

Sentential and Constituent Negation in Russian BE-sentences Revisited^[BHP1]*

Vladimir Borschev (VINITI RAN), Elena V. Paducheva (VINITI RAN), Barbara H. Partee (UMass Amherst, RSHU, MSU), Yakov G. Testelefs (RSHU), Igor Yanovich (MSU)

1. The problem: an apparent anomaly in Gen Neg BE sentences..... 1
 2. Identifying Constituent Negation 3
 2.1. Arguments that (1-NE) involves constituent negation..... 3
 2.2. The puzzles that remain. 5
 3. Syntactic, semantic, pragmatic notions of negation..... 5
 3.1 Syntactic notions of S-Neg, C-Neg. 5
 3.2 Semantic notions. The semantic negation OF p..... 7
 3.3 Semantic and Pragmatic notions..... 8
 3.4 Half of the solution. 10
 4. The resolution of the problem..... 10
 References 14

1. The problem: an apparent anomaly in Gen Neg BE sentences.

The main question of this paper is: what is the negation of (1)?

- (1) Kolja v Londone.
 Kolja-NOM in London
 ‘Kolja is in London.’

There are two potential candidates, (1-NE) and (1-NET)^{1,2}.

- (1-NE) Kolja ne v Londone.
 Kolja-NOM NEG in London
 ‘Kolja is not in London.’
 (1-NET) Koli net v Londone.
 Kolja-GEN NEG.BE in London
 ‘Kolja is not in London.’

The same questions arise for other examples that have a definite subject, a “null copula”, and a locative or locative-possessive predicate, such as those in (2), from Kondrashova (1996).

* This work was supported in part by National Science Foundation grant BCS-0418311 to Borschev and Partee for the project “The Russian Genitive of Negation: Integration of Lexical and Compositional Semantics.” We are grateful to Ekaterina Rakhilina, to FASL-14 participants, to Hana Filip, and to two anonymous referees for helpful comments.

¹ This question was first discussed by Arutjunova (1976, p.214), who observed that a yes-no locative question like *Kolja v Londone?* ‘Is Kolja in London?’ (our substitution for her similar example) admits two alternative forms for a negative answer, (1-NE), whose form corresponds to that of the affirmative (1), and (1-NET), whose form is like that of an existential sentence. She notes that (1-NET) is more widely used, and that it is (1-NET) which expresses general sentential negation. Our conclusions largely agree with hers.

² The question arises for all examples with definite subject, “null copula”, and a locative or locative-possessive predicate, including also those in (i) and (ii).

- (i) Tvoe pal'to na vešalke. Arutjunova (1976, p.214)
 your coat-NOM on coatrack
 ‘Your coat is on the coatrack.’
 (ii) Vaše pis'mo u sekretarja. Kondrashova (1996)
 your letter-NOM at secretary
 ‘The secretary has your letter.’

- (2) a. Naša mašina na stojanke.
our car-NOM in parking lot
'Our car is in the parking lot.'
- b. Vaše pis'mo u sekretarja.
your letter- NOM at secretary
'The secretary has your letter.'

For many sentences, such as (3a), "what their negation is" is uncontroversial.

- (3) a. Petrov rabotaet v Akademii.
Petrov-NOM works at Academy
'Petrov works at the Academy.'
- b. Petrov ne rabotaet v Akademii.
Petrov-NOM NEG works at Academy
'Petrov doesn't work at the Academy.'
- c. Petrov rabotaet ne v Akademii.
Petrov-NOM works NEG at Academy
'Petrov works somewhere other than at the Academy.'

Everyone would agree that the negation of (3a) is (3b). Sentence (3b) is an instance of syntactic sentential negation (S-Neg), and semantically it expresses the contradictory of (3a). Constituent negation (C-Neg) gives a contrary proposition (3c), whose properties we discuss in Section 3. It may be used to deny (3a), but one wouldn't call it "the negation of (3a)."

The Puzzle. The negation of a locative sentence like (1) presumably "should" be (1-NE), which differs from (1) only by the addition of the negative morpheme *ne*. But it has been argued (Babby 1980, Chvany 1975, Harves 2002a), and widely accepted, that (1-NE) involves constituent negation, and that the negation of (1) is (1-NET). Sentence (1-NET) has Genitive of Negation (Gen Neg), a sure sign of S-Neg status. As is well known (Babby 1980, Peškovskij 1956),^[BHP2] syntactic S-Neg but not C-Neg licenses Gen Neg, even in cases where the semantics is virtually indistinguishable, as in the NEG > \forall reading shared³ by (4a-b), either of which could be considered a semantic negation of (5).

- (4) a. My ne rešili vse zadač.
we NEG solved all problems-GEN
'We didn't solve all the problems.'
- b. My rešili ne vse zadači / *vsex zadač.
we solved NEG all problems-ACC / *all problems-GEN
(*lit.* 'We solved not all the problems.')
- (5) My rešili vse zadači.
we solved all problems-ACC
'We solved all the problems.'

But the idea that (1-NET) is the negation of (1) seems anomalous (Babby 1980, Harves 2002b), since *net* '(there) is/are not' and Gen Neg are generally found in existential sentences and impossible in locative sentences, and (1) is a typical Locative sentence (Arutjunova 1976, 214-15, Kondrashova 1996). It does not have *est* '(there) is/are', and the subject, Topic, and Perspectival Center (Borschev

³ This is the only reading for (4b), while for (4a) it is a marked reading (Padučeva's (1974) *smeshchennoe otricanie* 'shifted negation') requiring special intonation.

and Partee (2002a, 2002b)) are most naturally understood to be aligned: (1) predicates being in a certain location of Kolja. Typical *net*-sentences are negations of *est* 'BE'-sentences, and typical *est*'-sentences are Existential, as in (6a-b).

