBOARD FLOWERS DOOR.OPENED-----

‘There are flowers on the cupboard; the left (on signer's side) door is open, a mirror is hanging on it’.

(3) h1: TREE-----
h2: GREEN SNOW

‘The green tree is covered by snow.’

[Zajceva 2000: 65, 69, glossing is mine]

However, to my knowledge, there is no research that surveyed constructions indicating relative tense in RSL. Presumably, RSL has an ability to represent simultaneous events iconically by means of using two relatively independent articulators. Thus, my study can contribute to sign language typology, providing patterns of cross-linguistic variation in relation to iconicity in syntax.

Consider fully simultaneous production of two predicates in (4). Note, that both predicates are produced with one hand.

(4) h1: EAT [N4]³

h2: TEXT

‘[I am] eating and texting.’

However, in (5) fully simultaneous production is restricted to a hold. One of the predicates is maintained on the weak hand, while the other one is produced by the strong hand. In this case, the first predicate SPRINKLE.PERFUME is one-handed. The second verb-sign INHALE is generally produced with two hands (notice the weak drop⁴ here):

(5) h1: SPRINKLE.PERFUME----- [N4]

h2: INHALE

‘{A woman is going on a date}, sprinkling perfume and inhaling.’

Finally, there are instances (6) in which neither fully simultaneous production, nor hold is used. In the example below, both verb-signs LAY and THINK.OVER are basically two-handed.

(6) GIRL LAY THINK.OVER LAY [N2]

‘The girls is laying and thinking over.’

These examples demonstrate potential diversity of marking simultaneity in RSL that requires special investigation. In this study, Chapter 2 is concerned with temporal clause linking in spoken languages and simultaneous constructions in sign languages. Chapter 3 presents the methodology used for the study. In Chapter 4 strategies and lexical items found in the data are presented. In Chapter 5, I discuss the implications of the results. Chapter 6 concludes the study.

2. Constructions marking simultaneity

2.1. Temporal clause linking in spoken languages

In this section, I discuss relative tense relationship, where an event is located before, at, or after a reference point, presented by another predicate. Therefore, there are at least two predicates and at least two events in such constructions. Each event has its own time span on the axis, that is events are in some temporal relation. In most general terms three types of temporal relations

3 Signs are conventionally written in SMALL.CAPITALS, which is rough translation to spoken English. The source or the signer’s number or the sign language other than RSL is written in the brackets.

4 Weak drop is the omission of the non-dominant hand in two-handed symmetrical signs with non-alternating movement (Padden, Perlmutter 1987; Pichler 2012).

between events can be indicated: Precedence, Simultaneity, and Subsequence. In this paper, I concentrate on the notion of simultaneity, and other types are not considered further.

In Givón (2001b: 330), Simultaneity and Point Coincidence are divided. Consider examples below: in (7) the predicate *was working* presupposes a time span during which another event *left* took place. So, one event includes the other, and results in Simultaneity. In (8) the predicates *was coming* and *left* could lead to the same relationships of simultaneity between two events. According to Givón, it is grammaticalized connectives *while* and *as* that distinguish relationships of “neutral” Simultaneity and more precise Point Coincidence. In other words, temporal subordinators specify the temporal relation of an adverbial clause to its main clause. A number of temporal relations can be defined by ‘unmarked’ *when* in English. In this case, tense-aspect-modality features of a verb define semantic specificity of temporal relation, cf. activity and state in (9), achievements in (10).

(7) **While** *she was working, he left.*

(8) **As** *she was coming, he saw her.*

(9) **When** *she lived there, everybody was real friendly.*

(10) **When** *he opened the door, she shot him.*

[Givón 2001b: 330]

Another classification is presented in (Longacre 2007: 379–380), where a distinction between overlap and succession are grouped. The system of overlap classification includes: a) coterminous overlap, i.e. two actions are considered to start and stop at roughly the same time; b) punctiliar–continuous overlap, and vice-versa continuous–punctiliar, i.e. there is a continuum of activity during which another activity takes place; c) punctiliar–punctiliar, i.e. two punctiliar events may be reported as timed at the same instant.

Kortmann (2001: 164) presents a classification of semantic relations, relevant to time notions, in European languages:

1. Simultaneity Overlap ‘*when,*’
2. Simultaneity Duration ‘*while,*’
3. Simultaneity Co-Extensiveness ‘*as long as.*’

As indicated above, simultaneity is divided into three sub-types. The criteria include: a) overlapping of situations in time, and b) presence of the interval within which an event is localized.

Muravjev (2018: 24) rightly questioned this classification, because logically Simultaneity Duration is embedded into Simultaneity Co-Extensiveness. In this paper, Kortmann's classification is used to investigate differences between these temporal relation in RSL.

2.2. Simultaneous constructions in sign languages

As it was mentioned earlier, I expected to elicit simultaneous construction used to mark corresponding grammatical value. Basically, three types of simultaneity in sign languages are distinguished: manual simultaneity, manual-oral simultaneity, and simultaneous use of manual with non-manual articulators such as facial expressions.

Manual simultaneity is the focus of this study, though I highlight some relevant non-manuals in Chapter 4, too. The phrases "manual simultaneity" or "simultaneous production" will be used in this study to describe the full production of two lexically independent signs by distinct hands at the same time.

