# Polar responses in Russian across modalities and across interfaces
Maria Esipova (New York University)

**Overview**   The question of how different types of polarity are encoded cross-linguistically in polar responses to questions and assertions has received much attention in semantics literature (e.g., Farkas & Bruce 2010; Krifka 2013; Roelofsen & Farkas 2015). More recently, researchers started incorporating fine-grained gestural and prosodic data into the picture (e.g., González-Fuente et al. 2015). In this paper I make novel empirical observations about head nods and prosodic grouping in Russian polar responses and discuss their theoretical implications:

1. Russian doesn't have a dedicated spoken particle to mark positive *absolute polarity*, i.e., polarity of the response itself (as opposed to *relative polarity*, i.e., polarity with respect to the antecedent speech act). I argue that head nods fill this paradigm gap, marking both types of positive polarity and only those, contra the claim in González-Fuente et al. 2015 that nods can be used to reject propositions in Russian. This makes nods fit better into the cross-linguistic typology of polarity markers, yet, shows that they still lexicalize independently of spoken particles.

2. The following facts can be seen as (tentative) evidence in favor of separate positions for absolute and relative polarity in the structure of polar responses, with relative polarity being higher:

    (a) Two independent spoken particles typically can't be used in Russian (or English) to encode both absolute and relative polarity within one response, but a spoken particle and a head gesture can be used in such a way, and, furthermore, their linear order matters.

    (b) Relative polarity realizing particles prefer to be in their own prosodic phrases (no such preference for absolute polarity realizing particles), which is especially obvious in Russian, whose particle *da* can only realize relative polarity and is always in its own prosodic phrase.

**1. What do head nods do?**   Roelofsen & Farkas (2015) (R&F) show that cross-linguistically polarity particles mark two types of polarity: *absolute polarity* of the response itself ([+] or [−]) or *relative polarity* with respect to the antecedent speech act ([AGREE] or [REVERSE]). R&F treat the [] objects in parentheses as morphosyntactic features realized by polarity particles; I will adopt their terminology descriptively. English *yes* and *no* can realize both types of polarity (I show both features for each response and enclose the feature realized by the given particle instance in a box):

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

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

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

González-Fuente et al. (2015) (GF et al.) adduce production data showing that Russian (and Catalan) speakers produce head nods in both [AGREE] and [REVERSE] responses (they use different terms, but the gist is the same). GF et al. don't integrate gestures into their formal analysis, but their informal discussion suggests that they think nods can be used both for confirming and rejecting an antecedent proposition, which would make them unlike any spoken polarity particles.

However, GF et al. don't separate the data for (i) what they call "strong" vs. "repeated" nods, and (ii) [REVERSE, +] vs. [REVERSE, −] responses. Re (i), 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. Re (ii), I argue that repeated nods, glossed as NOD-NOD below, are good in [AGREE] and [REVERSE, +], but not in [REVERSE, −] responses (I write head gestures co-occurring with speech as superscripts and use overlining to indicate their approximate temporal alignment):

(3)  A: 'Did Nina pass the exam?'  (4)  A: 'Did Nina not pass the exam?'
     B: (i)  $\overline{\text{Da, sdala}}^{\text{NOD-NOD}}$.  [AGREE, +]      B: (i)  $\overline{\text{Net, ne sdala}}^{\text{NOD-NOD}}$.  [AGREE, −]
         (ii)  *$\overline{\text{Net, ne sdala}}^{\text{NOD-NOD}}$. [REVERSE, −]          (ii)  $\overline{\text{Net, sdala}}^{\text{NOD-NOD}}$.  [REVERSE, +]

I conclude that nods in Russian can realize [AGREE] and [+] (but not [REVERSE]), thus, filling the gap in the polarity marker inventory. This maintains their similarity to positive polarity markers cross-linguistically, yet, shows that they lexicalize independently of spoken particles within a language.

**2. One polarity projection or two?**  How are absolute and relative polarity represented in the syntax? R&F assume the features above cluster on a single Pol(arity) head. GF et al. assume two independent projections for the two polarity types (again, they use a different framework, which is immaterial here). I suggest gestural and prosodic data might help disentangle the two possibilities.

Realizing both polarity types Russian (as well as English) typically can't have two independent spoken particles realize both polarity types within one response (here the order of the features in [] reflects the linear order of the particles trying to realize them):

(5)  A: 'Did Nina not pass the exam?'
     B: (i) ??Da, net, ne sdala.  [AGREE, −]  (ii) ??Net, da, ne sdala.  [−, AGREE]

This can be seen as evidence in favor of a single polarity projection. Yet, (4-ii) shows the two polarity types can be realized within one response by a spoken particle and a co-speech nod. Furthermore, linear order seems to play a role. While the entire paradigm of all possible combinations is yet to be explored, there is a tangible contrast between an [AGREE]-realizing pre-speech nod, followed by a [−]-realizing *net*, and a [+]-realizing pre-speech nod, followed by a [REVERSE]-realizing *net*:

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

This suggests that not only is it possible to realize both polarity types within one utterance, but relative polarity should come first linearly. This can be seen as evidence that there are two polarity projections, and relative polarity is higher than absolute polarity. Why are the examples in (5) degraded then? One possibility is that they aren't ungrammatical, just pragmatically confusing, potentially making the addressee garden-path. The same considerations don't apply as strongly to head gestures, as addressees likely rely less on them, and furthermore they are often produced unconsciously. Alternative explanations of the data at hand are possible, but the gestural data at least weaken the argument in favor of a single polarity projection based on (5).

Prosodic grouping In both Russian and English, relative polarity realizing spoken particles prefer to be packaged into their own prosodic phrases (PrPs). 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 (beware of the adversative *da*, though, which is always a clitic and has a completely different set of uses):

(7)  A: 'Did Nina pass the exam'?
     B: (i)  $(_{PrP}$ Net), $(_{PrP}$ ne sdala). / $(_{PrP}$ Net, ne sdala).  (*Net* is realizing REVERSE or [−].)
         (ii)  $(_{PrP}$ Da), $(_{PrP}$ sdala). / ??$(_{PrP}$ Da, sdala).  (*Da* is realizing AGREE.)

These differences in prosodic grouping might reflect differences in syntactic structure, once again pointing at two separate positions for the two polarity types, with relative polarity being higher.

**References**  **Farkas & Bruce.** 2010. *JoS.* **González-Fuente et al.** 2015. *Frontiers in Psychology.* **Dohen et al.** 2006. *Speech Prosody.* **House et al.** 2001. *Eurospeech.* **Krifka.** 2013. *SALT.* **Roelofsen & Farkas.** 2015. *Language.*