

## Polar responses in Russian across modalities and across interfaces

### 1. Overview

- Contextualizing the project:
    - How are different types of polarity encoded cross-linguistically in POLAR RESPONSES, such as in (1) (Farkas & Bruce 2010; Krifka 2013; Roelofsen & Farkas 2015, etc.)?
- (1) A: {Did Nina pass the exam?, Nina passed the exam.}  
 B: {Yes, she did., No, she didn't.}
- More recently, how do we incorporate gestural and prosodic data into the picture (e.g., González-Fuente et al. 2015)?
- What I do: make novel empirical observations about head gestures and prosody in Russian polar responses and discuss their potential theoretical implications for how non-spoken content contributes to meaning as well as the grammar of polar responses:

- (i) Russian doesn't have a spoken particle to mark positive ABSOLUTE POLARITY, i.e., polarity of the response itself (cf. RELATIVE POLARITY, i.e., polarity with respect to the antecedent speech act). Head nods fill this gap, which shows that they fit well into the typology of polarity markers, but lexicalize independently of spoken particles.
- (ii) The following facts raise questions about how polar responses are constrained at the interfaces (e.g., How are the two types of polarity represented syntactically? How does a cooperative speaker structure their polar responses?):
  - (a) There are various constraints on co-occurrence and linear placement of polarity markers, spoken and gestural. I'll discuss one of them proposing a pragmatic constraint on how we disagree with antecedent speech acts.
  - (b) Relative-polarity-realizing particles tend to be more prosodically independent than absolute-polarity-realizing particles. I'll discuss potential ways to capture this distinction.

### 2. Background

- Roelofsen & Farkas (2015) (R&F): polar responses are categorized by two polarity types:<sup>1</sup>
  - ABSOLUTE POLARITY of the response itself ([+] or [-])
  - RELATIVE POLARITY with respect to the antecedent speech act ([AGREE] or [REVERSE])
- Languages have different inventories of polarity markers wrt the features they can realize.
- English *yes* and *no* can realize both types of polarity:

<sup>1</sup> R&F treat the objects in [] as morphosyntactic features; I adopt their terminology descriptively. Notation-wise, I show both features for each response and enclose the feature realized by the given particle instance (when it's clear what it is) in a box.

- (2) A: {Did Nina not pass the exam?, Nina didn't pass the exam.}  
 B: (i) Yes, she didn't. [AGREE, -]  
 (ii) No, she didn't. [AGREE, -]  
 (iii) Yes, she did. [REVERSE, +]  
 (iv) No, she did. [REVERSE, +]

- French (a.o.) has a dedicated particle for [REVERSE, +] responses only:

- (3) A: Nina n'a pas passé l'examen {?, .}  
 Nina NEG-has NEG passed the-exam  
 'Did Nina not pass the exam?'  
 B: {Si, \*oui, ?non}, elle l'a passé.  
 SI OUI NON she it-has passed  
 'Yes, she passed it.' [REVERSE, +]

- (4) A: {Est-ce que Nina a passé l'examen ?, Nina a passé l'examen.}  
 is-it that Nina has passed the-exam Nina has passed the-exam  
 'Did Nina pass the exam?'  
 B: (i) {\*Si, oui}, elle l'a passé.  
 SI OUI she it-has passed  
 'Yes, she passed it.' [AGREE, +]  
 (ii) {\*Si, non}, elle ne l'a pas passé.  
 SI NON she not it-has not passed  
 'Yes, she passed it.' [REVERSE, -]

- Russian has a gap in the polarity particle inventory: *net* can realize both types of negative polarity ([REVERSE] or [-]), but *da* can only realize relative positive polarity ([AGREE]):

- (5) A: Nina ne sdala ekzamen{?, .}  
 Nina NEG passed exam  
 'Did Nina not pass the exam?'  
 B: (i) Net, ne sdala.  
 NET NEG passed  
 'No, she didn't.' [AGREE, -]  
 (ii) Da, ne sdala.  
 DA NEG passed  
 'Yes, she didn't.' [AGREE, -]  
 (iii) Net, sdala.  
 NET passed  
 'No, she did.' [REVERSE, +]  
 (iv) \*Da, sdala.  
 DA passed  
 Intended: 'Yes, she did.' [REVERSE, +]

### 3. Head nods in Russian

- In many cultures, head nods (and head shakes) are used, a.o., in polar responses.

