**A report on the work already done**

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**Research question**

In our project we consider the distribution and function of one non-manual marker, namely eyebrow raise (in what follows, ‘br’) in RSL. Our aim is to investigate which constructions are marked by ‘br’ and to answer the question on why ‘br’ marks exactly these constructions.

**Steps**

Our work consists of three main part: reading, data collection, analyzing.

1. *To understand from the literature what is marked by ‘br’ in RSL.*
According to Burkova (2012:56), conditional constructions are always marked by ‘br’. ‘br’ may spread differently over manual signs but, nevertheless, the first sign in the antecedent is always marked, and ‘br’ never spreads over the consequent. Burkova (2012:57) also mentions that this non-manual marker also occurs in *yes*-*no* questions. Moreover, Aarons (1996) argues that topicalization in ASL is also marked by ‘br’. Since there are no separate studies on topicalization in RSL, we decided to check constructions with topicalization, too. Having learned from Burkova (2012) that in RSL ‘br’ marks: i) the antecedent part of conditional constructions; ii) *yes*-*no* questions, we wondered about whether it can mark: i) *wh*-questions; ii) topic and focus.
2. *To understand from the corpus what is marked by ‘br’ in RSL.*
In order to answer these questions we consulted the RSL corpus and elicited from native speakers of RSL (after consulting the corpus and making an initial hypothesis). Since the RSL corpus (http://rsl.nstu.ru/) does not contain a layer with non-manual markers, we chose and annotated three video-recordings ourselves. In our sample of video-recordings we included different types of texts: two dialogues and one story-telling. We paid special attention to *wh*-questions and to topicalized and focalized expressions. We ended up with [a google sheet](https://docs.google.com/spreadsheets/d/1PJnT8TspTQVSajJmABRh0ekpwhP6MNYKLUM95yB01pg/edit#gid=0), where we included glossed sentences containing ‘br’ (highlighted cells are signs that are marked by ‘br’) and sentences in which we expected ‘br’ to occur.
3. *To understand how ‘br’ is analyzed in other languages.*The most extensively studied language with respect to ‘br’ marking is ASL. In this language ‘br’ occur in a number of environments, including *yes-no* questions, contrastive topics, topics, *wh*-clefts, and others. Wilbur and Patschke (1999) developed a syntactic analysis of ‘br’ that aims to capture its wide distribution. According to what they propose, ‘br’ marks A'-positions that are associated with an operator features [−wh]. That is why *wh*-questions, that arguably bear the [+wh] operator feature, are not marked by ‘br’. In contrast, the feature of *yes-no* questions, the content of which moved to the SpecCP, is checked by Spec-head agreement with [Q] in the head C (Figure 3). The ‘br’ marks the scope of the operator feature. As the whole material of a *yes-no* question falls under the scope of the operator, we observe ‘br’ spreading over the whole question. A similar explanation is applied to topicalization, *wh*-clefts, and the focus signs THAT, ONLY-ONE and SAME, that are also [-wh] and bear the feature F.

4. *To propose an analysis for ‘br’ in RSL*In our work, we followed a different way of analysis. Specifically, tried to apply a semantic rather than a syntactic explanation for the distribution of ‘br’ in RSL. For this we adopted certain assumptions of the inquisitive semantics framework and a hypothesis (which will be spelled out below). Then we checked the predictions of our analysis (see Section Data) and summed up preliminary results (see Section Discussion).

**Hypothesis**

We decided to provide a semantic analysis of the distribution of ‘br’ in Russian. Taking into account the initial sample of constructions and environments in which ‘br’ occurs, we made a hypothesis that its function is to signal that the proposition is *inquisitive*. More specifically, we hypothesized that it may mark a highlighted proposition within a set of alternative possibilities falling under the denotation of respective construction.

The notion of inquisitiveness was originally formulated in the recently developed theory of inquisitive semantics (see, e.g., Ciardelli et. al 2018). The most prominent distinctive characteristic of this framework is that, unlike traditional truth-conditional semantics, it treats questions and assertions in a uniform way. Namely, it takes declaratives and interrogatives to denote the same kind of semantic object — a set of propositions. The function of declaratives and interrogatives in conversation is to raise (and possibly resolve) *issues*. Propositions are pieces of information that serve to resolve a particular issue raised by a sentence. The difference between a declarative and an interrogative with respect to their semantic content lies in the fact that while the latter denotes a non-singleton set of propositions, the former denotes a singleton one. From this follows different impact of these types of sentences on discourse settings. While declaratives raise a trivial issue (because the informative content of declaratives is enough to resolve the raised issue itself), interrogatives raise non-trivial issues — their content is not enough to rule out any possibilities.

