

# Presuppositions, *Wh*-Questions, and Discourse Particles: Russian *že*\*

Paul Hagstrom<sup>†</sup> and Svetlana McCoy<sup>‡</sup>  
<sup>†</sup>Boston University, <sup>‡</sup>Rutgers University

## 1. Introduction

In this paper, we attempt a formalization of the discourse properties of the particle *že* in colloquial Russian (specifically, the “sentential *že*,” as described in section 2). After establishing the meaning it has in simple declarative sentences, we go on to show that its effect in *wh*-questions is in fact predictable when incorporated into a semantics for questions and a model of discourse interactions.

We will proceed by first giving general background on the particle itself, then formalizing its meaning based on its simplest use, in declaratives. Next, we review some background assumptions about question semantics and then show how the effect of *wh-že* questions can be derived. Finally, we close with some comments on the appropriateness of modeling the meaning of *že* with presuppositions and its use in *yes-no* questions.

## 2. Background on the Colloquial Russian Particle *že*

The Russian particle *že* is etymologically related to Proto-Indo-European *\*ghe*. In colloquial Russian it is truly multifunctional: the diversity of its usage ranges from being a purely

---

\* We are grateful to Enric Vallduví for steering our thoughts on *že* in the direction of ‘verum focus’ and to the FASL 11 audience and the editors of the proceedings volume for helpful comments.

“modal/affective” particle to playing only an organizational role in discourse, from being a marker of focus to marking thematic elements, etc.<sup>1</sup> In a recent study of the particle, Parrott (1997) classifies *že* into three types, differentiated by scope, prosody, and pragmatic effect: “thematic” *že*, “phrasal” *že*, and “sentential” *že*.<sup>2</sup> Of these, it is the sentential *že* that we are concerned with in this paper (and all further references to *že* in this paper refer to the sentential *že*). These are the cases where *že* is felt to modify the whole proposition, rather than focusing on a single term within the proposition. The sentential *že* has only received limited attention in the literature to date (see, e.g., Yokoyama 1986, Padučeva 1988, Parrott 1997, Feldman 2001, McCoy 2001).

Rendering the meaning of utterances containing *že* into English usually involves the use of either some contrastive lexeme, such as *but*, or some prosodic means of indicating contrast. When *že* appears in a statement, the effect can be approximated in English using the “contradiction contour” (Lieberman & Sag 1974, Pierrehumbert & Hirschberg 1990).<sup>3</sup> *Yes-no* questions with *že* are best rendered as tag questions. A close approximation of a *wh*-question with *že* would be the ‘(who/what/...) *the hell...*’ construction.<sup>4</sup> Russian *že* also seems to be comparable to German *doch* and Dutch *toch* (on the German and Dutch particles, see, e.g., Karagjosova 2001a, b and Zeevat 2000). The three contexts for *že*

---

<sup>1</sup> For some descriptions of one or more of the various meanings of *že*, see, e.g., Vasilyeva 1972, Ickler 1981, Bonnot 1986, Paillard 1987, Padučeva 1988, King 1993/1995, Bitextin 1994, Parrott 1997, Bonnot & Kodzasov 1998, Feldman 2001, McCoy 2001.

<sup>2</sup> See McCoy 2001 for some discussion on unification of sentential and phrasal *že*.

<sup>3</sup> For example, speaker B in the mini-discourse below would use a contradiction contour on the first sentence, with a high pitch at the beginning (on *John*) and a rising pitch on the last syllable (of *library*).

(i)A: John’s not around. I guess he went to the library.

B: John didn’t go to the library...! He went to the movies!

<sup>4</sup> See den Dikken & Giannakidou 2002 for some recent discussion of the English ‘*wh* the hell’ construction. Their primary aim is to argue that ‘*wh* the hell’ behaves as a polarity item, and our preliminary investigations of Russian *že* seem to indicate that the same is true for *že*, although this is not directly relevant to our point here.

that we will be concentrating on here are illustrated in the following examples taken from CHILDES (MacWhinney 2000, Protassova's corpus). The first transcript, in (1), has examples of a *yes-no* question and a *wh*-question with *že*, which are broken down in (2–3).<sup>5</sup> The second transcript in (4) gives the context leading up to the example of the sentential *že* with a declarative that is illustrated in (5).

(1) *Situation*: While Mother is gluing a broken object together, Varja is questioning the fact that the object is broken.