- González-Fuente et al. (2015) (GF et al.):
  - production data showing Russian (and Catalan) speakers produce nods in both [AGREE] and [REVERSE] responses (GF et al. use different terms, but the gist is the same);
  - no formal analysis for gestures, but informally suggest that nods can be used both for confirming and rejecting an antecedent proposition, unlike any spoken polarity particles.
- Issues with GF et al.:
  - No data separation for what they call “strong” vs. “repeated” nods. Those “strong” nods might be marking (contrastive) focus, which they do cross-linguistically (e.g., House et al. 2001; Dohen et al. 2006), so I’ll ignore them.
  - No data separation for [REVERSE, +] vs. [REVERSE, -] responses. But repeated nods (NOD-NOD) are good in [AGREE] and [REVERSE, +], but not in [REVERSE, -] responses:<sup>2</sup>

- (6) A: ‘Did Nina pass the exam?’  
 B: (i)  $\overline{\text{Da, sdala}}^{\text{NOD-NOD}}$  [AGREE, +]  
 (ii)  $*\overline{\text{Net, ne sdala}}^{\text{NOD-NOD}}$  [REVERSE, -]
- (7) A: ‘Did Nina not pass the exam?’  
 B: (i)  $\overline{\text{Net, ne sdala}}^{\text{NOD-NOD}}$  [AGREE, -]  
 (ii)  $\overline{\text{Net, sdala}}^{\text{NOD-NOD}}$  [REVERSE, +]

• **Conclusion:** head nods in Russian can realize [AGREE] and [+], thus, filling the gap in the polarity marker inventory. This maintains their similarity to spoken positive polarity markers cross-linguistically, yet, shows that they lexicalize independently of those.

#### 4. Co-occurrence and linear placement of polarity markers

- It’s usually odd—or at least confusing—to have two independent spoken particles realize both polarity types within one response (in any language):<sup>3</sup>

- (8) A: ‘Did Nina not pass the exam?’  
 B: (i) ??Da, net, ne sdala. [AGREE, -]  
 (ii) ??Net, da, ne sdala. [-, AGREE]

- The two polarity types realized simultaneously within one response by a spoken particle and a CO-SPEECH head gesture don’t give rise to the same effect, as we’ve seen in (7-ii).
- Linear order is crucial, though. PRE-SPEECH nods are OK in [AGREE], but not in [REVERSE] responses to negative questions or assertions:

- (9) A: ‘Did Nina not pass the exam?’  
 B: (i) NOD-NOD, net, ne sdala. [AGREE, -]  
 (ii) ??NOD-NOD, net, sdala. [+ , REVERSE]

<sup>2</sup>I write head gestures co-occurring with speech as superscripts and use overlining to indicate their approximate temporal alignment.

<sup>3</sup>Here the order of the features in [] reflects the linear order of the particles trying to realize them.

- However, a similar contrast doesn't seem to obtain for head shakes:

- (10) A: 'Did Nina not pass the exam?'  
 B: (i) SHAKE, {da, net}, ne sdala. [-, {AGREE, -}]  
 (ii) SHAKE, net, sdala. [REVERSE, REVERSE]

- **(Tentative) generalization:** it is possible to realize both polarity types within one utterance with a head gesture and a spoken particle, but in [REVERSE, +] responses, relative polarity should (preferably) come first linearly.

- [REVERSE, +] responses are always reactions to assertions or biased questions and thus always lead to a CONVERSATIONAL CRISIS (i.e., in R&F's terms, signal incompatible commitments or biases of the speech act participants).

- **(Tentative) proposal:** *Disagree first!* A pragmatic principle requiring that if you are going to both disagree with the (biases of the) antecedent speech act and assert what you believe to be the truth, disagree first and only then make your assertion.
- **Moving on:** does the principle above apply to responses with two spoken particles? The entropy they create might be too high to have strong introspective judgements, more so than for gestures, which are easier to ignore and are often produced unconsciously. But the gestural data make the contrasts clearer, so now we know what to look for.

## 5. Prosodic grouping of polarity markers

- Spoken polarity particles exhibit preferences wrt prosodic grouping.
- E.g., relative-polarity-realizing particles tend to be in their own prosodic phrases (PrPs).<sup>4</sup> This is especially obvious in the case of Russian *da*, which can only realize relative polarity and always prefers to be in its own PrP:

- (11) A: 'Did Nina pass the exam?'  
 B: (i) {(PrP Net,) (PrP ne sdala.), (PrP Net, ne sdala.)} [REVERSE] or [-]  
 (ii) {(PrP Da,) (PrP sdala.), ??(PrP Da, sdala).<sup>5</sup>} [AGREE]

- We can make a similar observation for English:

- (12) A: Did Nina not pass the exam?  
 B: (i) {(PrP No,) (PrP she did.), ?(PrP No, she did.)} [REVERSE], -]  
 (ii) {(PrP Yes,) (PrP she didn't.), ?(PrP Yes, she didn't.)} [AGREE], -]

- We can furthermore observe for English that in [REVERSE, +] responses, *yes* prefers to be in the same PrP as the prejacent, but the same doesn't seem to hold for *no* in [REVERSE, -] responses:

<sup>4</sup>I remain ignorant about the specific prosodic grouping inventory in Russian, hence the vague term.