- (6) a. V xolodil'nike est' eda.
in refrigerator BE food-NOM.SG
'There is food in the refrigerator.'
- b. V xolodil'nike net edy.
in refrigerator NEG.BE food-GEN.SG
'There isn't any food in the refrigerator.'

Preview.

- In section 2, we show that contrastiveness is not a reliable diagnostic of C-Neg, but new arguments support the conclusion that (1-NE) indeed involves C-Neg.
- In Section 3, we argue that recent perspectives on syntax, semantics, and pragmatics of negation show that (1-NE) is not syntactically or semantically "the negation of" (1), but is a pragmatic negation of (1) in some contexts.
- In Section 4, we address the problem of sentence (1-NET). Invoking Borschev and Partee's (2002b) Perspective Structure and Padučeva's Observer (Padučeva 1992, 1997) plus Topic-Focus structure, we offer a novel account of the relation of (1-NET) to (1).
- Putting the pieces of our story together, we argue that either (1-NE) or (1-NET) may be a "functional" or "pragmatic" (Horn 1989) negation of (1) in appropriate contexts. Our goal is to show that attention to syntactic, semantic and pragmatic aspects of negation and of BE-sentences can help explain the relations among (1), (1-NE), and (1-NET).

2. Identifying Constituent Negation.

2.1. Arguments that (1-NE) involves constituent negation.

To argue that (1-NE) involves constituent negation, i.e. has structure (7a) rather than (7b), it has been standard since Babby (1980) to state that negation in (1-NE) must be interpreted contrastively, meaning that its use requires an overt or implicit paired contrasting 'correction'.

- (7) a. Constituent-negation structure: Kolja \emptyset_{be} [ne [v Londone]]
b. Sentential-negation structure: Kolja [ne [\emptyset_{be} v Londone]]

Although (1-NE) may often be intended and understood contrastively, contrastiveness is not obligatory for (1-NE), according to many speakers. Sentence (8) is even clearer: it may be relevant only that the person on duty was not at his post. The speaker need not know where he/she was.

- (8) Dežurnyj \emptyset_{be} (byl) ne na meste.
person on duty is (was) not at place
The person on duty is (was) not at his/her proper place.

Contrastiveness is largely a pragmatic, not structural, matter (Horn 1989, Padučeva 2004, p.430-1). One factor that facilitates a non-contrastive reading for such sentences is for the mentioned Location to be the "normal location" for the subject (Padučeva 2004, p.430), as in (8).

So to argue that the negation in (1-NE) must be C-Neg and not S-Neg, one cannot depend on evidence about contrastiveness. But we have found stronger arguments that (1-NE) is indeed *not* syntactic S-Neg.

One argument comes from future and past tense quantificational sentences. If (1-NE) could have structure (7b), then so could (9c); and then we can ask whether (9c) shares scopal possibilities with (9a), unambiguously syntactic S-Neg, or with (9b), unambiguously syntactic C-Neg. We find that in (9b), negation cannot take scope over the subject, while in (9a), it can (optionally). But (9c) allows only narrow scope⁴ for the negation, so (9c) and (1-NE) must have the C-Neg structure of (7a)⁵.

- (9) Context: We are talking about why the Royal Ballet won't be performing in London while our friend is or will be there.
- a. Vse baleriny ne budut v Londone.
All ballerinas-NOM NEG will.be in London
AMBIG: (i) $\forall > \text{NEG}$: all of the ballerinas will [not be in London]; i.e. None of the ballerinas will be in London; or
(ii) $\text{NEG} > \forall$ [dispreferred but possible with a marked Topic-Focus structure] not all will be in London⁶.
- b. Vse baleriny budut ne v Londone.
All ballerinas-NOM will.be NEG in London
UNAMBIG: Only (i): $\forall > \text{NEG}$
- c. Vse baleriny ne v Londone.
All ballerinas-NOM NEG in London
UNAMBIG: Only (i): $\forall > \text{NEG}$

Another argument to the same conclusion comes from the following pair of sentences.

- (10) a. Kolja ne byl v ètot moment v Londone.
Kolja-NOM NEG BE.PAST at this moment in London
'Kolja was not in London at that moment.'
- b. *Kolja ne v ètot moment v Londone.
Kolja-NOM NEG at this moment in London

If $ne+\emptyset$ were possible, (10b) would be as good as (10a). That it is not⁷ is another argument against S-Neg structure for sentences like (1-NE).

⁴ We ignore possible exceptional readings involving metalinguistic denial (Horn 1989).

⁵ For a syntactic analysis, what we have said above can be recast as follows: Subjects start at Spec,VP, and move to Spec,IP; there is a NegP somewhere between VP and IP where S-Neg English *not* and Russian *ne* sit. The source of the scope ambiguity in (9a) is the two options for the subject: It can take wide scope in its final position, or narrow scope in its base position, via reconstruction. On the other hand, in the C-Neg case of (9b), *ne* sits in some DP-internal position, where it does not c-command any other DP in the sentence, and thus C-Neg never takes wide scope with respect to clausemate DPs.

The fact that the negation in (9c) occupies a position which does not c-command the subject's base position is uncontroversial, given our data. The exact analysis for (9c) can be debated, though. For instance, one may argue that there is a NegP in (9c), but for some reason it cannot be filled, or that NegP is not projected in (9c) (more in the minimalist spirit), or, even more radically, that not only is NegP absent in (9c), but IP too. Under this last analysis, there is no null copula at all, there is no subject movement, and the structure of the clause is analogous to the structure of small clauses. All of these different options preserve the validity of our argument: there is no way for C-Neg to scope over the subject. The fact that there is no "NEG > \forall " reading in (9c) forces the conclusion that there is no S-Neg structure for (9c).