The usage of two relatively independent articulators, i.e. arms and hands, is claimed to be a unique aspect of sign language production. Obviously, articulators are not fully independent because of bimanual coordination and limitations on human language processing. For instance, according to Emmorey (2001: 146), two hands producing distinct signs are related to a single predication, and never used to express distinct propositions, "except as a type of parlor trick requiring extensive practice".

Simultaneously produced signs can be fully-simultaneous, "complete" signs (Miller 1994); or one hand can hold the end-state of a previously produced sign, while the other hand continues to produce the next sign. This structure is addressed as "perseveration" (Miller 1994), "scaffolding" (Leeson, Saeed 2003), "buoys" (Liddell, Vogt-Svendsen, Bergman 2007), and "weak-hand holds" (Kimmelman et al. 2016). I use the terms a *hold*, which is preservation of previously produced verb sign, and *fully-simultaneous production* of two verb signs.

There is a large volume of published studies describing the phenomenon of simultaneous sign production and its functions in American Sign Language, Irish Sign Language, Quebec Sign Language, Danish Sign Language, Sign Language of Netherlands, Russian Sign Language, and many others. First, data from several studies suggest that simultaneous constructions are means of providing coherence for the text. The non-dominant hand indicates backgrounded information, i.e. topic, while the dominant hand expresses focused information (Engberg-Pedersen 1993, Gee, Kegl, 1983, Miller 1994, Kimmelman 2014). Second, simultaneous constructions have been found to mark locative expressions and/or a motion event. In this case, the ground object is expressed

simultaneously with the figure object in two-handed classifier constructions (Engberg-Pedersen 1993, Miller 1994, Emmorey 2001: 85-87). Next, there are simultaneous constructions, in which the non-dominant hand represent ordering, i.e. 1st, 2nd, 3rd, while the dominant hand produces signs associated with numbers. Another type is simultaneous event constructions, a predicate sign is held with one hand while the other hand produces a clause expressing another event. This type of constructions means ‘while doing X, Y happened’ (Emmorey 2001: 147), and the propositions X and Y can have either the same or different subjects. Note, that lexical items like *while*, *when*, *as*, *at the same time*, etc. are not reported to be used in marking simultaneity.

Overall, simultaneous production is generally associated with backgrounded and foregrounded information. That is, one of the events is happening on the ground of another event.

3. Methodology

3.1. Verb-signs and constructions investigated

The design of the questionnaire including polypredicative constructions required definite criteria to choose and mix verb-signs. First, I took into account possible phonological restrictions on simultaneous production. Since I was especially interested in simultaneous manual production, the verbs were mostly presented by one-handed signs or two-handed signs that potentially allow one-handed production depending on the environment.

For the sake of simplicity, the sets include mostly transitive and intransitive plain⁵ verbs that do not mark object-verb agreement, e.g. EAT, SIT, LAUGH. However, there are rare instances of agreement verbs like TELL and LOOK.AT in the data. No spacial verbs and classifier predicates were included.

For elicitation, the sets of verbs were mixed with each other in complex sentences meaning ‘while X, Y happens’. I excluded lexical items and combinations of actionsart which result in the Precedence meaning, e.g. ARRIVE and EAT. Since Past Tense marking is not regular in RSL (Dushkina 2015), all sentences were given in Present. The number of subjects in a clause was restricted to one.

3.2. Elicitation

⁵ Plain verb is a type of verb which does not use space to express specific linguistic information, but it can denote person or aspect (Padden 1990).

The data was obtained through elicitation during the expedition to Novosibirsk, Russia in 2019. I have worked with 43 RSL signers and 1 CODA. Signers were grouped in twos and threes so that I could observe language used interactively. The participants were asked to evaluate the acceptability of sentences produced by me in RSL. If the produced construction failed, they corrected me; if it was acceptable, I asked them to repeat it for the camera. Since I had no data on constructions considered, signers almost always corrected me. Even when I started to realize acceptable patterns, I continued to offer wrong constructions to exclude priming.

This preliminary study was conducted on data obtained from 5 native Deaf RSL signers. I have chosen five Deaf signers of second or third generation with high-level linguistic skills. Three of the five went through special education for Deaf teachers of SL and these three work(-ed) at university teaching RSL. All signers have Deaf parents and some — Deaf children, they actively use RSL in domestic and social communication. I have several reasons for the choice. First, all 5 signers are experienced informants and participate in linguistic research for the second or third time. Importantly, they realize the difference between Signed Russian (calque from spoken Russian) and RSL. Second, experiments conducted by Kokab, Senghash, and Snedeker (2016) on emergence of temporal language in NSL, showed, that signers in first cohort have difficulties in producing signs for two different events. Simultaneous constructions are claimed to be “a challenge of articulation or cognitive load for signers, who must manage the multiple components of these constructions”. Thus, high linguistic skills and experience in producing linguistic information for research are required. The final sample of polypredicative sentences included 100 constructions in RSL.

3.3. Annotation

The elicited constructions were recorded on video, then annotated in ELAN and analyzed. For each construction all distinct sign were annotated. If verb signs overlapped, I made a gloss ‘smlt’, which is simultaneity, on the Category layer and a gloss with means of expression on the Form layer. I also added layers with non-manual markers and annotated them co-occurring with verb-signs.