- a. VAR: Zachem èto ty kleish'?
  - b. Èto *že* ne slomalos'?
  - c. Tak nuzhno kleit', chto li?
  - d. MOT: Ja +...
  - e. èto dolzhna pomazat' i skleit'.
  - f. Kak *že* ne slomalos'?
  - g. My *že* s toboj sami videli, chto slomalos'.
  - h. A teper' my s toboj zakleim, i budet neslomannyj.
- (Séance 7)

- a□ VAR: What for are you gluing it together?
- b□ This (*že*) isn't really broken, is it?
- c□ This way you have to glue it, really?
- d□ MOT: I +...
- e□ have to spread [the glue] out and glue it together.
- f□ Why in the world (*že*) isn't it broken?
- g□ You and I (*že*) saw it ourselves that it got broken.
- h□ And now we'll glue it together,  
and it will be not broken.

- (2) VAR: Èto *že* ne slomalos'? (=1b)  
 this *že* NEG got-broken  
 'This (*že*) isn't really broken, is it?'

---

<sup>5</sup> The third instance of *že* in (1) is an example of the phrasal *že*, not the sentential *že* that we are concerned with here.



*at the correct conclusion yourself, but nevertheless you seem to be sticking to the wrong conclusion.'*

Following McCoy (2001), we assume that *že* syntactically attaches to a “kontrastively”-marked element (borrowing the terminology of Vallduví & Vilkuna 1998), something in the sentence for which a set of alternatives is evoked (essentially Rooth’s 1985 notion of focus). The possible linear positions of *že* under this reading are shown in (6); *že* can either occur in second position (following topicalized material) or at the end of the sentence.

(6) Ona (*že*) už ubita (*že*).

This suggests that *že* here is a marker of *verum focus*—i.e., contrast not on the lexical meaning of the verb but rather on the polarity, the veracity, of the proposition itself. We assume that this corresponds structurally to focus on some inflectional category, such as tense, negation (or polarity). As at least a first approximation, the set of alternatives that would be evoked in this case is shown in (7) (one of which seems certainly true to the speaker, the other of which seems to be believed by the addressee).

(7) {The fly is killed; The fly is not killed }

The basic proposal we make about adding *že* to a proposition *p*—when *že* marks the polarity of the proposition—is that the utterance is an assertion of *p* (that is, it has no effect on the basic truth conditions), with an added presupposition that the hearer believes *not p*. Moreover, there is an added element that the hearer’s belief of *not p* is based on erroneous reasoning—all of the evidence for believing *p* is there, and yet the hearer is not drawing the conclusion that *p*.

We can write the meaning contribution of *že* somewhat more formally as follows:<sup>6</sup>

---

<sup>6</sup> Cf. Karagjosova’s (2001a, b) formalization of the meaning of the German *doch*.

- (8)  $[[\check{z}e]](p) = p$ , presupposes that  
the hearer believes  $\neg p$ , and that  
the hearer has enough information to have concluded  $p$ .

The definition in (8) is what we take to be the basic meaning contribution of  $\check{z}e$ , derived from the properties it exhibits in declarative utterances. In the next section, we will see how this same meaning interacts with the properties of *wh*-words to derive the pragmatic effect associated with *wh*- $\check{z}e$ .

#### 4. Particle $\check{z}e$ in *Wh*-Questions

The particle  $\check{z}e$  can appear also in contexts like (9), attached to a *wh*-phrase. The force of such questions is mostly rhetorical; the question is asked but no answer is expected, because in asking the question itself the speaker seems to presume that no (reasonable) answer is true.<sup>7</sup> In (9), the only two reasonable answers ('I should ask mother' and 'I should ask father') have been previously asserted to be false in the context of the utterance.

- (9) [Father puts away his son's library books and tells him that mother took them back to the library. The boy asks mother if she indeed took them back. She says 'no'. He then says (in the presence of both parents):]

U kogo         $\check{z}e$  mne        togda    sprosit'?  
at who(Gen)  $\check{z}e$  me(Dat) then    ask(infin)  
'Who ( $\check{z}e$ ) (in the world/the hell...) should I ask then?'

- (10) set of 'reasonable' answers:  
{I should ask mother, I should ask father }

It turns out that the pragmatic effect of  $\check{z}e$  in this use can be seen as a natural consequence of the basic verum focus meaning of

---

<sup>7</sup> What constitutes "reasonable" will of course vary from discourse to discourse; the speaker of (9) need not be assuming that there is no answer that he would accept, but just that there is no answer he can think of that he has not dismissed already.