Sentences can also be characterized with respect to the properties of being *inquisitive* and *informative*. A sentence is said to be inquisitive if it contains more than one possibility, and informative, if it rules out at least some possibilities. A simple declarative sentence like *Mary prefers coffee* is informative and non-inquisitive, while a declarative containing disjunction like *Mary prefers coffee or tea* is both informative (it rules out at least some possibilities) and inquisitive (it leaves more than one possibility). In contrast, an interrogative sentence is always inquisitive and non-informative. Crucially, as Roelfson & Gool (2010) claim, alternative possibilities in the denotation of a given sentence may or may not be *highlighted*. A highlighted possibility is, roughly speaking, the one that is explicitly mentioned by the respective sentence. As simple assertions make available only one alternative, we thus get only one alternative that is highlighted. Within the standard assumption that a *yes*-*no* question makes two possibilities available (its positive and negative answers), the highlighted possibility is the one that is explicitly mentioned in this questions. In a question like *Did Mary leave?* the highlighted possibility (among *Mary left* and *Mary didn’t leave*) is *Mary left*. In contrast, in a question like *Didn’t Mary leave?* the highlighted possibility (again among *Mary left* and *Mary didn’t leave*) is Mary didn’t leave. *Wh*-questions make no possibilities highlighted.

Returning to the distribution of ‘br’ in RSL we hypothesized that it appears in constructions that denote inquisitive propositions with a highlighted alternative. This hypothesis was primarily based on what Burkova (2012) claimed, namely that ‘br’ accompanies *yes*-*no* questions and antecedents of conditional constructions. While it is clear that *yes*-*no* questions satisfy the relevant requirement (for the now standard view on the semantics of *yes*-*no* questions see Hamblin (1973)), things may be less obvious in the case of antecedents of conditionals. Although we are not aware of any particular analysis that would state that the semantic content of antecedents is a set of propositions, antecedents of conditionals, just like questions, are known to be non-veridical (for the particular formulation of this notion see Giannakidou (1998)), that is, they are consistent with both *p* and non-*p* being true. Presumably, one of these propositions is also always highlighted. This mean that with respect to property that we push for *yes*-*no* questions and antecedents of conditionals are identical.

**Data**

In order to identify what can be marked by ‘br’, we made a [questionnaire](https://docs.google.com/document/d/1btbBTUeAaGw9dRZsF-O1Q-fuP4ikii_hGIuVd0QV94U/edit) and included in it various stimula on *wh-*questions, alternative questions, contrastive topics and focused constituents. Below we will present some relevant examples.

We found out that ‘br’ occurs in *wh*-questions and, interestingly, appears not only on *wh-*words but also on the rest of the clause, (1).

1. br
RAILWAY.STATION HOW
‘How to get to railway station?’

In alternative questions, ‘br’ also spreads over the whole sentence containing two alternatives, (2).

1. br
TEA COFFEE
‘Do you want tea or coffee?’

Our elicited data further shows that contrastive topics (3) (and focus) are marked by ‘br’, too.

1. [Who did bring what?]
 br br br
MOTHER BRING CAKE FATHER BRING FLOWERS FRIEND BRING PRESENT
‘Mother brought a cake, father brought flowers and friend gave me a present.’

One exception to this generalization is contrastive focus in negative answers, where there is a negative non-manual marker on the negative sign and no non-manual marking on the object at all (4). We hope to establish why this is the case in future research.

1. [Do you go by bus?]
neg
NO CAR
‘No, I go by car.’

The so-called aboutness (5) and scene-setting (6) topics are also marked by ‘br’. Expectedly, in these constructions, ‘br’ does not spread over the whole clause.

1. [Mother cooked soup and chicken.]
 br
THIS IX SOUP BOY EAT IX
‘This soup boy is eating.’
2. br
CAR IX BAG
‘The bag in the car.’

**Discussion**

During the elicitation sessions we noticed that: i) besides raised eyebrows, there is one more related non-manual marker, which is expressed as frown eyebrows and appear only on *wh*-words, such as WHY; ii) ‘br’ also marks surprising. An interesting question for further investigation, as we see it, is whether it is a true grammatical marker of mirativity or a mere extra-linguistic means of indicating non-expectedness.

What became obvious to us is that our initial hypothesis was not valid. The main piece of data that contradicts it is *wh*-questions. Although they do in fact denote sets of propositions, they however do not highlight any proposition from their denotation. We revised our initial hypothesis and currently think that a more simple notion of being inquisitive can be used for capturing the distribution of ‘br’ in RSL. We leave the elaboration of this hypothesis for future work.

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