Hamblin Pronouns in Modal Existential Wh-Constructions*

[Third draft, January 2009, To appear in *Formal Approaches to Slavic Linguistics* 17]

Radek Šimík
University of Groningen

Modal Existential Wh-Constructions (MECs) are cross-linguistically characterized by three obligatory syntactico-semantic properties: the presence of a fronted wh-word, existential quantification over the variable that it expresses, and a modal force of the verb to which the wh-word relates as an argument or adjunct. In addition, the MEC is obligatorily selected by a verb, usually 'be' or 'have' (BE/HAVE for short), which is believed to be the source of the existential quantification. The modality is typically expressed by infinitival or subjunctive mood on the main verb. MECs occur in all Slavic and Romance languages, as well as Hungarian, Greek, and some Semitic languages (Modern Hebrew). Below, I give an example from Czech.

(1) Mám / Je si s kým promluvit.
have / is REFL with who talk
'There is someone (for me) to talk with.'

In this paper, I argue against earlier proposals that MECs are operator-variable structures, resembling free relatives or embedded questions (Izvorski 1998, Caponigro 2003, and Grosu 2004). I offer an alternative view according to which the wh-words in MECs (MEC wh-words for short) denote "Hamblin pronouns", i.e. sets of individuals (Kratzer and Shimoyama 2002). The movement that they undergo is characterized in discourse terms, namely as "escaping narrow focus". I follow Yanovich (2005) in assuming that Hamblin pronouns need to be

* I am very grateful to the following people, whether for data, or for valuable discussions and remarks: Aysa Arylova, Markus Egg, Atle Grønn, Alexander Grosu, Natalia Kondrashova, Zhenya Markovskaya, Senka Stanivukovićová, and Mark de Vries. I would also like to thank to the anonymous reviewers and editors for their remarks and clarification questions. Finally, I thank to the audience of FASL 17.

licensed by c-commanding operators of a certain kind. The proposed analysis readily explains the non-specificity of MECs (obligatory narrow scope w.r.t. negation, quantifiers, but also the MEC-internal modality), which so far has only had the status of an observation.

The paper is organized as follows. Section 1 presents arguments against the operator-variable analysis of MECs and shows that MEC wh-words behave like non-operator indefinites ('something', 'anything'). Section 2 analyzes MEC wh-words as Hamblin pronouns and BE/HAVE as a deontic modal with existential force. Section 3 concludes the paper.

1 The non-operator nature of wh in MEC

The present proposal is based on the assumption that MEC wh-words are indefinites rather than operators. This is in contradiction with standard beliefs. Izvorski (1998) proposes that MECs are reducible to embedded questions. In Caponigro (2003), MECs are free relatives that lack a maximality/iota operator (D-head). For Grosu (2004) MECs are specialized CPs, headed by an existential generalized quantifier. In all these proposals, the MEC wh-word is a (syntactic) operator, undergoing movement to SpecCP. Let us call these accounts "CP-based". In this section, I present evidence that MECs are not full CPs and that MEC wh-words are not operators, at least in Slavic.

1.1 Slavic MEC are not CPs

In Šimík (2008a), I argue that the Czech infinitival MEC is not a CP. Instead, it is a vP and the "matrix" predicate BE/HAVE is generated in its functional layer (TP) and is therefore closer to a modal/auxiliary than a wh-clause-selecting verb. See the following schema:

(2) $[_{CP} \ldots [_{TP}$ BE/HAVE $[_{MEC}$ wh_i $[_{vP} \ldots \{$ V t_i $\} \ldots]]]]$

Arguments for this position include the transparency of MECs for A'- and clitic-extraction, the impossibility of selecting an MEC by a CP-correlative pronoun, and the availability of nominative Case-assignment and agreement relations between the "matrix" HAVE and the "embedded" wh-word. Here, I cannot repeat these arguments for reasons of space and will limit myself to providing some additional evidence.

Consider the following transparency contrast between embedded

questions (EQs) and MECs. EQs are islands for extraction of non-specific (non-referential) material. MECs are different in this respect, which is illustrated in (3), an example involving VP-extraction. The verb *nemám* 'I don't know' introduces an MEC and the predicate *nevím* 'I don't know' introduces an EQ.

(3) [Jít do kina]$_i$ bohužel nemám / *nevím s kým t_i.
go to cinema unfortunately not.have / not.know with who
'As for going to the cinema, there's nobody for me to go with.'

Similar evidence against a CP analysis of MECs can be obtained from other Slavic languages. Like Czech, Serbo-Croatian allows for clitic climbing out of MECs but not out of EQs (Senka Stanivukovićová, p.c.).