⁶ Similar examples were described in Padučeva (1974: 143,155) as involving *smeščennoe otricanie* 'shifted negation'; a particular Topic-Focus structure (marked by word order and intonation) allows negation to take scope over a preceding quantifier.

⁷ Sentence (10b) is definitely '*' on the S-Neg reading. On a C-Neg reading it is either '*' or semantically anomalous – we do not know which.

In summary, contrastiveness is not a reliable diagnostic of C-Neg, but we have found a stronger argument that sentences like (1-NE) involve C-Neg, not S-Neg, by comparing their behavior with that of sentences that have *ne* preceding (S-Neg) or following (C-Neg) an overt copula.

2.2. *The puzzles that remain.*

If (1-NE) does not involve syntactic sentential negation, can (1-NE) be “the negation of (1)”? We believe that the usual assumption of a “no” answer rests on overly simple notions of “the negation of” a given sentence; in Section 3 we defend a context-dependent “yes” answer.

And what about (1-NET), which has been argued to be the negation of (1)? That question will be addressed in Section 4.

3. Syntactic, semantic, pragmatic notions of negation.

In classical semiotics (Morris 1938), *syntax* treats properties of expressions; *semantics* relates expressions to their denotata; *pragmatics* relates expressions, their denotata, and their uses in possible contexts.

Similarly we need to distinguish syntactic, semantic, and pragmatic notions relating to negation, and doing so is not always simple. The question “Is sentence S1 the negation of sentence S2?” is not a single question; it is only in the simplest cases that it may seem so.

3.1 Syntactic notions of S-Neg, C-Neg.

3.1.1. English: Jespersen’s Nexal/Special Neg, Klima’s S-Neg, C-Neg.

As Horn (1989) observes, Jespersen’s (1924) and Klima’s (1964) criteria for S-Neg in English can conflict. Jespersen’s criterion for S-Neg (“nexal negation”) is canonical position of the negative morpheme; Klima’s is a battery of tests including tag questions, *too* vs. *either* tags, *so* vs. *neither* conjunction. Both regard *John didn’t arrive*, *John didn’t eat anything* as S-Neg; both regard *They’re arguing about nothing* as C-Neg. But some Jespersen C-Neg (‘special negation’) cases clearly come out as S-Neg for Klima, e.g. *No one objected*, *John ate nothing*, *Not everyone agreed*.

3.1.2. Russian: Russian syntactic S-Neg, C-Neg.

For Russian, Jespersen’s and Klima’s criteria converge: translations of Klima’s S-Neg sentences *do* all have pre-verbal *ne*. So for Russian the syntactic terms S-Neg/C-Neg correspond to Russian *priglagol’noe/ nepriglagol’noe otricanie* ‘preverbal/ non-preverbal negation’.

- (11) a. Russian Syntactic S-Neg: *Ivan ne prišel*. ‘Ivan didn’t come.’ *Nikto ne prišel*. ‘No one came.’
On ne rešil vsech zadač. ‘He didn’t solve every problem.’ *Vsego ja ne ponjal*. ‘I didn’t understand everything.’
- b. Russian Syntactic C-Neg: *Èto byl ne portret*. ‘That wasn’t a portrait.’ *Prišel ne Ivan*. ‘Not Ivan came.’ *Petja ezdit ne bystro*. ‘Petja drives not quickly.’ *On rešil ne vse zadači*. ‘He didn’t solve every problem.’ *Ja ponjal ne vsë*. ‘I didn’t understand everything.’
- c. Unclear cases: *Kolja ne v Londone*. *Kolja ne gotov*. *Kolja ne ženat*. *Kolja ne durak*. ‘Kolja is not in London/ ready/ married/ a fool.’

The main unclear cases for Russian, thus, are present tense BE sentences with no overt verb. The question is whether such sentences have the structure in (7a) or (7b), or are ambiguous. We have seen some ways to settle the question in Section 2. In Section 3.1.3, we review two prominent syntactic

properties of Russian C-Neg and S-Neg sentences, before turning in Sections 3.2 and 3.3 to semantic and pragmatic notions.

3.1.3. Properties of Syntactically S-Neg sentences in Russian.

For Russian, S-Neg sentences differ in systematic ways from C-Neg sentences. We mentioned in Section 1 that S-Neg and not C-Neg licenses Gen Neg. *Ni*-words and *ni*-phrases are also licensed by S-Neg and not by C-Neg. We illustrate with the licensing of *ni* – *ni* coordinations.

- (12) a. Ni tvoja, ni moja kniga ne byla na stole.
NI your NI my book NEG BE.PAST on table
'Neither your nor my book was on the table.'
- b. *Ni tvoja, ni moja kniga byla ne na stole.
NI your NI my book BE.PAST NEG on table
(no licensing by C-Neg 'not on the table')
- (13) a. Ni my, ni oni ne rešili vsech zadač.
NI we NI they NEG solved all problems-GEN
'Neither we nor they solved all the problems.'
- b. *Ni my, ni oni rešili ne vse zadači.
NI we NI they solved NEG all problems-ACC
(no licensing by 'not all the problems')
- (14) a. Mal'čiki ne prigotovili ni ris, ni kartoshku.
boys NEG prepared NI rice-ACC NI potatoes-ACC
'The boys didn't cook either rice or potatoes.'
- b. *Ne mal'čiki prigotovili ni ris, ni kartoshku.
NEG boys prepared NI rice-ACC NI potatoes-ACC
(no licensing by 'not the boys')

And as is well known (Babby 1980, Peškovskij 1956), syntactic S-Neg licenses Gen Neg, and C-Neg does not, even in cases where the semantics is virtually indistinguishable, as in the NEG > ∀ reading shared by (4a-b), either of which could be considered a semantic negation of (5) under one or more of the construals of that notion below.