Layer	00:12:47.500	00:12:48.000	00:12:48.500	00:12:49.000	00:12:49.500	00:12:50.000
rh-1 1347	lie.down	lie.down1	look.at		star:PL	
lh-1 171	lie.down	lie.down1			star:PL	
Translation-1 121	[He] lay down, is lying and whatching stars.					
Category-1 113			smlt			
Form-1 171			hold+nmm			

Fig.1. Annotation in ELAN.

4. Results

In the final sample it was found that fully simultaneous production is extremely rare (four utterances). However, the results reveal another three core formal devices related to marking simultaneity: doubling, hold, and non-manuals. As shown in Table 1, combinations of these devices are found to be more frequent than single devices.

Tab. 1. Strategies for marking simultaneity value.

Means of expression	Quantity in the sample
1. Doubling + non-manuals	23
2. Hold + non-manuals	18
3. Non-manuals	19
4. Hold + doubling + non-manuals	18
5. Doubling	7
6. Hold	6
7. Hold + doubling	5
8. Fully simultaneous production	4
Total	100

The following part of this paper moves on to describe the strategies presented by hold, doubling, fully simultaneous production, and non-manual markers in more detail. The issue of lexical items with simultaneity meaning are described in the end of this section.

4.1. Hold and dominance reversal

A regular strategy to code simultaneity value in the data is hold. A hold is half-maintenance of the previous sign on the non-dominant hand, while the next sign is produced by the dominant hand. The dominant hand is defined here as the one used for fingerspelling, producing one-handed signs and playing the main role in producing two-handed signs. Non-dominant hand is typically less used and depends on the dominant one to high extent.

A hold is often presented by the non-dominant hand — left one for right-handers and vice versa for left-handers. Typical example is the case when the two-handed sign is followed by the one-handed. If so, the non-dominant hand can maintain configuration, orientation and/or localization, while the dominant one is producing the next sign. In this case left non-dominant hand presents a “weak hand hold” (11).

- (11) h1: **DRIVE** GO IX-FORWARD RECOGNIZE IX-BUILDING
 h2: **DRIVE** -----
 ‘She drove around and recognized the building over there.’
 [JSL, Vermeerbergen et al. 2007: 248]

However, there are such constructions in which the dominant hand maintains configuration, orientation and/or localization, while the non-dominant one is producing next signs. Normally, signer’s dominant hand is right (12), (13), but the dominant hand becomes inactive and presents hold in the examples below (14), (15).

- (12) h1: READ ENJOY [N3]
 h2: **READ**-----
 ‘While reading, [I am] getting pleasure.’

- (13) h1: TYPE.ON.KEYBOARD DRINK TYPE.ON.KEYBOARD [N4]
 h2: **TYPE.ON.KEYBOARD**-----
 ‘While typing, [I] had a drink.’

- (14) h1: TEXTING PERSON NOT.UNDERSTAND **TEXTING**---- [N3]
 h2: BE.NERVOUS
 ‘While texting, [I am] nervous, [because] a person does not understand.’

- (15) h1: CLOTHES **DO.IRONING**----- FLAW [N4]
 h2: CLOTHES DO.IRONINGTHINK.OVER DO.IRONINGRECALL FLAW
 ‘While [I] do ironing, thinking over something, [I] recall ironing, [clothes] got a flaw.

The latter is known as “dominance reversal”, which has been observed in a number of sign languages (Frishberg 1985; Engberg-Pedersen 1993; Sutton-Spence, Woll 1993; Vermeerbergen, Leeson, Crasborn 2007; Nillson 2007; Sáfár, Crasborn 2013). Dominance reversal

is a formal device, claimed to imply the following relevant functions: expressing backgrounded information or interjections, expressing semantically different concepts of a similar morphosyntactic structure, marking topic-comment sequence, expressing conjoined phrases. Sáfár and Crasborn (2013) assume that hold has a morphosyntactic function if dominance reversal is present either to produce the hold or in order to maintain it. The reason is that most signers have a “default” hand in producing signs. “Default” hand will be preferred for signing unless it is used for non-linguistic purposes. Consequently, using non-dominant hand requires effort, and there must be a reason to do this effort. In relation to “functional” hold, it is assumed that when a dominance reversal goes before or after the sign where the hold occur, this means that signer endeavors to keep the end state of that sign.

My data shows that dominance reversal occurs in the utterances marking simultaneity. As it was mentioned earlier, the non-dominant hand is claimed to identify backgrounded information, and the dominant hand expresses foregrounded information. In (12), (13), (14), (15) a hold establishes the reference time, while the other hand changes to express following events happening within the within the interval of the reference time.

4.2. Doubling

Striking results that emerge from the data is that doubling occur to be another regular strategy to express simultaneity. The examples below illustrate these observations: the verb signs in bold are doubled in the left and in the right periphery of the utterances.

- (16) **BE.NERVOUS** SMOKE **BE.NERVOUS** [N1]
 ‘Being nervous, [I am] smoking.’
- (17) CLOTHES **DO.IRONING** DREAM THINK.OVER PONDER **DO.IRONING** [N2]
 ‘Doing ironing, [I am] dreaming, thinking over something, and pondering.’
- (18) **CAKLE** CONVERSE **CAKLE** [N3]
 ‘[We are] conversing, cackling.’
- (19) **LAY** THINK.ABOUT **LAY** [N4]
 ‘[The man] is laying and thinking about something.’