(4) Nemam / *Neznam *to*$_i$ [$_{MEC}$ komu dati t_i]
not.have / not.know it who give
'There's noone for me to give it to / I don't know to whom I should give it.'

This is relevant because clitic-climbing across a CP boundary is generally prohibited (see e.g. Dotlačil 2007 and the literature cited there).

As discussed in Rappaport (1986), Russian MECs allow to express a "matrix"-scope negation in the form of an affix on the wh-word, as illustrated in (5a). Moreover, (5b) shows that the two morphemes form a syntactic constituent as they can appear together in a displaced position – e.g. to the left of a "matrix" sentential adverb *navernoe* 'perhaps' (Zhenya Markovskaya, p.c.).

(5) a. Mne nekomu ego otdať
me$_{DAT}$ neg.who him give
'There's noone for me to give it to.'
b. Nekomu navernoe Saše ego otdať
neg.who perhaps Saša$_{DAT}$ him give
'Perhaps, Saša has noone to give it to.'
*'Saša has noone to whom she can perhaps give it.'

Kondrashova (2008) identifies the negative morpheme on the wh-

word as a negated existential quantifier, i.e. the negated "matrix" BE. Obviously, the *neg-wh*-constituency is difficult to derive in a CP-based account.[1]

1.2 Wh in MEC do not undergo operator movement

Once we recognize that MECs are not CPs, we face the question of what kind of movement the MEC wh-word undergoes. One possibility, explored in Šimík (2008a), is that it undergoes (relative) operator movement to the left periphery of vP. MECs would thus be "vP-level free relatives". An advantage of this approach is that it does not force us to make any specific assumptions about the nature of MEC wh-words: they retain their characteristic operator-status. However, the approach also makes some false predictions. First, if MEC wh-words are operators, nothing prevents them from undergoing successive cyclic movement, comparable to the situation in infinitival relatives in English, as in (6) (Bhatt 1999:12). The Czech example in (7) shows that this is not correct.

(6) Here's a book [*Op* to tell your parents [*t* that you're reading *t*]]

(7)* Nemám [*co* říct tvým rodičům [*t* že jsem četl *t*]]
not.have what tell your parents that AUX_{1SG} read
'There's nothing to tell your parents that you're reading.'

The following examples from Russian show that MEC wh-words cannot even move out of embedded infinitival CPs (as opposed to wh-words in EQs) (Aysa Arylova, p.c.).

(8) a. Ja ne znaju [*čto* poobesčať [*t* počiniť *t*]] EQ
I not know what promise do
'I don't know what to promise to do.'
b.* Mne ne[*čego* poobesčať [*t* počiniť *t*]] MEC
me_{DAT} not what promise do
'There's nothing I can promise to do.'

1 Grosu (2004) can deal with this, as he places the existential quantifier into a specialized C-head and the wh-word in its specifier. It is still not quite clear, though, how the *neg-wh* complex can escape the embedded CP and appear in front of matrix adverbials.

Another problematic aspect for the operator-approach is that MEC wh-words do not always need to move all the way to the left periphery of the vP/VP. When the MEC's main predicate consists of a copula and an adjectival or nominal predicate, it is sufficient for the wh-word to move past the predicate, as the example from Czech illustrates.

(9) a. Nemáš [$_{VP}$ být [$_{AP}$ na co pyšný]]
not.have$_{2SG}$ be on what proud
'There's nothing for you to be proud of.'
b. Mám [$_{VP}$ být [$_{AP}$ komu učitelem]]
have$_{1SG}$ be whom teacher
'There's someone whose teacher I can be.'

The facts presented here significantly weaken the position that MEC wh-words are (relative) operators, even in the weaker sense of purely syntactic (i.e. not semantic) operators (cf. Berman 1991).

But why do MEC wh-words move at all, if they are no operators? It appears that the wh-movement in MECs resembles the movement of other non-specific indefinites. In Czech, this movement is obligatory for non-complex indefinites (such as *něco* 'something' as opposed to 'some book' or 'something strange'); see (10b).

(10)a. Mám si {co} koupit *{co} MEC
have$_{1SG}$ refl what buy what
'There's something that I can buy.'
b. Můžeš si {něco} koupit *{něco} simple clause
can$_{2SG}$ refl something buy something
'You can buy something.'