<sup>5</sup>Beware of the adversative *da*, though, which is always a clitic and has a completely different set of uses.

- (13) A: Did Nina not pass the exam?  
 B: (i)  $\{(PrP \text{ Yes, she did.}), ??(PrP \text{ Yes.}) (PrP \text{ she did.})\}$  [REVERSE,  $\boxed{+}$ ]  
 (ii)  $\{(PrP \text{ No, she didn't.}), (PrP \text{ No.}) (PrP \text{ she didn't.})\}$  [AGREE,  $\boxed{-}$ ]

• **(Tentative) generalization:** there is a general tendency

- (i) for relative-polarity-realizing markers to be prosodically independent across the board and  
 (ii) for absolute-polarity-realizing markers to be prosodically close to the prejacent in [REVERSE, +] responses.

• A syntactic story for (i):

- Story 1: absolute-polarity-realizing markers are part of the same speech act as the prejacent while relative-polarity-realizing markers are their own speech acts without prejacent, so they always come with boundary contours associated with assertions. Problems:

- Particles like French *si* are sensitive to both types of polarity; how would this sensitivity be captured across speech acts?
- Speech acts aren't easily embeddable (with, perhaps, some exceptions), but Russian *da* (which, once again, only realizes relative polarity) is:

- (14) A: Ty pozvonila Nine i Ane?  
 you called Nina and Anya  
 'Did you call Nina and Anya?'  
 B: Nine— da, (pozvonila,) a Ane— net.  
 Nina DA called but Anya NET  
 'As for Nina, yes, (I did,) but as for Anya, no.'

- (15) Ne znaju točno, sdala li Nina ekzamen, no dumaju, čto da.  
 not know exactly passed Q-PRT Nina exam but think that yes  
 'I don't know for sure if Nina passed the exam, but I think that she did [lit.: I think that yes].'

- (16) Ne znaju, sdala li Nina ekzamen, no esli da, to xorošo.  
 not know passed Q-PRT Nina exam but if DA then good  
 'I don't know if Nina passed the exam, but if she did [lit.: if yes], that's good.'

- Story 2: there are two positions for the two polarity types within one clause, with the relative polarity being higher and preferably packaged into its own PrP. A bit ad hoc.

• Non-syntactic alternative for (i) (also compatible with a view whereby there is only one polarity projection within a clause, assumed, a.o., by R&F and Krifka (2013)):

- Regardless of their syntax, relative-polarity-realizing markers prefer to be focused (contrastively in case of a conversational crisis), in which case they bear a pitch accent and are packaged into their own PrPs (at least intermediate phrases in English).

- Why focus relative, but not absolute-polarity-realizing markers? Absolute polarity focus is realized on the highest auxiliary, actual or dummy, in English (the inflected verb or the non-verbal predicate in the absence of a verbal one in Russian), but there is nothing in the response to bear relative polarity focus other than the particle realizing it.
  - What about (ii)?
    - Absolute-polarity-realizing markers can in principle be in their own PrPs; e.g., (13-ii) could be two utterances, the first one with an elided preajcent and the second one without a polarity particle. But in “marked” cases ([REVERSE, +]) this is misleading.
    - We have to be more specific about “misleading”, though. E.g., as observed by Paloma Jeretič (p.c.), placing *yes* after the preajcent in [REVERSE, +] responses doesn’t help:
- (17) A: {Did Nina pass the exam?, ??Did Nina not pass the exam?}  
 B: She did, yes.

• **Summary:**

- The tendency of relative-polarity-realizing markers to be prosodically independent could be attributed to their syntax or propensity to be focused (or both!).
- The reluctance of absolute-polarity-realizing markers to be prosodically independent in conversational-crisis-evoking responses is intuitively the other side of the same coin, but we want to be more precise eventually.

- **Moving on:** how do prosodic grouping considerations apply to head gestures (e.g., pre-speech vs. co-speech)?

## 6. Conclusion

- We can fit head gestures into the typology of polarity markers and we can do so independently of spoken polarity particles. (Case in point: head nods in Russian)
- Gestural polarity markers can reveal pragmatic properties of polar responses that might not be evident if we only look at spoken polarity particles. (Case in point: linear placement constraints on co-occurring polarity markers)
- Prosodic properties of polar responses can potentially inform us about their syntax and/or pragmatics. (Case in point: prosodic grouping preferences for absolute vs. relative polarity)

### References

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