že, when coupled to an analysis of questions and information flow. Showing this is the task we turn to next.

#### 4.1 *Background on questions*

Since at least Hamblin 1958, the standard view of the semantics of questions has been that a question defines a set of propositions that can serve as possible answers. Although this has been implemented in various ways, we will adopt a simple one based on Hamblin 1973, under which a question simply characterizes (or denotes) a set of propositions (those propositions which are possible answers to the question). The intuition is very much like the intuition behind taking propositions to be defined by their truth conditions: just as knowing the meaning of a proposition is equivalent to knowing under what conditions it is true, to know the meaning of a question is equivalent to knowing what counts as an answer (Hamblin 1958:162, Postulate 2). We can think of a question as a presentation of options to the hearer, a formula for enumerating the propositions among which the questioner would like to know the true one(s). Given this, the answer set for (9) above would in fact be the set in (10).

A point worth making in this connection is that the proposition *I should ask Kofi Annan* is conspicuously absent from (10). We assume (with probably everyone else, although it is often left implicit) that the individuals who can stand in for ‘who’ in the set of possible answers are being drawn from a small set of salient and contextually relevant individuals.<sup>8</sup>

We adopt here an *in situ* semantics for questions, using a system of composition basically as in Rooth 1985; see also Rullmann & Beck 1998, as well as Hamblin 1973, Hagstrom 1998. The basic outline is as follows.

---

<sup>8</sup> See von Stechow 1994 for a more detailed discussion of the intricacies of “resource domains” that constrain expressions like *u kogo* ‘at who’ in (9) or similarly *everyone* in *Everyone had a good time last night*. The details are not as important as the intuition for our purposes in this paper.

Hamblin (1973) proposed that while a name such as *John* denotes an individual, a *wh*-word such as *who* denotes a set of individuals, made up of the possible candidates for substitution for the *wh*-word in the answers in the answer set.

(11)  $[[ \text{who} ]] = \{ \text{John, Mary, Bill, ...} \}$

Normally a verb, such as *leave*, is taken to be a function that, when provided with an individual, will respond with either *true* or *false* depending on whether that individual left (that is, *leave* is true of *John* if and only if John left). Given that *leave* demands an argument that is an individual, this raises an issue with respect to the interpretation of a question like “Who left?” in which *leave*, according to (11), receives not an individual but a set of individuals.

The specific mechanism we will assume to handle this situation is *flexible functional application* as formalized by Rullmann & Beck (1998) (itself anteceded by Hamblin 1973 and more particularly Rooth 1985). The relevant subcases are given in (12).<sup>9</sup>

(12) Flexible functional application

$$\begin{array}{l}
 f(a) = \\
 \text{(i)} \quad f(a) \\
 \text{(ii)} \quad \{m: \exists x \ a: m = f(x)\} \\
 \text{whichever is defined}
 \end{array}$$

Flexible functional application simply does the obvious thing to repair a situation in which a function that requires an individual argument gets instead a set of individuals. To illustrate with an analogy, consider a vending machine to be a function from quarters to cans of soda, and consider what the natural resolution would be of a situation in which someone approached the vending machine with a bag of quarters. Although the vending machine cannot accept things of type ‘bag’, each of the items *in* the bag is of the right type. Applying flexible functional application in this

---

<sup>9</sup> This other two subcases are clear, but not relevant here. These would be the cases with a set of functions and a single argument, or a set of both functions and arguments.

analogy, we would simply run through the quarters in the bag, collecting sodas as each iteration of the function completes.

Applying flexible functional application in “Who left?” would proceed similarly, applying *leave* to each element of *who*.

(13) [[ who left ]] = { left(John), left(Mary), ... }  
= { John left, Mary left, ... }

#### 4.2 The proposal for *wh-že*

Given the discussion of *že* in section 3, we can look at its effect in (9). Recall that *že*, when applied to a proposition, does not change the assertion, but sets up the presupposition that the hearer believes that the asserted proposition is false. That is, the contribution of *že* is not part of the propositional content. Rather, *že* applies to a proposition and generates requirements on a well-formed discourse.

