## Unifying the Meaning of Multifunctional Particles: The Case of the Russian $\check{ZE}^*$

### Svetlana McCoy

#### **1** Introduction

This paper raises the question of whether the meaning of multifunctional particles—such as the ancient Greek ge (Slings 2000), the German *doch* (Abraham 1991, Karagjosova 2001, etc.), or the Russian *-to*, *že*, *ved*' (Bitex-tin 1994, Bonnot and Kodzasov 1998, McCoy 2001a,b, etc.)—can be unified. A sample model for such unification of meaning is offered, which is based on the distribution properties of the colloquial Russian particle *že*.

The particle  $\check{ze}$  (etymologically related to Proto-Indo-European \*ghe) is truly multifunctional in colloquial Russian: the diversity of its usage ranges from being a purely "modal/affective" particle to playing only the organizational role in discourse, from being a marker of focus to marking thematic elements, etc. The excerpt in (1), taken from CHILDES, illustrates some of these functions:

- (1) [While Mother is gluing a broken object together, Varja is questioning the fact that the object is broken] (CHILDES, séance 7)
  - \*VAR: Zachem èto ty kleish'?
  - \*VAR: Éto *zhe* ne slomalos'?
  - \*VAR: Tak nuzhno kleiť, chto li?
  - \*MOT: Ja +...
  - \*MOT: èto dolzhna pomazat' i skleit'.
  - \*MOT: Kak zhe ne slomalos'?
  - \*MOT: My zhe s toboj sami videli, chto slomalos'.
  - \*MOT: A teper' my s toboj zakleim, i budet neslomannyj.
  - \*VAR: What for are you gluing it together? This (*že*) isn't really broken, is it? This way you have to glue it, really?

<sup>&</sup>lt;sup>\*</sup> This paper is based on Chapter 6 of my Ph. D. dissertation. I would like to express gratitude to my committee members for all the help I received from them: Mary Catherine O'Connor, Bruce Fraser, Enric Vallduví, Catherine V. Chvany, and Shanley Allen. Special thanks go to my first reader Paul Hagstrom.

\*MOT: I +... have to spead [the glue] out and glue it together. Why in the world (že) isn't it broken? You and I (že) saw it ourselves that it got broken. And now we'll glue it together and it will be not broken.

Glosses: Èto že ne slomalos'? This že NEG got-broken 'This (že) isn't really broken, is it?' [yes-no question: rhetorical; translation: tag question]

Kak že ne slomalos'? How/why že NEG got-broken 'Why in the world (že) isn't it broken?' [wh-question: rhetorical; translation: 'why in the world...']

My že s toboj sami videli, chto slomalos'. We že with you ourselves saw that got-broken. '(But) you and I (že) together saw that it got broken.' [statement; scope: phrase/term; translation: 'but'/prosody]

The first occurrence of  $\check{z}e$  in (1) is in a yes-no question, the force of which is purely rhetorical and which is best rendered into English as a tag question. Its second occurrence is in a wh-question, also with a rhetorical force, which can be translated as a special type of wh-questions of the form 'why in the world...?' And the last case of  $\check{z}e$  in (1) is present in a statement, where it has scope over a phrase (or term) and its English translation utilizes either the contrastive *but* or similar prosodic means. This particle can also have a sentential, or propositional, scope when used in statements, such as its second occurrence in (2):

- (2) [in the morning, Varja wants to go to bed. Mother is persuading her against that] (CHILDES, séance 1)
  - VAR: Baaj-baj, Aja baj-baj xotit.
  - %eng: Ni-night, Varja wants ni-night.
  - \*MOT: Varen'ka, nu Varen'ka, nu zachem zhe tebe baj-baj s utra.
  - %eng: Varen'ka, so, Varen'ka, so what for have you to have ni-night in the morning.
  - \*VAR: Baju-baj, baju-baj.

\*MOT: Ty *zhe* nichego segodnja ne sdelala razumnogo. %eng: But you haven't yet done anything reasonable today.

Glosses:

Varen'ka, nu Varen'ka, nu zachem *zhe* tebe baj-baj s utra. V. PART V. PART what-for *že* to-you night-night from morning. 'Well, Varen'ka, why in the world (*že*) do you need night-night in the morning?'