Spontaneously elicited utterance in which the propositions have different subjects presents this strategy, too. The example in (20) illustrates a case of doubling of the predicate TYPE belonging to the first proposition within which the other two predicates SIT and DRINK belonging to another proposition are embedded:

- (20) GIRL TABLE DOCUMENTS **TYPE** / GIRL SECOND **SIT:LOC** IX TEA **DRINK** IX **TYPE** [N1]
 ‘While [one] girl is typing documents, [another one] is sitting drinking tea.’

In addition, controversial constructions with two doublings were found (21), (22), (23). For now, it is not clear how to interpret them. Previous research in sign languages shows, that the clause with doubling is subordinate (Fischer and Janis 1990). In (21), (22) backgrounded and foregrounded information can be potentially distinguished pragmatically, whereas utterances still have two possible interpretations in the absence of the context. For now, I present both possible interpretations with subordinate clause. Yet possible option is that there is no subordination at all.

(21) **TEXT BE.NERVOUS TEXT S-M-S BE.NERVOUS** [N1]

‘While I am texting, I am nervous’ or ‘I text while being nervous.’

(22) **SMOKE EXPLAIN SMOKE EXPLAIN** [N1]

‘While [somebody] is explaining, [he/she] is smoking’ or ‘While [somebody] is smoking [he/she] is explaining.’

(23) **FRIEND SIT CHAT EAT CHAT EAT** [N3]

‘My friend and I are sitting, chatting, and eating.’

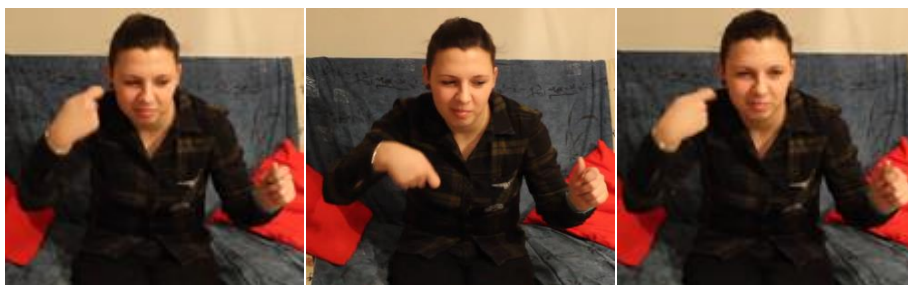
To sum up, doubling expresses backgrounded information, that is relative clause. This strategy is discussed in Section 5 in more details.

4.3. Fully-simultaneous production

Unexpected outcomes to emerge from the data is that fully-simultaneous production of signs was quite rare. In previous studies, strong constraints on the form of simultaneously produced signs are claimed. For example, the two simultaneous predicates generally cannot contain distinct movement morphemes. However, four instances of fully simultaneous articulation are found in the data.

In (24a) right-hand-sign EAT does not lack circular path movement and internal repetition in left-hand-sign TEXT is maintained, too. That is both hand include movement, although internal movement in the sign TEXT is originally quite short.

(24)



a. h1: EAT [N4]
h2: TEXT

‘[I am] eating and texting.’

Interestingly, the same utterance can be produced by changing hands. In (24b), the right hand is producing the sign TEXT, and the left hand is producing the sign EAT. In both cases signs are originally one-handed and start right at the same time. Note, however, that configurations of two distinct signs are the same, which potentially makes the productions of different kinds of movement easier.



b. h1: TEXT

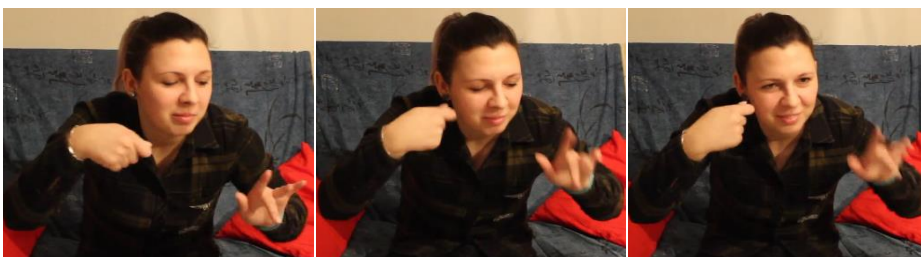
[N4]

h2: EAT

‘[I am] eating and texting.’

In (25) below, right hand is producing the sign EAT and left hand expresses SCROLL. This instance is more interesting, because these two signs have rather different movement morphemes. Recall that the sign EAT include circular movement or “tracing”, but the sign SCROLL implies repetitive back and forth movement or “direction”.

(25)



h1: EAT

[N4]

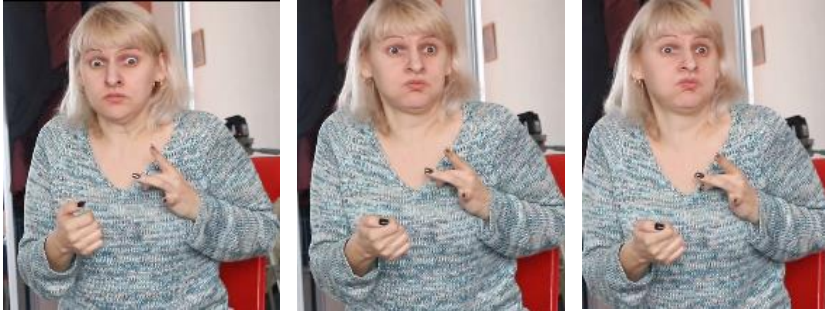
h2: SCROLL

‘[I am] eating and scrolling.’