Reconsider now the set of propositions in (13) above and what would happen if we added *že*; since *že* is not part of the propositional content, we would not expect any trace of *že* in the basic set of possible answers (moreover, it would seem unlikely that the questioner would be providing the hearer with several options of how to contradict the questioner’s own beliefs). The *že* is directed at the hearer; it is not part of the options that the hearer is being asked to select among.

There is a technical issue here at this point; *že* is defined as taking a proposition, but a question is a set of propositions. Thus, this requires the same kind of ‘repair’ that we saw above for interpreting *wh*-words as arguments. Exactly parallel to what we assume happens in (9), the set in (10) is taken as an argument to the function which *že* represents, resulting in (14), and addition to the presuppositional context.

- (14)  $\check{z}e$  ( { I should ask mother, I should ask father } )  
 = { I should ask mother, I should ask father }  
 and presupposes that the hearer believes  
 {it is not the case that I should ask mother,  
 it is not the case that I should ask father }

Consider what options the questioner is really providing to the hearer in (9). For every possible answer in the set in (14), there is a presupposition that the hearer believes that it is false, making it an infelicitous answer. Under the maxim of Quality (Grice 1975), the hearer cannot answer the question by providing a proposition that s/he believes to be false. Since this holds for every answer in the set of possible answers, the hearer (if accepting the presupposition of the question) is left without any response to make in a cooperative discourse.

There are a couple of issues worth bringing up at this point. First, although these *wh- $\check{z}e$*  questions have a rhetorical feel to them, there is also a sense in which they *can* be answered. Recall that we are assuming that a normal question (without  $\check{z}e$ ) the formula for constructing what counts as a possible answer is contextually constrained (this was the point of observing that *I should ask Kofi Annan* was not among the reasonable answers). We can characterize the contextual constraint as essentially limiting the alternatives to the reasonable, the typical, the salient. When we subject a question (that is, a set of alternative propositions) to the function marked by  $\check{z}e$ , we will generate a set of presuppositions such that for each of the propositions that would count as reasonable, typical, salient answers to the question, the hearer believes it to be false. It does not, however, generate such presuppositions for answers that, while they fit the specification given by the question, cannot be formed by substituting in a “reasonable” value for the *wh*-word. The upshot of this is that a *wh*-question with  $\check{z}e$  has the property that the only felicitous answers would have to be drawn from propositions that the questioner takes to be unreasonable or atypical.

This matches the intuition that when a question like (9) is presented to a hearer, the option is open to answer “the tooth fairy”

(or “Kofi Annan”) in response, but at the same time this is very likely to be rejected by the questioner as an unreasonable answer. We might characterize the meaning of *wh-že* questions as something like: *What is the answer, given that all of the possible/reasonable answers are false?*

## 5. Commentaries

### 5.1 *Is this really a presupposition?*

Above in (8), we gave the meaning of *že* as evoking certain presuppositions in the discourse. It is worth taking a moment to decide if these are really presuppositions.

In favor of taking this effect to be a presuppositional one is the behavior with respect to the projection of presuppositions from embedded clauses (see Karttunen 1974, Heim 1992). Consider the uncontroversially presuppositional verb *stop*, for example. The sentence in (15) with the verb *stop* presupposes that John once decrypted secret messages for the CIA (and asserts that he no longer does). Anyone who accepts (15) as true (or even rejects it as false) must also accept the presupposition.

(15) John has stopped decrypting secret messages for the CIA.

However, accepting (16), where *stop* is embedded under *think*, or (17), under *want*, no longer requires presupposing that John once decrypted secret messages for the CIA; rather, each requires presupposing that John *believes* that he once decrypted secret messages for the CIA.<sup>10</sup> Someone who accepts (16) need not believe that John ever decrypted secret messages for the CIA.

(16) John thinks that he has stopped decrypting secret messages for the CIA.

(17) John wants to stop decrypting secret messages for the CIA.

---

<sup>10</sup> More specifically, it presupposes that the subject of *think* believes it. If the embedded subject of *stop* were someone other than John, it would still be John who needs to believe the presupposition of *stop*.

Some verbs respond differently to embedded presuppositions; for example, accepting (18) with the verb *realize* again requires presupposing that John previously decrypted secret messages for the CIA.

(18) John (finally) realized that he has stopped decrypting secret messages for the CIA.

The situation is the same in Russian; the sentences in (19), (20), and (21) are parallel to (15), (17), and (18), respectively, and share the same properties: accepting (19) or (21) requires accepting the presupposition that Ivan once stole books, whereas accepting (20) only requires accepting that Ivan believes he once stole books.