- (15) a. My ne rešili vsech zadač.
we NEG solved all problems-GEN
'We didn't solve all the problems.'
- b. My rešili ne vse zadači / *vsech zadač.
we solved NEG all problems-ACC / *all problems-GEN
'We didn't solve all the problems.' (*lit.* 'We solved not all the problems.')
- (16) My rešili vse zadači.
we solved all problems-ACC
'We solved all the problems.'

Even the syntactic C-Neg in (17b) does not license Gen Neg, although its translation into English would come out as syntactic S-Neg on Klima's tests. It is semantically negative on Padučeva's (1974) definition of 'general negation', since it is the semantic contradictory negation of the corresponding sentence without the *ne*. And the VP of such a sentence is clearly a Downward-Entailing context (Ladusaw 1980) as shown in (18).

- (17) a. Nikto ne videl Mašu / Maši.
no one NEG saw Masha-ACC / Masha-GEN
'No one saw Masha.'
- b. Ne vse mal'čiki videli Mašu / *Maši.
NEG all boys saw Masha-ACC / *Masha-GEN
'Not all the boys saw Masha.'
- (18) Ne vse mal'čiki priexali do 3-x → Ne vse mal'čiki priexali do 2-x.
NEG all boys arrived by 3 NEG all boys arrived by 2
'Not all the boys arrived by 3 → Not all the boys arrived by 2.'

3.2 Semantic notions. The semantic negation OF p.

It is principally in semantics that we find (various) definitions of what it is for one sentence to be the negation of another, or more strictly, for one proposition to be the negation of another.⁸ The familiar truth-tables of logic present the simplest case, an idealization: assume that all propositions are true or false (i.e., ignore presuppositions), and define negation truth-functionally: $\neg p$ is T(rue) if and only if p is F(alse). When applied to natural language phenomena, this notion is referred to as *propositional (contradictory) negation*.

Table 1: the simplest definition of propositional negation.

p	¬p
T	F
F	T

Contrary negation is a weaker notion: q is a contrary negation of p iff p and q cannot both be true but can both be false.

- (19) a. p_2 is a **contradictory negation** of p_1 : p_2 is true iff p_1 is false.
b. p_2 is a **contrary negation** of p_1 : p_2 and p_1 cannot both be true but can both be false.

Sentence (3b) in Section 1 expresses the contradictory of (3a)⁹; (3c) expresses a contrary of (3a).

- Semantically, a proposition may be analyzed as a set of possible situations, namely those in which it is true.
- If U is a universe of possible situations, then proposition p is a subset of U , its contradictory is $U - p$ (the complement of p in U), and any contrary q of p is a set which is disjoint from p and is a proper subset of the complement of p .
- It can be seen then that whether q is a contradictory or a contrary of p is relative to U . "Shrinking" U by removing from consideration situations where neither p nor q is true (e.g. removing from U all situations that violate presuppositions of p) converts q from a contrary to a contradictory.

⁸ What we are interested in is a "correspondence" notion of "negation of", in which we consider pairs of affirmative and negative sentences which would be well-formed in the same contexts, e.g. with respect to an implicit background Yes-No question. This is not the same as the notion of "denial of", a discourse relation of an utterance to a preceding (or implicit) assertion.

⁹ In 3.3 we note that for (3b) to be the contradictory of (3a), either (3a) must not be taken to presuppose the existence of Petrov, or the universe U mentioned in the next paragraph must be restricted to possible worlds where Petrov exists.

- For instance, *general negation* introduced in Padučeva (1974) is defined as propositional negation that preserves presuppositions, so the general negation of **p** is the complement of **p** in a set of situations where all presuppositions of **p** are met. The general negation of **p** is the *contradictory* of **p** in such a set but a *contrary* in sets not preserving presuppositions of **p**, i.e. in a maximal universe **U**.
- The choice of **U** is often a pragmatic matter; we illustrate further in Section 3.3.

The status and treatment of presuppositions, and of linguistically encoded “pragmatic” factors such as Topic-Focus structure and point of view (including Borschev and Partee’s Perspective Structure, Padučeva’s Observer), important for many of our examples, complicate the individuation of the sentences we are talking about. Does a shift in presuppositions or in Topic-Focus structure create a ‘different sentence’ or a different interpretation of the same sentence? (See structures (1 i-ii) in Section 4.)

- What is the relation between the semantic and syntactic notions we have introduced? It is not straightforward.
- If a sentence has no scope-taking elements nor presuppositions (a rare case), then its S-Neg will denote its contradictory, but in other cases it may not. E.g., “Every boy did not come” on the universal wide scope reading is a *contrary* of “Every boy came”, and not its *contradictory*. Syntactic C-Neg is often interpreted as contrary negation (as in (3c)), but not always: in a restricted set of situations, it can be contradictory (if, e.g., the negated constituent is contrastively focused).

The conclusion is that not all syntactically S-Neg sentences are semantic contradictory “negation of” a “corresponding” affirmative. And not all syntactically affirmative sentences “have” a contradictory negation expressible by a “corresponding” S-Neg sentence. A good example is (20): both (20a), the syntactically closest S-Neg counterpart of (20c), and (20b), with C-Neg, express mere contraries of (20c).