The question we need to ask is whether we can find any motivation for this movement. There is some evidence that Czech non-complex indefinites in post-predicate positions attract semantic focus. Consider the following minimal pair, involving the free-choice/negative-polarity indefinite *kýmkoli* 'whoever/anyone':

(11)a. Popřel, [že by se s kýmkoli vyspal]$_F$
denied that would REFL with anyone slept
'He denied that he would sleep with anyone.'

b. Popřel, že by se vyspal [s kýmkoli]$_F$
denied that would REFL sleep with anyone
'He denied that he would sleep with just anyone.'

It is well-known that negation associates with focus. In the examples above, the negation from the verb *popřel* 'denied' associates with the whole clause in (11a) but only with the free-choice component of *kýmkoli* 'whoever/anyone' in (11b). This shows that the indefinite in a post-predicate position is necessarily in narrow focus. In order for broad focus (focus on the whole clause) to be facilitated, the indefinite has to move. Importantly, the situation is similar in (Czech) multiple wh-questions, where a post-predicate interrogative wh-word obligatorily attracts focus.

(12)a. Řekni mi, komu jsi s čím pomohl
tell me who AUX$_{2SG}$ with what help
'Tell me whom you helped with what.' (rhetoric)
b. Řekni mi, komu jsi pomohl s čím
tell me who AUX$_{2SG}$ help with what
'Tell me whom you helped with what.' (true interrogative)

Only (12a) can be used in a rhetoric fashion, where the speaker knows that the addressee didn't help anyone with anything. (12b), on the other hand, obligatorily triggers a presupposition that the addressee did help someone with something. Arguably, this presupposition is triggered by focusing the post-predicate wh-word *s čím* 'with what', and consequently putting the rest of the embedded clause in background. In Šimík (2008b), following Hagstrom (1998), I show that because the post-predicate interrogative wh-word is in focus, it is always selected by a focus-sensitive variable over choice functions, which in turn must be bound by an existential quantifier that takes CP-scope and facilitates an interrogative interpretation.[2] It appears that if a wh-word is in a post-predicate position in MEC, it is forced to receive the same analysis, as it can only be interpreted interrogatively.[3]

---

2 Placing the focus on the post-predicate wh-word also forces a pair-list (as opposed to single-pair) reading.

3 I believe that the reduced acceptability in (13b) stems from processing difficulties (and not e.g. because of the wh-extraction). Thanks to the fact that *měl* 'had' can also be

(13)a. Kdy jsi měl co komu darovat?
when AUX_{2SG} have what who give
'When was it that you could give something to someone?'
b. ? Kdy jsi měl co darovat komu?
when AUX_{2SG} have what give who
'When was there was something you could give to whom?'
* 'When was it that you could give something to someone?'

Thus, escaping narrow focus in MECs boils down to escaping interrogative interpretation.

1.3 Summary

We saw that Slavic MECs are to be analyzed as vPs rather than CPs. Despite the fact that the wh-word moves, the movement is not operator movement to the left periphery of the MEC. Rather than an operator, the wh-word is an indefinite and moves to the left of the main predicate in order to escape narrow focus, like other kinds of indefinites. By doing that, it also escapes an interrogative interpretation. I remain agnostic here as to what syntactic position the MEC wh-word moves to and whether it is adjoined or sits in the specifier of some projection. Arguably, this is a more general problem, which concerns the whole class of non-complex indefinites and which is therefore beyond the scope of this paper.

2 Analysis

In this section I propose an explicit implementation of the idea that MEC wh-words are not operators but indefinites. More particularly, I argue that they are Hamblin pronouns.

2.1 Bare indefinites as Hamblin pronouns

Yanovich (2005) shows in his account of Russian indefinite pronouns that we need to distinguish between two broad classes of indefinites. One class takes the form [wh-base+affix], the other [wh-base]. Let us call the former a "plain indefinite" and the latter a "bare indefinite". In both cases, the wh-base is analyzed as a "Hamblin pronoun", i.e. a set of

---

interpreted as a deontic modal 'supposed to', the questions can also be interpreted as tripple interrogatives 'When were you supposed to give what to whom?'

individuals (Hamblin 1973, Kratzer and Shimoyama 2002). Affixes generally express choice functions which take the wh-base as their argument and return an individual from the set that it denotes (see e.g. Kratzer 1998).

(14) *kto* : [[who]] = {x : human(x)} (= λx.human(x))
(15) *kto-to* : [[who-affix]] = [[affix]]([[who]]) = $f_{<et,e>}$({x : human(x)})

Since a plain indefinite denotes an individual, it is directly composable with predicates that take individuals as arguments (e.g. *come*). A bare indefinite, on the other hand, requires a special composition rule, as it denotes a set of individuals. Hagstrom (1998) formulates the rule of *flexible functional application*, a tool of semantic composition that handles both standard and Hamblin cases. The idea is that whenever an individual-taking predicate encounters a set of individuals, it composes with each member of the set, yielding a set of values.