Ty zhe nichego segodnja ne sdelala razumnogo. You že nothing today NEG did/have-done reasonable. '(But) you (že) haven't really done anything reasonable today.' Or: 'You have NOT really done anything reasonable today.' Or: 'You haven't really done anything reasonable today, have you.' [statement; scope: sentence/proposition; translation: 'but'/prosody/tag]

In general, utterances with že address some contradiction that the speaker believes the addressee holds on to and are aimed at solving this contradiction by "correcting" the addressee. Such utterances are perceived as adding the argumentative tone, or reproaching the addressee, or even as "a verbal attack" on the addressee (terminology proposed in Parrott 1997). The meaning that že adds to the utterance can be paraphrased as You are wrong! And more than that, you are capable of arriving at the correct conclusion yourself, but nevertheless you are sticking to the wrong conclusion.

Rendering the meaning of utterances containing ze into English usually involves the use of either some contrastive lexeme, such as *but*, or some prosodic means. Specifically, the English translation of statements containing zecan employ the so-called "contradiction contour" (Liberman and Sag 1974;<sup>1</sup> Pierrehumbert and Hirschberg 1990). Yes-no questions are best rendered as tag questions. The closest English equivalent of a wh-question with ze is the one in the form (*who/what/...*) in the world or its more colloquial version (*who/what/...*) the hell...

Elephantiasis isn't incurable!

<sup>&</sup>lt;sup>1</sup> Liberman and Sag (1974: 420) discuss sentences as shown in (i) (their example (8)) which, if pronounced with the special intonation contour, are felicitous only as contradicting some "context proposition:"

Most of the proposals in the literature have aimed at either a complete enumeration of the multitude of its functions (Vasilyeva 1972, etc.) or a precise description of a particular function or related functions (Bonnot 1986, etc.). The following context-dependent functions have been identified for že:

- thematic/ organizational/textual že (Vasilyeva 1972, Ickler 1981, Bonnot 1986, Padučeva 1988, Bitextin 1994);
- affective/modal že (Vasilyeva 1972, Ickler 1981, Paillard 1987, Bitextin 1994);
- marker of contrast/ contrastive focus (Vasilyeva 1972, Bitextin 1994, King 1993);
- 4. marker of emphasis (Vasilyeva 1972, Ickler 1981, Bitextin 1994);
- marker of (re-)activated information (Bitextin 1994, Parrott 1997, Feldman 2001);
- 6. marker of a reference point in the activated "domain of reference" (Bonnot and Kodzasov 1998); etc.

However, descriptive approaches to these particles have proven inadequate and a search for an underlying meaning of this particle has been started in Bitextin (1994), Parrott (1997), Bonnot and Kodzasov (1998), Feldman (2001). However, these earlier studies in the "unifying" direction have their limitations: they choose to deal with unifying a single aspect of the particle, such as its discourse role.

Here particle  $\check{z}e$  is given a unifying analysis which integrates the following current frameworks: the theory of "kontrast," or the ability of certain linguistic expressions to generate a set of alternatives (Vallduví and Vilkuna 1998, following Rooth 1985, 1992); cognitive statuses of referents in discourse (Yokoyama 1986, Gundel et al. 1993), and information packaging on the clausal level (Vallduví 1992). Using a variety of colloquial Russian texts as naturally occurring data (Protassova's corpus of CHILDES, etc.), particle  $\check{z}e$  is analyzed as a lexeme which marks kontrast and is labeled "a kontrastive marker," or "k-marker."

The paper is organized in the following way: section 2 discusses the type of set marked by  $\underline{z}e$  and the type of membership within this set. The meaning of wh-questions containing  $\underline{z}e$  is briefly discussed in subsection 2.1. In section 3, the cognitive status of information marked by this particle is analyzed. Section 4 focuses on the consequences of these two essential properties of  $\underline{z}e$ : its position at the clausal level and its role in the organization of discourse. Section 5 outlines how multiple context-dependent meanings/

implicatures of ze that have been discussed in the literature can be also be viewed as consequences of its two essential properties. Section 6 concludes the discussion of how the meaning of ze can be unified with suggestions on how the model can be applied to other multifunctional particles.