In contrast to the previous examples where the signer begins to produce one-handed signs right in the same time, the utterance in (26) begins with two-handed sign TEXT which is followed by the weak drop. That is, second predicate BE.NERVOUS is originally two-handed, but the second hand is omitted in the example below, while the dominant hand continues to produce the sign TEXT with very short internal movement.

Thus, for now, it is not clear how to interpret this example formally: since the verb sign TEXT does not lack its hand-internal movement, I put it in the sample of fully-simultaneous production, but not hold. However, since the predicate does not contain any path movements in its initial form, it still resembles hold.

(26)



h1: TEXT

[N3]

h2: BE.NERVOUS

‘[I am] texting and getting rattled.’

4.4. Non-manual markers

Two possible combinations of signs with non-manual markers has been found in the data. First, sequential sign production with joint non-manual marker, that is non-manual accompanying the first predicate is spread on the second sign.

In (27) below, joint non-manual markers are screwed up eyes and a head tilt to the right shoulder. The joint non-manual markers, first, identify one and the same subject, and second, preservation of non-manual presupposes, that previously expressed activity continues to take place.

(27)



esc, htr

HAVE.A.REST

READ

[N1]

‘[I am] having a rest and reading.’

In (28) below, eye gaze on the left and upward, and head tilt to the right shoulder are maintained within three predicates. Head tilt is more overt, because it is a part of the lexical sign THINK. Note that it is spread on the next verb sign DREAM.

(28)

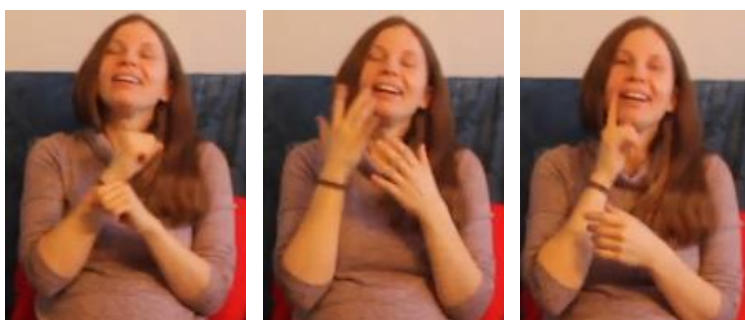


	<u>glp, htrb</u>	
TOSS	THINK	DREAM = ‘ponder’
		[N3]

‘[I am] tossing, thinking, and pondering [something].’

In (29), three non-manual markers are joint in the utterance: for the first two predicates FALL.ASLEEP and DREAM eyes are closed, and all three verb signs share a head tilt back and mouth open.

(29)



	<u>ecl</u>	
FALL.ASLEEP	DREAM	<u>hb, mo</u> ENJOY

‘[I am] sleeping, seeing dreams and getting pleased.’

The second possible combination of signs with non-manuals to mark simultaneity is the case when a manual verb sign is produced with a non-manual marker expressing the second predicate (30), (31). Generally, in literature, this phenomena is referred to as manual-oral simultaneity.

In (30) below, non-manual sign meaning ‘look out of the window’ occurs earlier and then is followed by the manual sign TELL. In this utterance, no signs LOOK or WINDOW occur, that is the first predicate is expressed only with non-manual marker.

(30)



hr

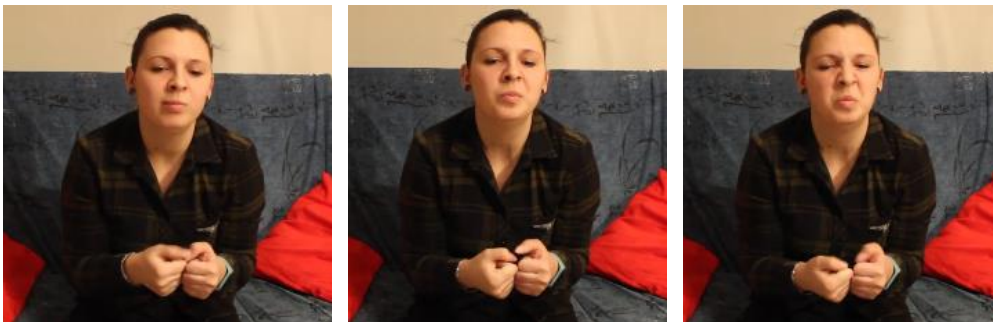
look.out.of.the.window

TELL = 'give a lecture'

'{I am working just for the appearance,} giving a lecture looking out of the window.'

In (31), the manual sign TEXT is produced relatively longer than usually, and non-manual marker, denoting second predicate, is changing during the time meaning 'getting nervous more and more'.

(31)



bf, lm, nw

get.nervous

TEXT-----

'[I am] texting and getting nervous more and more.'

To sum up, non-manual markers contribute to the devises of expressing simultaneity. According to the data, the most frequent markers are gaze: 55 instances, head tilts: 54 instances, and eyes: 27 instances, all being combined with other strategies, too.