(16) Flexible functional application (Hagstrom 1998)
[[f a]] (where f and a are sisters) =
i. f(a) or
ii. λm. ∃x[m = f(x) & a(x)] or
iii. λm. ∃g[m = g(a) & f(g)] or
iv. λm. ∃g ∃x[m = g(x) & a(x) & f(g)]
(whichever is defined)

The difference between *affix-who come* and *who come* 'someone comes' is that the former denotes a proposition (a set of worlds) and the latter a set of propositions (a set of sets of worlds). Note that (16) makes use of (16i) and (18) makes use of (16ii). The *f* below stands for the choice function expressed by the affix.

(17) [[come(who-affix)]] = λw. come(f(who))(w)
(18) [[come(who)]] = λp. ∃x. p = come(x) & who(x)

In order for (18) to become interpretable as an assertion, the set of propositions needs to be transformed into a proposition. We assume (with Yanovich 2005) that this is achieved by quantifiers, generally modals,

that take Hamblin sets of propositions (such as (18)) and return propositions. E.g. *možet* 'maybe' is such a quantifier in Russian.[4]

(19) For $\alpha \subseteq D_{<s,t>}$,
$[[\text{možet}(\alpha)]] = \lambda w[\exists w'.\ w'Rw \ \& \ \exists p.\ p \in \alpha \ \& \ p(w') = 1](w)$

(20)a. Možet kto prišel (compare: *Kto prišel)
maybe who came
'Maybe someone came'

b. $[[\text{možet}(\text{prišel}(\text{kto})))]] = \lambda w[\exists w'.\ w'Rw \ \& \ \exists p \exists x.\ p \in \text{come(who)} \ \& \ \text{who}(x) \ \& \ p(w') = 1](w)$

This analysis makes a prediction concerning the scopal properties of *kto* and *kto-to*. The former must scope below its licenser (below the quantifier that "rescues" the sentence from uninterpretability), whereas the latter can be either bound by c-commanding quantifiers, or get valued by context (see also Geist 2008).

(21)a. Možet kto prišel. Mod >/*< ∃
maybe who came
'Maybe someone came'

b. Možet kto-to prišel. Mod >/< ∃
maybe who-affix came
'Maybe someone came'

2.2 Wh in MEC as a Hamblin pronoun

If we combine the empirical findings from section 2 with the reasoning about bare and plain indefinites from the preceding subsection, it seems natural to assume that the MEC wh-word is a Hamblin pronoun.

(22) $[[\text{who}_{\text{MEC}}]] = \{x : \text{human}(x)\}$

I further assume that BE/HAVE in MEC is an existential (deontic) modal, analogous to the modal *možet* above.

---

4 I use a standard analysis of modals as quantifiers over world variables ranging over worlds accessible from the actual world (e.g. Kratzer 1977). The exact nature of the accessibility relation R is contextually determined.

(23) For $\alpha \subseteq D_{<s,t>}$,
[[BE/HAVE(α)]] = λw[∃w'. w'Rw & ∃p. p ∈ α & p(w') = 1](w)

In effect, an MEC like (24a) receives the interpretation in (24b).

(24)a. Nemá kdo přijít
not.have$_{3SG}$ who come
'There's noone who can come'
b. [[Neg(HAVE(come(who)))]] = λw[not ∃w'. w'Rw & ∃p∃x. p ∈ come(who) & who(x) & p(w') = 1](w)
c. The proposition characterizes a set of worlds in which there is no accessible world where someone comes.

MECs under this analysis are conventionalized structures (constructions) that supply both the Hamblin pronoun (the wh-word) and its licenser (the modal BE/HAVE). The analysis directly predicts some familiar observations, e.g. the obligatory narrow scope of the MEC with respect to matrix negation or quantifiers, as illustrated below.

(25)a. Nemám s kým jít na pivo
not.have with who go for beer
'There's no one for me to go for a beer with.'
* 'There is a certain person with whom I can't go for a beer.'
b. Každému má kdo pomoct
everyone$_{DAT}$ has who.nom help
'For everyone$_i$ there is someone who can help him$_i$.'
* 'There is a certain person that can help everyone.'

It is also predicted that Slavic MEC can have multiple wh-words, an observation which is problematic for CP-/operator-based approaches. Below I give examples from Czech (26) and Russian (27) (Aysa Arylova, p.c.); see Bošković (1998) for analogous Bulgarian examples.