# 2 Type of Set Marked by ŽE

Particle  $\underline{z}e$  marks a set of propositions which differ from each other in the value of (at least) one term. The kontrast set for  $\underline{z}e$  contains members which are mutually exclusive: if one proposition is true, the other one(s) is/are false. Thus, the relationship among the members of the  $\underline{z}e$  set often involves (binary) opposition, contradiction, or negation. The kontrast set marked by  $\underline{z}e$  is generalized in (3) and illustrated with a sample of naturally occurring data in (4):

- (3) The kontrast set marked by ŽE: M={ X, X' }, where X=¬X' (X is true if and only if X' is false)
- (4) [Varja notices a fly on the windowsill and asks her mother to kill it] (CHILDES, séance 4)
  - \*VAR: Ona muxa, muxa.
  - \*MOT: Muxa, muxa, da.
  - \*VAR: Ubit', ubit' ee!
  - \*MOT: Ona *zhe* uzhe ubita.

\*VAR: It's a fly, a fly.

- \*MOT: A fly, a fly, yes.
- \*VAR: Kill, kill it!
- \*MOT: It (že) is already killed.

Gloss: Ona *zhe* uzhe ubita. *she že already killed(participle)* '(But) it (*že*) is already killed.'

In (11), mother's utterance with  $\underline{z}e$  corrects the presupposition of Varja's previous utterance *Kill it!*, i.e., *The fly is alive*. The members of the kontrast set marked by  $\underline{z}e$  are mutually exclusive: it is impossible for the fly to be alive (presupposition of Varja's utterance) and to be already killed (mother's

utterance containing  $\check{z}e$ ) at the same time. The kontrast set of mutually exclusive propositions marked by  $\check{z}e$  in (4) is given in (5):

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

It is important that the kontrast set for  $\underline{z}e$  consists of mutually exclusive propositions, independently of whether the particle has phrasal or sentential scope. This is illustrated by two pairs of examples below: in (6), repeated from (1), the particle  $\underline{z}e$  has scope over a single phrase/term (*my s toboj* 'you and I'), while in (8), repeated from (2), its scope is the full clause/proposition. However, the kontrast sets marked by  $\underline{z}e$  comprise mutually exclusive propositions in either case, shown in (7) and (9) respectively:

- (6) [from (1): the broken object example] My že s toboj sami videli, chto slomalos'. We že with you ourselves saw that got-broken.
  '(But) you and I (že) together saw that it got broken.'
- (7) {Both Mother and Varja saw the object getting broken; Varja did not see the object getting broken}
- (8) [from (2): Varja wants to sleep in the morning] Ty zhe nichego segodnja ne sdelala razumnogo. You že nothing today NEG did/have-done reasonable.
  '(But) you (že) haven't really done anything reasonable today.'
- (9) {Varja has not done anything reasonable today; Varja has done something reasonable today }

To summarize, a proposition p marked with  $\underline{z}e$  asserts p and presupposes that the hearer believes  $\neg p$ .

## 2.1 $\check{Z}E$ in Wh-Questions<sup>2</sup>

An interesting case is the use of  $\underline{z}e$  in wh-questions: how in the world can the kontrast set be mutually exclusive with wh-words? The force of such questions is rhetorical; the question is asked but presupposes that no (reasonable)

<sup>&</sup>lt;sup>2</sup> This section presents work in progress with Paul Hagstrom. For more detail, see Hagstrom and McCoy (2002).

answer is true, from the speaker's point of view. An example, recorded in a home setting, is provided in (10):

(10) [Father puts away his son's library books and tells him that mother took them back to the library (which she did not do). The boy asks mother if she indeed took them back. She says 'no'. He then says (in the presence of both parents):]

U kogo že mne togda sprosit'? 'Who (že) (in the world/the hell...) should I ask then?'

In (10), 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. Taking the semantic value of a wh-question to be the set of propositions which could serve as possible (contextually accessible) answers (Hamblin 1973), the set for (10) is given in (11):

(11) {I should ask mother, I should ask father }

In statements, the function of  $\check{z}e$  is to assert p and produce a presupposition that the hearer believes  $\neg p$ . In wh-questions,  $\check{z}e$  operates on a set of propositions serving as possible answers; thus, it applies to each member of the set and, consequently, produces the presupposition for each member as well. For example, the presence of  $\check{z}e$  in a wh-question in (10) causes  $\check{z}e$  to be applied to the set of propositions serving as its possible (contextually accessible) answers in (11); now, applying  $\check{z}e$  to each proposition in the set results in (12), with a presupposition generated for each member of the set:

(12) že ( { I should ask mother, I should ask father } )

= { I should ask mother, I should ask father } and presupposes that the hearer believes {I should not ask mother, I should not ask father }

Thus, the rhetorical force of a wh-question with ze arises from the fact that ze generates a presupposition that the hearer has already rejected all possible answers as false.