4.5. Lexical items with simultaneity meaning

Before proceeding to discuss syntactical means of simultaneity marking, it should be noted that no lexical items were found in the elicited data. However, in sign language dictionary Spreadthesign I found 3 presumably compound signs meaning 'simultaneously' (Spreadthesign, 2018). They are (32) ONE^TIME, (33) TIME^SAME.AS, (34) TIME^THE.SAME, illustrated below.

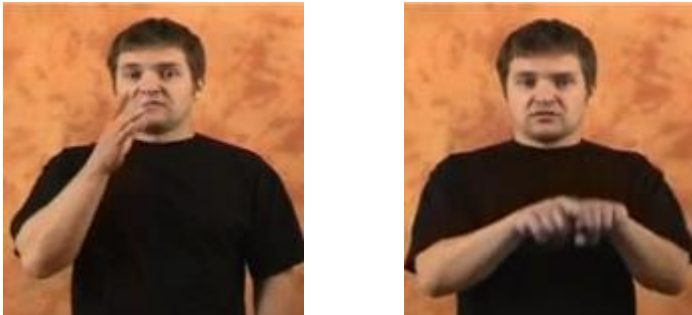
(32)



ONE^TIME

[\[https://media.spreadthesign.com/video/mp4/12/319200.mp4\]](https://media.spreadthesign.com/video/mp4/12/319200.mp4)

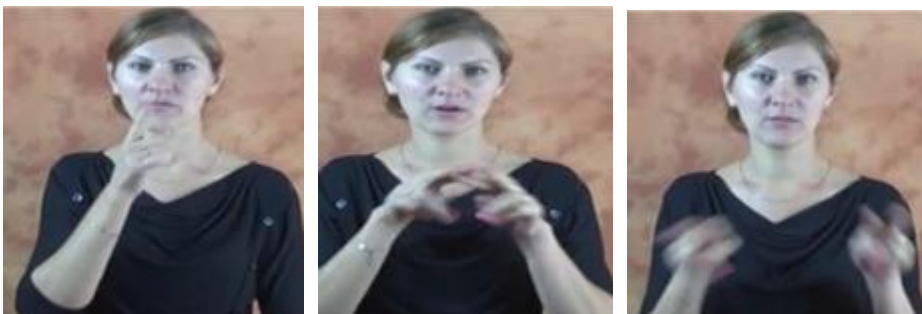
(33)



TIME^SAME.AS

[\[https://media.spreadthesign.com/video/mp4/12/16234.mp4\]](https://media.spreadthesign.com/video/mp4/12/16234.mp4)

(34)



TIME^THE.SAME

[\[https://media.spreadthesign.com/video/mp4/12/296994.mp4\]](https://media.spreadthesign.com/video/mp4/12/296994.mp4)

RSL corpus includes one controversial example glossed AT.THE.SAME.TIME.WITH.HIM.
I provide corpus notation with translation below (35).

- (35) GIRL LOOK.AT NOT.KNOW **AT.THE.SAME.TIME.WITH.HIM** BLIND HEARING.AID BE:PRES
LOOK.AT CAN CATCH IX UNNOTICEABLE

‘The girl says: “Do not know where”, and doesn’t notice the hearing aid.’

[<http://rsl.nstu.ru/data/view/id/73/t/26630/d/27520>]

The gloss of the considered lexical item is unsatisfactory, since it includes the sign **THE.SAME** which also occurs as a part of the compounds from Spreadthesign. For the sake of clarity I gloss the signs from the corpus as **TOGETHER THE.SAME**.



TOGETHER

THE.SAME:LOC

The examples given below were gathered during the fieldwork in Novosibirsk through elicitation and interview. **THE.SAME** sign also occurs in equality constructions, when comparing two entities:

- (36) TWINS FACE **THE.SAME** / *SAME.AS

‘The twins have the same faces.’

- (37) CLOTHES **THE.SAME** / *SAME.AS

‘[They have] the same clothes.’

The sign **SAME.AS** is used in conjoined comparative constructions:

- (38) M-A-Š-A CLEVER D-A-Š-A **SAME.AS** CLEVER

‘Masha is as clever as Dasha.’

The difference is more clear when properties of actions are compared:

- (39) a. P-E-T-JA RUN **THE.SAME** V-A-S-JA

‘Petya runs as fast as Vasya.’

- b. P-E-T-JA RUN *(SPEED) **SAME.AS** IX BOY V-A-S-JA

‘Petya runs as fast as Vasya.’

In RSL the signs **SAME.AS** seems to mark equative meaning, which is the equality of two degrees. The sign **THE.SAME** marks similitive meaning, which is the similarity of two events or entities. To express equative, there must be a scale so that is why examples in (36), (37) are ungrammatical with

SAME.AS: one cannot put a scale into faces and clothes. A similative marks identity of two events or objects and they don't need any scales. That is why it is felicitous in more contexts and doesn't need a scale to be expressed in (39a) opposed to (39b). Taking into account all above, the example from corpus would rather mean 'The girl says: "Do not know where", we both do not notice the hearing aid'.

Since SAME.AS and THE.SAME are used in comparative constructions, I expect to observe them in contexts with comparison of time in predicate groups with different subjects. The question for further research is whether ONE^TIME, TIME^SAME.AS, TIME^THE.SAME and TOGETHER^THE.SAME are lexicalized compounds or distinct parts of a verb phrase.