(19) Ivan perestal krast' knigi.  
Ivan stopped steal(infin) books  
'Ivan has stopped stealing books.'

(20) Ivan xočet perestat' krast' knigi.  
Ivan wants stop(infin) steal(infin) books  
'Ivan wants to stop stealing books.'

(21) Ivan (nakonec) ponjal, što on perestal krast' knigi.  
Ivan (finally) realized that he stopped steal(infin)books  
'Ivan (finally) realized that he has stopped stealing books.'

With these facts in mind, consider the examples of *wh-že* below in (22–24). In (23), the clause with which *što že* is thematically associated is embedded under 'think', and in (24), under 'realize'.

(22) Što že Ivan kupil?  
what že Ivan bought  
'What (že) did Ivan buy?'

(23) Što že Ivan xočet kupit'?  
what že Ivan wants buy(infin)  
'What (že) does Ivan want to buy?'

- (24) Čto *že* Ivan (nakonec) ponjal, (čto) on kupil?  
what *že* Ivan (finally) realized (that) he bought  
'What (*že*) did Ivan (finally) realize that he bought?'

The questions in (22) and (24) are necessarily felt to be something of a “verbal attack” on the addressee, similar to (9), discussed earlier. Significantly, (23) (although it also allows a hearer-hostile reading) has another reading, under which it can be interpreted as being an attack on Ivan rather than on the hearer. This could be used in a situation in which, for example, Ivan wants to buy something, we know what it is (we can see it, Ivan is pointing to it), and it is something not particularly outrageous or surprising (perhaps a loaf of bread). Ivan, however, seems to believe it is something else, something fantastic, but we do not know quite what (perhaps something like a magic, wish-granting loaf of bread). Here (23) could be used to attack Ivan’s reasonableness (but not necessarily the reasonableness of the hearer). This is of course what we expect if *že* has the presupposition proposed above; where the presuppositions project to the beliefs of the main clause subject rather than into the discourse context, we wind up presupposing that Ivan believes all of the reasonable propositions of the form “(Ivan) to buy *x*” are false, leaving only the implausible, unreasonable propositions. However, to accept (23), it is not required that I myself (as the hearer) believe that what Ivan wants to buy is anything implausible.<sup>11·12</sup>

---

<sup>11</sup> Another famous test for presuppositions is embedding under negation. For example, accepting *John didn’t stop decrypting messages for the CIA* still requires accepting that John once did decrypt messages for the CIA. The negation test will not work for testing the presuppositions of *že*, however, since the presupposition of *že* is generated too high in the structure (on the polarity itself).

<sup>12</sup> This gets immediately very complicated when one attempts to spell out exactly how the presuppositions project, and how they interact with the *de dicto/de re* distinction in this example (‘What does Ivan want to buy?’ could either be answered *de re*, ‘a loaf of bread’, even though he is under the mistaken impression that it is a magic loaf of bread, or *de dicto*, ‘a magic loaf of bread’, accurately representing his—unfulfillable—desire). We cannot do the issue justice here, but it is one that deserves more serious thought.

## 5.2 “Yes-no questions” with *že*

Having dealt with *wh*-questions, it is worth considering “yes-no questions” such as (25), repeating (2) from above.

- (25) Èto *že* ne slomalos?  
this *že* NEG got-broken  
‘This (*že*) isn’t really broken, is it?’

A “yes-no question” with *že* such as “*p že?*” seems to presuppose that the hearer believes  $\neg p$ , despite apparent sufficient (common) evidence that *p*—that is, just as the affirmative “*p že*” does. However, given our explanation of *wh-že* questions above, this poses a problem: if in a question (that is, a set of propositions that are possible answers to the question), *že* is applied to each possible answer, the net result should be that all possible polarities of *p* are presupposed not to hold. More succinctly, our system seems to force presupposition of a contradiction in this case.<sup>13</sup>

Our claim here that these questions like (25) are not in fact *yes-no* questions at all. Rather, they are simply declaratives with *že* and a sort of “contradiction intonation”, analogous to the English question uttered by B in (26) below (where the first syllable of *broken* is uttered with a relatively high pitch and the last syllable is uttered with a low pitch, with a small, short rise at the end).<sup>14</sup>

- (26) A: Let me fix this. It’s broken.  
B: It’s *broken!*? It’s never worked better!