Another example is given in (13), repeated here from (2): the mother is asking Varja why she wants to go to sleep in the morning. The set of propositions serving as possible answers for the wh-question in (13) is outlined in (14); the result of applying  $\underline{z}e$  to each of the propositions in the set is the presupposition that all the possible answers have been proved false:

(13) [from (2): Varja wants to sleep in the morning]
Varen'ka, nu Varen'ka, nu zachem *zhe* tebe baj-baj s utra.
V. PART V. PART what-for *že* to-you night-night from morning.
'Well, Varen'ka, why in the world (*že*) do you need night-night in the morning?'

(14) že ( { Varja needs to sleep in the morning for reason<sub>1</sub>; Varja needs to sleep in the morning for reason<sub>2</sub>;... Varja needs to sleep in the morning for reason<sub>n</sub>} )

To summarize,  $\underline{z}e$  is defined to take a single proposition and provide a presupposition (statements). However, when  $\underline{z}e$  is provided with a set of propositions (a question), it is applied to each proposition in the set, creating a presupposition for each. The end result is that for each possible answer, there is a presupposition that the hearer has already rejected it as false; the speaker has provided no felicitous options for answers within this contextually determined restricted set.

# 3 Cognitive Status of Information Marked by ŽE

Particle  $\underline{z}e$  marks the membership set, one member of which is activated in the hearer's mind at the time of the utterance, while the other (incompatible) member is viewed by the speaker as though it is (or should have been) known to the hearer and should have been activated at this time.

For example, in (4), the activated member of the set is *The fly is alive* (presupposition of *Kill, kill it!*). The other member of the set (is treated by the speaker as though it) should be known to the hearer and, therefore, should be activated—i.e., in the speaker's estimation, there are enough visual cues for the hearer to make the correct conclusion (*The fly is already dead*). Similarly, in (1/6): the activated member of the set is *Varja did not see the object getting broken*.

Taking cognitive status of information into consideration is especially important when ze is compared with other particles: for example, the particles *-to* and *ved'* mark information known to the hearer but not activated in the hearer's mind at the time of the utterance. Now let us consider some consequences of the essential properties of ze as a k-marker.

## 4 Consequences: Position in the Clause

The placement of particle  $\check{z}e$  can be defined with respect to the element marked [+kontrast]. Since  $\check{z}e$  requires only one kontrastive element present

in the clause (i.e., the kontrast set for ze is a set of propositions, not a set of sets of propositions, as it is for the particle -to, for example), this kontrastive element usually occurs in the rheme. As a result, ze is usually a marker of rhematic kontrasts, <sup>3</sup> i.e., it is associated with an element marked [+kontrast; +rheme] (for terminology, see Vallduví and Vilkuna 1998).

The position of both phrasal and sentential  $\underline{z}e$  can be described with respect to the element marked [+kontrast; +rheme] (cf. Parrott 1997, Feldman 2001). When  $\underline{z}e$  has scope over a single phrase/term, it is a second position clitic. Specifically, the phrasal  $\underline{z}e$  is an enclitic to the (first phonological word within the) kontrastive element it marks, which is illustrated below in (15):

(15) [from (1): broken object example]: comitative construction:
[+K/+Rheme My že s toboj] sami videli, chto slomalos'.
We že with you ourselves saw that got-broken.
'(But) you and I (že) together saw that it got broken.'

The sentential, or propositional,  $\underline{z}e$  is a marker of the so-called verum focus—i.e., kontrast not on the lexical meaning of the verb but on some verbal inflectional category, such as tense, aspect, etc. (which is compatible with the condition of mutual exclusiveness of propositions posed on the set by  $\underline{z}e$ ). Thus, it is possible to translate utterances containing  $\underline{z}e$  as cases of rhematic polarity of verum focus. For example, alternative translations for the utterance with the sentential  $\underline{z}e$  in (4) are It [=the fly] IS already killed or It is ALREADY killed.