Overall, according to my data, simultaneity in RSL can be marked by hold, doubling, fully simultaneous production, and non-manual markers. Combinations of strategies described in 4.1-4.4 require special attention and are discussed in the next chapter.

5. Discussion








In the current study, the main purpose was to identify modality-specific strategies marking overlapping events. I assumed that simultaneous events can be expressed iconically by means of using two relatively independent articulators. The following strategies has been found: a hold, doubling, fully-simultaneous production, and non-manuals. In this section, I describe phonological restrictions on simultaneous production and a hold. Research question for further investigations are discussed, too.

The small size of the data set does not allow to state that doubling is a specialized type of construction to mark simultaneity, yet. Previously proposed morphosyntactic functions of doubling in sign languages include "heaviness" of the predicate (Fisher, Janis 1990), aspect marking of intransitive verb-signs (Liddell 2003), and argument incorporation (Kegl 1985). Still the regular presence of the utterances with doubling obtained from different informants in the data makes this notion an area for further work. Doubling strategy is not discussed further because of limitations based on the large set of potential combinations of the verb-signs to test.

5.1. Phonological restrictions on fully-simultaneous production

On the question of fully-simultaneous production of signs, this study found that this strategy is extremely infrequent. Battison (1978) proposed two restrictions on simultaneous movements in two-handed signs production.

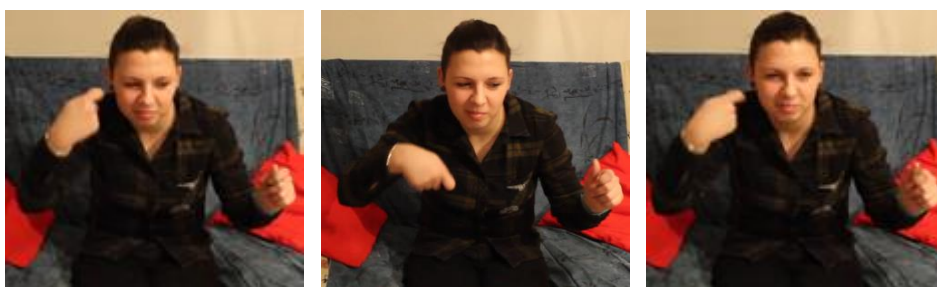
First, the symmetry condition states that, if both hands in a sign move, either alternating or simultaneous, then the handshape, the movement, and the location must be the same. Second, the dominance condition presuppose that, if the hands of a two-handed sign have distinct handshapes,

then the dominant hand can move only while the passive hand stays in one place. The set of handshapes available for non-dominant hand is restricted to unmarked ones. At least in ASL, they are A , S , B , 5 , G , C , and O  (Battison 1987: 55). Similarly, Emmorey (2002) has claimed that in simultaneous production, the motion morphemes within each predicate must be the same. Hendriks (2007: 240) discussed Jordanian Sign Language in more general restrictions: “Manual simultaneity can only take place when at least one of the hands makes no lexically specified movement, or when the movement of the two hands is symmetrical”.

However, rare instances of fully simultaneous production in the data yet contradicts with more general interpretation that of Battison (1978), and Emmorey (2002). Section 4.3. provided examples of fully simultaneous production, which I repeat below.

The utterances in (40a) and (40b) partly meets the symmetry condition. In both (40a) and (40b), the handshapes of both signs are nearly the same, but the movement and the location are different.

(40)

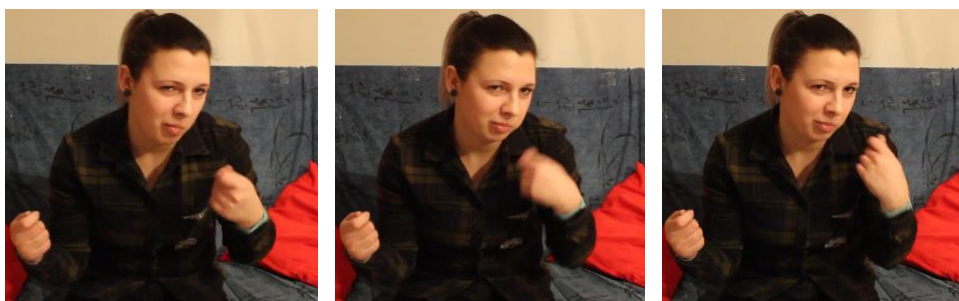


a. h1: EAT [N4]

h2: TEXT

‘[I am] eating and texting.’

Common handshape may contribute to the fact that the signer easily changes hands, and produces the same utterance in (40b) below.



b. h1: TEXT [N4]

h2: EAT

‘[I am] eating and texting.’

Example in (41) yet contradicts all the previously proposed restrictions. The handshapes and locations are different, “tracing” and “direction” movements co-occur.

(41)



h1: EAT

[N4]

h2: SCROLL

‘[I am] eating and scrolling.’

RSL is not the first sign language to be found permitting fully-simultaneous construction in which signs violate Battison’s proposal. Tang et.al. (2007) assume that “conjoined or temporal embedding of clauses”, where different predicates are subsumed under the same event, are sites for “potential violations.”cf. two propositions in Hong Kong Sign Language (42).

(42) h1: DRINK -----

[HKSL]

h2: DRIVE -----





‘(The man) was drinking while driving.’