- (20) a. Kolja ne pošel iz za Vas na koncert.
Kolja NEG GO.PST.PF because-of you to concert
Because of you, Kolja didn’t go to the concert.
- b. Kolja pošel ne iz za Vas na koncert.
Kolja GO.PST.PF NEG because-of you to concert
Kolja went to the concert, (but) not because of you.
- c. Kolja pošel iz za Vas na koncert.
Kolja GO.PST.PF because-of you to concert
Kolja went to the concert because of you.

A contradictory of (20c) would be true in any situation in which (20c) is not true, including situations in which Kolja did not go to the concert (whether or not that was because of you) and situations in which he went but not because of you. But the only way to express such a proposition, if at all, is with a paraphrase “It is not true that ...”.

3.3 Semantic and Pragmatic notions.

Given current dynamic theories, the line between semantics and pragmatics is not sharp or stable. But whatever the labels, it is important to take presuppositions and context into account, since these crucially affect the background universe **U** of relevant possibilities.

Since pragmatics concerns relations among expressions, their denotata, and contexts of use, it is natural that **pragmatic negation** should be a three place relation:

- **Pragmatic negation:** Given contextual assumptions¹⁰ Σ , a speaker may use sentence S' with semantic interpretation q as the pragmatic negation of sentence S with interpretation p if relative to all situations which satisfy Σ , q is the contradictory (i.e. complement) of p .

We can illustrate the notion of pragmatic negation clearly with our *Petrov* example (3a-c). Imagine a universe U partitioned into 4 situation types: W_1 , worlds in which Petrov does not exist; W_2 , in which Petrov exists but doesn't work; W_3 , in which Petrov works but not at the Academy; and W_4 , in which Petrov works at the Academy.

Table 2

Propositions → ----- Classes of situations ¹¹ ↓	(3ai) [Petrov]TOPIC rabotaet v Akademii	(3aii) [Petrov rabotaet]TOPIC v Akademii	(3b) [Petrov]TOPIC ne rabotaet v Akademii (propositional neg)	(3c) [Petrov rabotaet]TOPIC ne v Akademii (local neg)
W_1 : There's no Petrov	# (False)	# (False)	# (True)	# (False)
W_2 : Petrov doesn't work anywhere	False	# (False)	True	# (False)
W_3 : Petrov works, but not at the Academy	False	False	True	True
W_4 : Petrov works at the Academy	True	True	False	False
KEY: # = violation of a pragmatic presupposition: infelicitous in such contexts (Here we are following Horn's analysis, treating presuppositions as pragmatic.)				

The affirmative (3a) picks out W_4 . What is its contradictory negation?

Relative to U , ignoring all presuppositions, even the existence of Petrov, the answer is $W_1 \cup W_2 \cup W_3$, not a realistic interpretation of (3b).

For a more realistic interpretation of (3b), consider only contexts (situations) in which Petrov exists¹², shrinking U to $W_2 \cup W_3 \cup W_4$. The affirmative (3a) with *Petrov* as Topic is true in W_4 and false in W_2 and W_3 ; and (3b) is its contradictory, while (3c) is only a contrary.

Now suppose we take *Petrov works* to be Topic in (3c) and in another possible interpretation of (3a); those choices carry the pragmatic presupposition that Petrov works, further shrinking the relevant universe U to just $W_3 \cup W_4$. In such a restricted universe, the contradictory of (3a) is equally expressed

¹⁰ Contextual assumptions may include pragmatic presuppositions plus further assumptions about the conversational background and context of utterance.

¹¹ For graphic simplicity, we are oversimplifying, and not distinguishing in the left-hand column the roles of situations as contexts of utterance and as 'partial possible worlds', points of evaluation for truth and falsity. Distinguishing these roles would require a 3-dimensional chart. Not distinguishing may be confusing, though.

¹² This may be considered a semantic presupposition of the proper name.

by (3b) and (3c). In that case it is natural for the speaker to use the more informative (3c) to negate (3a).

So (3c) is a good “pragmatic negation” of (3a) in such a context: it is more informative than (3b), and its user conveys presuppositions she presumes are shared.

If we treat most presuppositions as pragmatic¹³, then Padučeva’s (1974) general negation defined in section 3.2 may be viewed as pragmatic negation: it amounts to contradictory negation in a universe *U* that has been restricted to include only possible worlds in which all presuppositions are satisfied, but as contrary negation in an unrestricted, maximal universe. There seem to be differences between Russian and English in the choice of S-Neg vs. C-Neg to express general negation (cf. Padučeva 1974, p. 152) in contexts where they are pragmatically equivalent. But a full discussion would have to go further into presuppositions and topic-focus articulation (Hajičová et al. 1998, Padučeva 1985, Rooth 1992) than space allows.

Note that pragmatic context-sensitivity concerns not only presuppositions, but aspects of context such as location and point of view. If A and B are in different locations, B’s repetition of A’s sentence in (21) expresses a pragmatic contrary negation (denial) of A’s assertion.

- (21) A: John is here.
B: (No,) John is *here*.

3.4 Half of the solution.

We can now describe the sense in which (1-NE) can be “the negation of (1)”: (1-NE) is not S-Neg, but it can be the pragmatic negation of (1). Semantically it is only a contrary of (1); but context may pragmatically “shrink” the universe *U*, making (1-NE) effectively a contradictory of (1).

On the other hand, (1-NET) is S-Neg, but it’s not obvious that it is the negation of (1) on any formal grounds (syntactic or semantic): so where does its intuited relation to (1) derive from? That is the other half of the puzzle that we still have to try to solve.