Given this, we expect (and find) the pragmatic effect of a “yes-no question” with *že* to be the same as for the corresponding

---

<sup>13</sup> The situation does not change even if we contemplate degrees of certainty between *true* and *false*, as exploited by Romero & Han (2002) (see also Gärdenfors 1988) in dealing with the expectations of negative tag questions in English. Even with degrees of certainty, flexible functional application of *že* to each would still yield a contradictory presupposition.

<sup>14</sup> Note, however, that there is a polarity reversal in English. Saying “It’s broken?!” in English corresponds to (25) (‘It’s not broken + *že* + ?’) in Russian; both imply that the addressee believes that it is broken and evoke the claim that it is not.

declarative with *že*. In the English example above, B's "question" is clearly not a *yes-no* question, since the subject and verb have not inverted. In Russian, however, there is no corresponding indicator of a *yes-no* question: the question is just like the declarative but for the intonation. Unfortunately, this leaves us with no way to tell for sure, but our account makes the (as far as we know, unverifiable) prediction that *že* is in fact impossible with a true *yes-no* question due to the fact that it would raise a contradictory presupposition (or at least a presupposition that the addressee holds directly contradictory beliefs).

## 6. Summary Remarks

The semantic contribution of (sentential) *že* in declaratives is 'p, given that it is obvious, and despite the fact that you act as if you believe  $\neg p$ .' In this paper, we have shown that the role of (sentential) *že* in *wh*-questions is a natural extension of this meaning, once we take into account the semantics of questions (where the denotation arises through the use of the type-repair mechanism of flexible functional application). We argued that *že* is adding a presupposition on the basis of its behavior with respect to presupposition projection. Further, our account implies that "yes-no questions" with *že* cannot be *yes-no* questions at all, but must be declaratives with question intonation (cf. *It's broken!?*), which is at least supported by fact that the presuppositions of "yes-no questions" and declaratives are the same.

## Data Source

CHILDES: Other Languages - Russian – Protassova. In MacWhinney, Brian. 2000. *The CHILDES Database: Tools for Analyzing Talk*. 3d Edition. Vol. 2: *The Database*. Mahwah, NJ: Lawrence Erlbaum Associates.

## References

- Bitextin, Alexandr Borisovič. 1994. *Časticy -to, že, ved' i Vvodnye Konstrukcii Tipa kak izvestno kak Sredstva Ukazaniya na Izvestnost' Propozicional'nogo Soderžaniya Predloženiya Slušajuščemu*. AKD, Moskovskij Gosudarstvennyj Universitet imeni M. V. Lomonosova.
- Bonnot, Christine. 1986. La particule *že* marqueur de theme. In *Les Particules Enonciatives en Russe Contemporain 1*, 125–152. Paris: Institut d'Études Slaves.
- Bonnot, Christine and C. B. Kodzasov. 1998. Semantičeskoe var'irovanie diskursivnyx slov i ego vlijanie na linearizaciju i intonirovanie (Na primere častic ŽE i VED'). In *Diskursivnye Slova Russkogo Jazyka: Opyt Kontekstno-Semantičeskogo Opisaniya*, ed. K. Kiseleva and D. Paillard, 382–443. Moskva: Metatekst.
- Dikken, Marcel den, and Anastasia Giannakidou. 2002. From hell to polarity: “Aggressively non-D-linked” *wh*-phrases as polarity items. *Linguistic Inquiry* 33(1): 31–61.
- Feldman, Anna. 2001. Discourse markers—Accessing ‘hearer-old’ information: The case of the Russian *že*. In *Proceedings of the 27th LACUS Forum (Speaking and Comprehending)*, ed. Ruth M. Brend, Alan K. Melby, and Arle R. Lommel, 186–201.
- Fintel, Kai von. 1994. *Restrictions on Quantifier Domains*. Doctoral dissertation, University of Massachusetts, Amherst.
- Gärdenfors, Peter. 1988. *Knowledge in flux: Modeling the dynamics of epistemic states*. Cambridge, MA: MIT Press.
- Grice, H. P. 1975. Logic and conversation. In *Speech Acts: Syntax and Semantics*, 3, ed. Peter Cole and Jerry Morgan, 41–58. New York: Academic Press.
- Hagstrom, Paul. 1998. *Decomposing Questions*. Doctoral dissertation, Massachusetts Institute of Technology. Distributed by MIT Working Papers in Linguistics.
- Hamblin, C. L. 1958. Questions. *Australasian Journal of Philosophy* 36: 159–168.