[Tang et al. 2007: 192]

To conclude, fully-simultaneous production in RSL is presented, and previously proposed phonological restrictions do not hold. Nevertheless, this strategy seems to be an exception rather than a rule due to limited set of utterances in the data. Regarding simultaneous production of two verb-signs, it means that two predicates characterized by different phonological features must undergo either phonological change or result in a syntactic transformation. The data shows both options: the hold strategy demonstrates phonological change, i.e. lack of movement feature, while the doubling strategy seems to present a syntactic transformation.

5.2. Restrictions on a hold production

One of the most productive strategies found in the data was a hold. In this case, constructions formally meet the Symmetry Condition, the Dominance condition, and the generalization proposed by Hendriks (2007). A likely explanation which comes from the data is that in a hold strategy, signs are produced simultaneously if the first predicate is two-handed, and the configuration of one of the hands in the first predicate is unmarked. In the data analyzed here, there are no utterances in which

hold would be presented by the sign with marked configuration. The most frequent unmarked configurations in the data are A , B , 5 , G  This generalization holds within the cases of the dominance reversal, too. However, limitations of the data set should be taken into account.

With regard to the further investigation, another parameter defining the type of a hold strategy can be a movement type. A path movement is characterized by changing the location of a sign during the production (Sandler 2012), and is primarily made with the elbow or shoulder. A local movement, also known as ‘hand-internal movement’, is the change of a handshape, that is, movement made by the wrist, knuckles, or finger joints (Brentari 1998). Both path and local types of movement can include [repeat] and/or [return] features (Mak, Tang 2011).

Signs with simple path/local movement and [repeat] feature present full articulation during the repetition. As a rule, repetitions in verb-signs mark for duration of the event. For instance, in RSL, the signs with simple path movement and [repeat] feature are:

PRAISE (<https://media.spreadthesign.com/video/mp4/12/295250.mp4>),

HARM (<https://media.spreadthesign.com/video/mp4/12/318929.mp4>),

DEPEND (<https://media.spreadthesign.com/video/mp4/12/316014.mp4>).

In these signs the final state of the first and the second movement are identical, so, it is full repetition, which is part of the lexical specification. Transitional or ‘zero’ movement is not lexically specified here, while the first and the second movements have the same end-state. The feature [return] is inherent in signs with path or handshape being returned to its initial state. In RSL, simple path movement with [return] feature can be illustrated by the following signs:

SIGH (<https://media.spreadthesign.com/video/mp4/12/109583.mp4>),

CONTROL (<https://media.spreadthesign.com/video/mp4/12/133829.mp4>),

BOUNCE (<https://media.spreadthesign.com/video/mp4/12/319628.mp4>).

The examples of a simple local movement with [return] feature are presented in the signs:

YAWN (<https://media.spreadthesign.com/video/mp4/12/318965.mp4>),

WINK (<https://media.spreadthesign.com/video/mp4/12/181866.mp4>),

CORRECT (<https://media.spreadthesign.com/video/mp4/12/319839.mp4>).

In contrast to previously mentioned examples, the following signs contain both [return] and [repeat] features:

FIGHT (<https://media.spreadthesign.com/video/mp4/12/43099.mp4>),

SHIP.DRIFT (<https://media.spreadthesign.com/video/mp4/12/318687.mp4>).

Notice that first, location is changed, then, hands **return** to the initial state, which is lexically specified. These movements are **repeated** two or three times within each sign. The sign FIGHT has a

simple path movement, while the sign SHIP.DRIFT has both a path and local movements, so, it is a complex one. Complex movement in a sign is characterized by the presence of more than one local movement and/or by combination of path and local movements.

So, based on the current data, I assume that possible hypothesis for further investigations could be the following. A hold strategy is triggered by unmarked configuration of non-dominant hand in the first two-handed verb-sign (e.g. DO.IRONING). If the first verb-sign is one-handed, a simple path/local movement with [return] feature can lead to a hold strategy (e.g. SPRINKLE.PERFUME). In both cases a weak drop and dominance reversal are expected when the second predicate is two-handed (e.g. INHALE).

6. Conclusions

This study was undertaken to investigate polypredicative constructions marking simultaneity in RSL. On the major question of types of syntactic constructions, the following formal devices has been found: a hold, doubling, fully-simultaneous production, and non-manuals. According to the data, combinations of these devices are used more often. The data analyzed here showed, that fully-simultaneous production of verb signs is not regular yet possible device. The principal theoretical implication of this study is that formal devices found in the study imply modality effects, which is due to different articulators and spacial-visual modality of sign languages.

On the question of phonological change, rich body of the utterances in which the hold strategy was found, may be due to the phonological change in the first predicate. That is fully-simultaneous production demands cognitive effort, while a hold is cognitively easier formal device. It might be possible to test the relation between two-handed / one-handed signs and the strategy in use. It might be that the first predicate lack the movement morpheme, while the next predicate is produced. However, it was shown, that held signs may be restricted to those which tend to have unmarked configuration.

Further research questions that also could be asked include the criteria to distinguish distinct strategy within temporal relations. Options to enhance the issues of temporal relations and their presumable connections with diagrammatic iconicity might involve acceptability judgments in further work.

This study was limited to the utterances with one subject, however, in future investigations, it might be possible to use stimuli including two or more subjects. I assume, that strategies found in this study might be combined or distributed with different subjects in some other way. It is expected, that lexical items, which are absent in the data gathered during this research, may occur in the utterances with different subject, too.

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