4. The resolution of the problem.

“Majority report¹⁴”

We will not discuss at any length the debates about whether (1-NET) is an Existential sentence (Borschev and Partee 1998, 2002a, 2002b, 2002c), a Locative sentence (Babby (1980), Chvany (1975), Harves (2002a,b), a Perceptual subtype of Locative sentence (Padučeva 1997 and p.c.) or a mixed Existential-Locative type (Partee and Borschev 2004, In press). This is an important part of the problem of analyzing (1-NET), but too big a topic to fit here. What we say here draws on these earlier works without following any one of them exactly. Our main assumptions are stated in (i) – (iii) below:

(i) There is a specific property that is marked via the Nom/Gen distinction in negative sentences. On Borschev and Partee’s approach, it is Perspective Structure (namely, the location of Perspectival Center); on Padučeva’s approach it is the location of Observer. In affirmative sentences, we have no morphological evidence about Perspective Structure or Observer. We will assume that affirmative sentences like (1) are perspectivally ambiguous; see the structures (1 i-ii) farther below.

¹³ The debatable labels ‘semantic’ vs. ‘pragmatic’ are not the issue here. What is crucial is the role of presuppositions in Padučeva’s definition.

¹⁴ VB does not agree with all of the assumptions made here or with the resulting way of resolving the problem; his “minority report” is described in footnote 17. All of us consider the issues still open.

(ii) It is Topic-Focus structure that is crucial for word order, overriding Perspective Structure when they do not agree¹⁵. Evidence for the primacy of Topic-Focus structure over Perspective Structure in determining word order is the impossibility of (22) with neutral intonation¹⁶.

- (22) *Doma on.
At-home he
(He is at home.)

In the default cases, Subject-Predicate, Topic-Focus, and Perspective Structure are all aligned. Definiteness and animacy are also non-randomly associated with Subject/Topic/Perspectival Center.

(iii) If (i) and (ii) are correct, then affirmative sentences have no morphosyntactic indicators of Perspective Structure, since the word order is determined by Topic/Focus, and there is no Nom/Gen distinction. We therefore reject the earlier assertions by Borschev and Partee that Kolja is obligatorily the Perspectival Center in (1)¹⁷. Instead we posit the two structures (1 i-ii) below for (1).

- (1) (i) $[[\text{Kolja}_{\text{PERSP CENTER}}]_{\text{TOP}}] \emptyset_{\text{be}} \vee \text{Londone}$.
(ii) $[\text{Kolja}_{\text{TOP}}] \emptyset_{\text{be}} [\vee \text{Londone}_{\text{PERSP CENTER}}]$.

Now we are prepared to resolve the puzzle of (1-NET).

Step 1. In the default case, Kolja in sentence (1) is both Topic and Perspectival Center, as in (1-i). The choice between (1-i) and (1-ii) does not affect truth conditions (as long as we presuppose the existence of both Kolja and London), but does affect felicity conditions: (1-i) can only be felicitously used in a context in which the situational Perspectival Center is Kolja, and would be infelicitous in a context in which the situational Perspectival Center is London.¹⁸

Step 2. The opposite choice of Perspectival Center for (1), indicated in (1-ii), is also possible, though it is more marked (because of the misalignment of Topic and Perspectival Center). The sentence with this structure can be felicitously used only in contexts in which the situational Perspectival Center is London: for instance, the speaker is in London, and is discussing who else is in London now.

Step 3. The “expected negation” of (1-i) would be (23).

- (23) * $[[\text{Kolja}_{\text{PERSP CENTER}}]_{\text{TOP}}] \text{ne} \emptyset_{\text{be}} \vee \text{Londone}$. (S-Neg but *)

¹⁵ Although the frameworks make direct comparison impossible, this statement draws in part on related claims in (Kondrashova 1996) and in Padučeva’s work. It also suggests parallels between Perspective Structure, Kondrashova’s level of NP structure, and what Babby (1980) attributed to Theme-Rheme structure; the use of Topic-Focus structure in this paper is closer to what Babby (1980) said about the distinct Given-New structure.

¹⁶ The word order in (22) requires fronted “expressive” Focus and de-accented Topic.

¹⁷ A majority of the authors favor something like this hypothesis. One author (VB) is skeptical about assumptions (i-iii), believing that the Perspectival Center in (1) is unambiguously Kolja, and in (1-net) London. He favors an alternative hypothesis on which (1) and the S-Neg (1-net) share Topic-Focus structure but not Perspective Structure. If the speaker is in London, the most natural Perspectival Center is on London. If Kolja is in London, the speaker may choose to shift the Perspectival Center to Kolja, resulting in (1), with ‘exceptional’ Perspectival Structure. But if Kolja is not in London, the Perspectival Center most naturally stays on London, making (1-net) a more natural negation of (1) than (1-ne) in such a situation, even though (1) and (1-net) have different Perspective Structure.

¹⁸ Following Borschev and Partee (2002a, 2002b), we take Perspective Structure to reflect a property of situations. Describing a given situation, one must use a sentence with corresponding Perspective Structure marking or pragmatic infelicity will result.

But (23), with *ne* + \emptyset_{be} , is impossible, as shown in Section 2.

For steps 4 and 5, we need to consider the assumed Topic-Focus and Perspective Structures of the unambiguous (1-NE) and (1-NET), (1-NE') and (1-NET') respectively.

(1-NE') [[Kolja_{PERSP CENTER}]_{TOP}] \emptyset_{be} *ne* *v* Londone.
(1-NET') [Koli_{TOP}] *net* [*v* Londone_{PERSP CENTER}].