Syntactically, the sentential/ propositional  $\underline{z}e$  follows the topicalized material (i.e., regular topics, or links) and marks either the left (more often) or the right (less often) boundary of the IP. In (16), the possible positions of the sentential  $\underline{z}e$  for (4) are shown:

(16) Ona (že) [ uže ubita ]<sub>IP</sub> (že).
it (že) already killed(participle) (že)
'But it is ALREADY killed.'/'But it IS already killed.'

More research is needed to determine the exact syntactic position of the sentential  $\tilde{z}e$ , with most likely options to be the following:

<sup>&</sup>lt;sup>3</sup> Historically, že was a marker of contrastive themes (kontrastive links), however, in contemporary colloquial Russian this usage of že is perceived as stylistically marked (bookish, archaic, etc.) and it is being replaced by another marker -a (for details see Ickler 1981, Parrott 1997).

- 1. adjunction to an inflectional phrase (e.g., TP)
- 2.  $\underline{z}e$  as the head of its own  $\underline{Z}eP$ , positioned below the Agr<sub>s</sub>P (which is the landing site for regular topics/links) but above the rest of the IP, i.e. above TP.

However, the rightmost position of  $\check{z}e$  in the clause seems to be somewhat problematic for either of these options. Thus, if the sentential  $\check{z}e$  does adjoin to TP, its final position would need to be derived by the process of adjunction to the right. If, on the other hand, the sentential  $\check{z}e$  is indeed the head of its own  $\check{Z}eP$ , which is below the Agr<sub>s</sub>P but above TP, its final position can be accounted for by the movement of the other material (post-topic but preceding  $\check{z}e$ ) to the Specifier position of  $\check{Z}eP$ .

In short, the position of  $\underline{z}e$  in the clause is best defined with respect to the element marked [+kontrast; +rheme].<sup>4</sup>

## **5** Consequences: Multiple Functions/Implicatures

Multiple implicatures which have been identified for  $\underline{z}e$  in various contexts can also be viewed as following from its two essential properties. Since  $\underline{z}e$  is a marker of a restricted set, containing mutually exclusive propositions, subsequently, in certain contexts, it is capable of performing (one or more of) the following functions: it could be a marker of contrast, a marker of emphasis, a marker of contrastive focus or a marker of contrastive topic; it could add a tone of an indisputable argument, or it could be perceived as a verbal attack on hearer, etc. From being a marker of activated information which is to a large extent known to the hearer, it follows that  $\underline{z}e$  can also be analyzed as introducing (one or more) of the following implicatures: mark a reference point in the activated domain of reference, be perceived as a verbal attack on hearer, add a tone of an indisputable and irrefutable argument, or convey emotions of irritation, annoyance, and impatience, etc.

## **6** Conclusion

In this paper, I have shown that the meaning of a multifunctional particle like ze can be unified with respect to two dimensions:

<sup>&</sup>lt;sup>4</sup> The role of ze in discourse is also a consequence of its kontrastive properties: ze refers back to a salient element or some unresolved (from the speaker's viewpoint) question in the discourse or discourse situation.

- 1. the type of set marked (including the type of membership within this set) and
- 2. the cognitive status of referents marked by it.

Specifically, with respect to the type of set marked and the type of membership within this set, ze marks a set of mutually exclusive propositions which differ from each other in the value of at least one kontrastive term. With respect to the cognitive status of referents, one of the propositions in the ze kontrast set is already activated in discourse.

These two properties of ze—the type of set and the cognitive status of referents—are analyzed as contributing to the core semantic meaning of this particle, while the following properties are viewed as consequences: its position in the clause (defined with respect to the [+kontrast; +rheme] element it marks), its role in discourse, and its multiple implicatures.

The model for the unification of meaning of the colloquial Russian particle  $\check{ze}$  that is proposed here is directly applicable to multifunctional particles in other languages (for example, the ancient Greek *ge*, the German *doch*, etc.).<sup>5</sup>

#### **Data Source**

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

## References

- Abraham, Werner. 1991. Discourse particles in German: How does their illocutive force come about? In: Abraham, Werner, ed. *Discourse particles in German*, 203-252. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Bitextin, Aleksandr Borisovič. 1994. Časticy -to, že, ved' i Vvodnye Konstrukcii Tipa kak izvestno kak Sredstva Ukazanija na Izvestnost' Propozicional'nogo Soderžanija Predloženija 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.
- Bonnot, Christine and Kodzasov, C. B. 1998. Semantičeskoe Var'irovanie Diskursivnyx Slov i ego Vlijanie na Linearizaciju i Intonirovanie (Na Primere Častic ŽE i

<sup>&</sup>lt;sup>5</sup> For the analysis of the colloquial Russian particles -to and ved' within the same model see McCoy 2001a,b.