- Hamblin, C. L. 1973. Questions in Montague English. *Foundations of Language* 10: 41–53.
- Heim, Irene. 1992. Presupposition projection and the semantics of attitude verbs. *Journal of Semantics* 9: 183–221.
- Ickler, Nancy Louisa. 1981. *The Particle 'ŽE' in Old Russian: The Discourse Origins of Conditionals and Relatives*. Doctoral dissertation, University of California, Berkeley.
- Karagjosova, Elena. 2001a. Modal particles and the common ground: Meaning and functions of German *ja*, *doch*, *eben/halt* and *auch*. In *BI-DIALOG 2001*, ed. P. Kühnlein, H. Reiser, and H. Zeevat, 201–209.
- Karagjosova, Elena. 2001b. Towards a comprehensive meaning of the German *doch*. In *Proceedings of the Sixth ESSLLI Student Session*, ed. Kristina Striegnitz, 131–141. Helsinki.
- Karttunen, Lauri. 1974. Presupposition and linguistic context. *Theoretical Linguistics* 1: 181–194.
- King, Tracy Holloway. 1993/1995. *Configuring Topic and Focus in Russian*. Doctoral dissertation, Stanford University, Stanford, CA. Published in 1995 by CSLI Publications, Stanford, CA.
- Lieberman, Mark and Ivan Sag. 1974. Prosodic form and discourse function. *Proceedings of the Chicago Linguistic Society* 10: 416–427.
- McCoy, Svetlana. 2001. *Colloquial Russian Particles –to, že, and ved' as Set-Generating ("Kontrastive") Markers: A Unifying Analysis*. Doctoral dissertation, Boston University.
- Padučeva, E. V. 1988. La particule *že*: Semantique, syntaxe et prosodie. In *Les Particules Enonciatives en Russe Contemporain* 3, 11–44. Paris: Institut d'Études Slaves.
- Paillard, Denis. 1987. *Že* ou la sortie impossible: Immediatete, reprise, evidence, questionnement. In *Les Particules Enonciatives en Russe Contemporain* 2, 173–225. Paris: Institut d'Études Slaves.
- Parrott, Lillian. 1997. *Discourse Organization and Inference: The Usage of the Russian Particles že and ved'*. Doctoral dissertation, Harvard University.

- Pierrehumbert, Janet and Julia Hirschberg. 1990. The meaning of intonational contours in the interpretation of discourse. In *Intentions in Communication*, ed. Philip R. Cohen et al., 271–312. Cambridge, MA: MIT Press.
- Romero, Maribel and Chung-Hye Han. 2002. On certain epistemic implicatures in *yes/no* questions. In *Proceedings of the 13th Amsterdam Colloquium*. Amsterdam: ILLC/Department of Philosophy, University of Amsterdam.
- Rooth, Mats. 1985. *Association with Focus*. Doctoral dissertation, University of Massachusetts, Amherst. Distributed by GLSA.
- Rullmann, Hotze, and Sigrid Beck. 1998. Reconstruction and the interpretation of *which*-phrases. In *Reconstruction: Proceedings of the 1997 Tübingen Workshop*, ed. G. Katz, S.-S. Kim, H. Winhart, 223-256. Stuttgart University and University of Tübingen.
- Vallsduví, Enric, and Maria Vilkuna. 1998. On rheme and kontrast. *Syntax and Semantics* 29 (The Limits of Syntax), 79–108.
- Vasilyeva, A. N. 1972. *Particles in Colloquial Russian: Manual for English-Speaking Students of Russian*. Moscow: Progress Publishers.
- Yokoyama, Olga Tsuneko. 1986. *Discourse and Word Order*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Zeevat, Henk. 2000. Discourse particles as speech act markers. *LDV Forum*, 74–91.

Paul Hagstrom  
Department of Modern Foreign Languages and Literatures  
Boston University  
718 Commonwealth Ave.  
Boston, MA 02215  
USA

[hagstrom@bu.edu](mailto:hagstrom@bu.edu)

Svetlana McCoy  
Linguistics Department  
Rutgers University  
18 Seminary Pl.  
New Brunswick, NJ 08901  
USA

[svetgmcc@yahoo.com](mailto:svetgmcc@yahoo.com)