Step 4. In the absence of the possibility of (23)¹⁹, a speaker who wants to deny that Kolja is in London on structure (1-i) while preserving Topic-Focus and Perspective Structure must use syntactic C-Neg, giving (1-NE). As we argued above, this can be considered a good “pragmatic negation” of (1) in such a context.

Step 5. If the affirmative sentence has structure (1-ii), then the contradictory negation of (1) can be expressed by (1-NET) while preserving Topic-Focus and Perspective Structure.

In situations where it is most natural to make Location the Perspectival Center (or place of the “Observer”), (1-NET) is strongly preferred; this is illustrated in (24a-b), where the use of *zdes* ‘here’ creates a very strong bias in favor of Location as Perspectival Center. Conversely in (25a-b), the adverb *poka* ‘so far, yet’ forces the choice of nominative subject, with Kolja as Perspectival Center. Since Perspectival Structure is subjectively assigned, often both are possible.

- (24) a. Koli *zdes*’ *net*.
 Kolja-GEN.SG here NEG.BE
 ‘Kolja isn’t here.’
 b.#Kolja *ne* *zdes*’.
 Kolja-NOM.SG NEG here
 ‘Kolja isn’t here.’
- (25)a. Kolja *poka* *ne* *v* Londone.
 Kolja-NOM.SG so far NEG in London
 ‘Kolja is not yet in London.’
 b.#Koli *poka* *net* *v* Londone.
 Kolja-GEN.SG so far NEG.BE in London
 ‘Kolja is so far not in London.’

¹⁹ It should be noted that there are other instances of NP \emptyset Pred structures which have no S-Neg counterparts at all, and which cannot be “rescued” with the use of *net* + Gen Neg; (i) is such a sentence; even its past tense counterpart (ii) cannot be negated with S-Neg. It seems that the Perspectival Center on the Location is crucial in licensing *net* + Gen Neg (see also Babby 1980), and the impossibility of (23) is secondary, if relevant at all.

- (i) Èta devuška s xarakterom.
 This girl with character
 ‘This girl has a strong character.’
(i’) *Èta devuška ne s xarakterom.
(i’’) *Ètoj devuški net s xarakterom.
(ii) Èta devuška byla s xarakterom.
 This girl was with character
 ‘This girl had a strong character.’
(ii’) *Èta devuška ne byla s xarakterom.
(ii’’) *Ètoj devuški ne bylo s xarakterom.

To formalize what we have done in Steps 3-5 in terms of propositions as sets of possible situations, we assume a universe U with 4 situation types, shown in (26). The assumption that Perspective Structure reflects a property of situations gives us the four possibilities shown. For a given situation, one must use a sentence with corresponding Perspective Structure marking to avoid pragmatic infelicity.

- (26) W_1 : Kolja is the Perspectival Center; Kolja is in fact in London.
 W_2 : Kolja is the Perspectival Center; Kolja is not in London.
 W_3 : London is the Perspectival Center; Kolja is in London.
 W_4 : London is the Perspectival Center; Kolja is not in London.

Sentence (1-i) is felicitous in W_1 and W_2 , true in W_1 and W_3 .

Sentence (1-ii) is felicitous in W_3 and W_4 , true in W_1 and W_3 .

The impossible S-Neg (23) would be felicitous in W_1 and W_2 , true in W_2 and W_4 .

The S-Neg (1-NET) is felicitous in W_3 and W_4 , true in W_2 and W_4 .

The C-Neg (1-NE) is felicitous in W_1 and W_2 , true in W_2 and W_4 .

As we stated in Step 3, the “expected” negation (1-i) is the impossible (23): It is S-Neg, and has the same Topic-Focus Structure, Perspective Structure, and felicity conditions, and contradictory truth-conditions.

In Step 4, we noted that given the impossibility of (23), the best choice for negating (1-i) is (1-NE): (1-NE) has C-Neg, but it matches the impossible (23) in all other respects.

And in Step 5 we noted that a perfect choice for negating (1) on structure (1-ii) is the S-Neg (1-NET), which matches (1-ii) in Topic-Focus Structure, Perspective Structure, and felicity conditions, and has contradictory truth-conditions.

In conclusion, we argue that while (1-NET) may not be an Existential sentence, we do not consider it an accident that (1-NET), like Existential sentences, suggests a ‘Perspective’ or ‘Observer’ centered ‘in London’ (e.g. it is natural if the speaker is, or imagines the situation from the perspective of being, ‘in London’), and remarks on the perceived absence of Kolja; sentence (23) resists such a perspective. Natural languages frequently use similar means to express non-perceivability or perceived absence and nonexistence (Padučeva 2004, 27, 246).

We have argued that either of these negations can become the preferred one in a given context in the absence of the all-purpose general negation for the case in which Kolja is Perspectival Center, an absence possibly caused by the defectiveness of the verb *byt’* ‘be’²⁰. While the story remains incomplete in the absence of a better understanding of the interaction of syntactic, semantic, and pragmatic “preferences”, it is clear that closer attention to the fine-grained semantics and pragmatics of negation and of *be*-sentences can help us to understand and resolve the puzzles of such apparently imperfect matches between affirmative and negative *be*-sentences.

Authors’ e-mail addresses:

Borschev: borschev@linguist.umass.edu, Paducheva: avenul@atom.ru, Partee: partee@linguist.umass.edu, Testelet: yakov_ts@mail.ru, Yanovich: iyanovich@mail.ru

²⁰ But see footnote 18, which casts doubt on the centrality of the defectiveness of the verb *byt’*. An important topic for future research is to fit these Existential and Locative sentences into the larger class of copular sentences with various kinds of predicates and null or non-null forms of *byt’*, and in particular to see which others lack S-Neg counterparts and why.