VED'). In: Kiseleva, K. and Paillard, D., eds. Diskursivnye Slova Russkogo Jazyka: Opyt Kontekstno-Semantičeskogo Opisanija. Moskva: Metatekst.

- Feldman, Anna. 2001. Discourse Markers Accessing 'Hearer-Old' Information: The Case of the Russian Že. In: Melby, Alan et al., eds. Proceedings of the 27th LACUS Forum.
- Gundel, Jeanette K., Nancy Hedberg, and Ron Zacharski. 1993. Cognitive Status and the Form of Referring Expressions in Discourse. *Language* 69 (2): 274-307.
- Hagstrom, Paul and Svetlana McCoy. 2002. Presuppositions, Wh-Questions, and Discourse Particles: Russian ŽE. Paper presented at Formal Approaches to Slavic Linguistics (FASL-11), University of Massachusetts-Amherst.
- Hamblin, C. L. 1973. Questions in Montague English. Foundations of Language 10: 41-53.
- Ickler, Nancy Louisa. 1981. The Particle 'ŽE' in Old Russian: The Discourse Origins of Conditionals and Relatives. Ph.D. dissertation, University of California, Berkley.
- Karagjosova, Elena. 2001. Towards a comprehensive meaning of the German doch. In: Striegnitz, Kristina, ed. Proceedings of the Sixth ESSLLI Student Session, 131-141. August 2001, Helsinki.
- King, Tracy Holloway. 1993/1995. Configuring Topic and Focus in Russian. Ph.D. dissertation, Stanford University, Stanford, CA. Published in 1995 by CSLI Publications, Stanford, CA.
- Liberman, Mark, and Ivan Sag. 1974. Prosodic Form and Discourse Function. Proceedings of the Chicago Linguistic Society 10: 416-427.
- McCoy, Svetlana. 2001a. Colloquial Russian Particles –*To*, Že, And Ved' As Set-Generating ("Kontrastive") Markers: A Unifying Analysis. Ph.D. dissertation, Boston University. (http://people.bu.edu/smccoy/)
- McCoy, Svetlana. 2001b. Connecting Information and Discourse Structure Levels through "Kontrast:" Evidence from Colloquial Russian Particles -TO, ŽE, and VED'. In: Kruiff-Korbayová, Ivana and Mark Steedman, eds. Information Structure, Discourse Structure, and Discourse Semantics. Workshop Proceedings. ESSLLI 2001 (13<sup>th</sup> European Summer School in Logic, Language, and Information), 79-93. (http://www.coli.uni-sb.de/~korbay/esslli01-wsh/esslli01-wshfinal-papers.html)
- Padučeva, E. V. 1988. La Particule že: Semantique, Syntaxe et Prosodie. In: Les Particules Enonciatives en Russe Contemporain 3: 11-44.
- Paillard, Denis. 1987. Že ou la Sortie Impossible: Immediatete, Reprise, Evidence, Questionnement. In: Les Particules Enonciatives en Russe Contemporain 2: 173-225.
- Parrott, Lillian. 1997. Discourse Organization and Inference: The Usage of the Russian Particles že and ved'. Ph. D. dissertation, Harvard University.
- Pierrehumbert, Janet and Julia Hirschberg. 1990. The Meaning of Intonational Contours in the Interpretation of Discourse. In: Cohen, Philip R. et al., eds., 271-312.
- Slings, Simon R. 2000. Ancient Greek GE: A Sentence-Structure Particle? Paper presented at International Conference on Particles 'Discourse Particles, Modal

and Focal Particles and All That Stuff...' Belgian Science Foundation, Brussels, December 8-9, 2000.

- Vallduví, Enric. 1992. The Informational Component. New York: Garland.
- Vallduví, 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.

Linguistics Department Rutgers University 18 Seminary Pl. New Brunswick, NJ 08901 smccoy@rci.rutgers.edu