References

- Arutjunova, Nina D. 1976. *Predloženie i ego smysl [The Sentence and its Meaning]*. Moscow: Nauka.
- Babby, Leonard H. 1980. *Existential Sentences and Negation in Russian*. Ann Arbor, Michigan: Karoma Publishers.
- Babby, Leonard H. 2001. The genitive of negation: a unified analysis. In *Annual Workshop on Formal Approaches to Slavic Linguistics: The Bloomington Meeting 2000 (FASL 9)*, eds. Steven Franks, Tracy Holloway King and Michael Yadroff, 39-55. Ann Arbor: Michigan Slavic Publications.
- Borschev, Vladimir, and Partee, Barbara H. 1998. Formal and lexical semantics and the genitive in negated existential sentences in Russian. In *Formal Approaches to Slavic Linguistics 6: The Connecticut Meeting 1997*, eds. Željko Boskovic, Steven Franks and William Snyder, 75-96. Ann Arbor: Michigan Slavic Publications.
- Borschev, Vladimir, and Partee, Barbara H. 2002a. The Russian genitive of negation in existential sentences: the role of Theme-Rheme structure reconsidered. In *Travaux du Cercle Linguistique de Prague (nouvelle série), v.4*, eds. Eva Hajičová, Petr Sgall, Jiri Hana and Tomáš Hoskovec, 185-250. Amsterdam: John Benjamins Pub. Co.
- Borschev, Vladimir, and Partee, Barbara H. 2002b. The Russian genitive of negation: Theme-rheme structure or perspective structure? *Journal of Slavic Linguistics* 10:105-144.
- Borschev, Vladimir, and Partee, Barbara H. 2002c. O semantike bytijnyx predloženij (On the semantics of existential sentences). *Semiotika i Informatika* 37 (Moscow: VINITI):59-77.
- Chvany, Catherine V. 1975. *On the Syntax of BE-Sentences in Russian*. Cambridge, MA: Slavica.
- Hajičová, Eva, Partee, Barbara, and Sgall, Petr. 1998. *Topic-Focus Articulation, Tripartite Structures, and Semantic Content*. Dordrecht: Kluwer.
- Harves, Stephanie A. 2002a. Unaccusative Syntax in Russian, General and Slavic Linguistics, Princeton University: Ph.D. dissertation.
- Harves, Stephanie A. 2002b. Genitive of negation and the existential paradox. *Journal of Slavic Linguistics* 10:185-212.
- Horn, Laurence R. 1989. *A Natural History of Negation*. Chicago: University of Chicago Press.
- Jespersen, Otto. 1924. *The Philosophy of Grammar*. London: Allen and Unwin.
- Klima, E. 1964. Negation in English. In *The Structure of Language*, ed. J.; Katz Fodor, J., 246-323. Englewood Cliffs: Prentice-Hall.
- Kondrashova, Natalia. 1996. The Syntax of Existential Quantification, University of Wisconsin, Madison: Ph.D. dissertation.
- Morris, Charles. 1938. Foundations of the Theory of Signs. In *International Encyclopedia of Unified Science*, eds. Otto Neurath, Rudolf Carnap and Charles Morris, 77-138. Chicago: University of Chicago Press.
- Padučeva, E.V. 1974. *O semantike sintaksisa: materialy k transformacionnoj grammatike russkogo jazyka [On the Semantics of Syntax: Materials toward the Transformational Grammar of Russian]*. Moscow: Nauka.
- Padučeva, E.V. 1985. *Vyskazyvanie i ego sootnesennost' s dejstvitel'nost'ju (The Utterance and its Correspondence with Reality)*. Moscow: Nauka.
- Padučeva, E.V. 1992. O semantičeskom podxode k sintaksisu i genitivnom sub"ekte glagola BYT' [On the semantic approach to syntax and the genitive subject of the verb BYT' 'BE']. *Russian Linguistics* 16:53-63.
- Padučeva, E.V. 1997. Roditel'nyj sub"ekta v otricatel'nom predložении: sintaksis ili semantika? [Genitive subject in a negative sentence: syntax or semantics?]. *Voprosy Jazykoznanija* 2:101-116.
- Padučeva, E.V. 2004. *Dinamičeskie modeli v semantike leksiki [Dynamic models in lexical semantics]*. Moscow: Jazyki slavjanskoj kultury.
- Partee, Barbara H., and Borschev, Vladimir. 2004. The semantics of Russian Genitive of Negation: The nature and role of Perspectival Structure. In *Proceedings of Semantics and Linguistic Theory (SALT) 14*, eds. Kazuha Watanabe and Robert B. Young, 212-234. Ithaca, NY: CLC Publications.

- Partee, Barbara H., and Borschev, Vladimir. In press. Existential sentences, BE, and the Genitive of Negation in Russian. In *Existence: Semantics and Syntax*, eds. Ileana Comorovski and Klaus von Heusinger. Dordrecht: Kluwer/Springer.
- Peškovskij, Aleksandr M. 1956. *Russkij sintaksis v naučnom osveščanii [Russian syntax in a scientific light]*, 7th edition. Moscow: Gosučpedgiz (3rd edition 1928).
- Rooth, Mats. 1992. A theory of focus interpretation. *Natural Language Semantics* 1:75-116.
- Stalnaker, R. 1978. Assertion. In *Pragmatics*, ed. Peter Cole, 315-332. New York: Academic Press. Reprinted in Portner and Partee, eds., 2002, 147-161.

[BHP1]Starting from paper version 10, last one with codes in.

[BHP2]BHP note to myself. After we have final draft, and remove EndNote codes, reverse the order of these two.