(26) Mám komu co dát
have$_{1SG}$ whom what give
'I can give something to someone.'

(27) Bylo komu čto zakazať
was whom what order
'One could order something to someone.'

There is one aspect of the analysis, though, which may seem counterintuitive: the semantics of (28a) is now closer to (28b) than to (28c) – a usual paraphrase of the MEC.

(28)a. Mám čím napsat ten dopis.
have$_{1SG}$ what$_{INSTR}$ write the letter
'I have something to write the letter with.'
b. Můžu něčím napsat ten dopis.
can$_{1SG}$ something$_{INSTR}$ write the letter
'I can write the letter with something.'
c. Mám něco, čím můžu napsat ten dopis.
have$_{1SG}$ something what$_{INSTR}$ can$_{1SG}$ write the letter
'I have something with which I can write the letter.'

If we give the same semantic analysis to (28a) as to (28c), however (cf. Izvorski 1998, Caponigro 2003, Grosu 2004), the existential quantifier over individuals scopes over the modal. In effect, the existence of the individual that would/could be used to write the letter is (or at least *can be*) evaluated with respect to the actual world, rather than (one of) the possible worlds introduced by the modal. For (28c), this is indeed the correct analysis, but it does not work for the MEC. This can be shown by means of a discourse in which (28) is followed by (29).

(29) Tady **to** je.
here it is
'Here it is.'

Crucially, the sentence in (29) can function as a continuation of (28c) and (28b), but not (28a). It appears that the MEC cannot establish a discourse referent independently of the worlds introduced by the modal, which could later be picked up by a pronoun, *to* 'it' in (29). This is readily captured by the present analysis, which forces the wh-word to scope below the modal.

2.3 Open issues

The analysis proposed here directly accounts for the radically narrow scope of MECs / the MEC wh-word. Below I suggest some possible ways of addressing some further issues.

2.3.1 Type of modality.

I have said nothing about what distinguishes (28a) from (28b); the current semantic machinery assigns them the same truth conditions (when the indefinite in (28b) scopes below the modal), which is counterintuitive. It is plausible, however, that BE/HAVE differs from standard modal verbs like 'can' or 'may' only in that it is lexically associated with a different *modal base* and/or *ordering source*, which are functions that determine which worlds are in the restriction of the modal (e.g. Kratzer 1991).

2.3.2 Force of modality.

All existing analyses, including the present one, stipulate that the force of modality in MECs is existential. Given that the this is a cross-linguistic fact, we should look for a principled explanation. Note that it is insufficient to say that the predicates 'be' and 'have' often express existential quantification because when they are modal, they can be universal, too. One notable example is the English *have* + INF or the Czech *mít* 'have' + INF, which can mean 'supposed (to)' (see also footnote 3 and (13) above). It is possible that the existential interpretation relates to the fact that the modal necessarily associates with a non-specific (and in particular a Hamblin) indefinite. Pronouns and determiners belonging to a certain class of non-specific indefinites, namely polarity and free choice items (like the English determiner *any*), are known to be dependent on certain types of operators. For example free choice items are typically licensed by existential but not universal modality (see e.g. Aloni 2007 for discussion).

(30) You can/*must buy anything.

This property is shared to some extent by the Russian Hamblin pronoun *kto* (cf. Yanovich 2005), which is licensed by the existential modal *možet* (see (20) above), but not by the universal *dolžno byť* (Zhenya Markovskaya, p.c.).

(31) * Dolžno byť kto prišel
must be who came
'Someone must have come'

We can therefore hypothesize that Hamblin pronouns are sensitive to something like a *variation requirement*, which seems to be lexically associated with free choice items and which is responsible for the fact that they are not licensed under universal modality (cf. Giannakidou 2001).

2.3.3 Restriction on wh-phrase complexity.
It has been observed that MECs are not acceptable with complex wh-phrases (Kondrashova 2008 for Russian, Rudin 1986:157 for Bulgarian, Grosu 2004 for Romanian and Hebrew). I give an example from Czech.

(32) * Mám si s kterým / jakým studentem promluvit
have$_{1SG}$ refl with which / what student talk
'There is a student with whom I can speak'

Even though the present analysis remains silent about this, it enables us to look for a common explanation of (32) and bare non-specific indefinites in German (33) or Chinese (34) (from Cheng 1991:114), arguable candidates for the Hamblin pronoun analysis.

(33) Will Hans was / * {welches Buch} kaufen?
want Hans what / which book buy
'Does Hans want to buy anything / any book?'

(34) hufei hui mai shenme / *na-yi-ben-shu ma?
Hufei will buy what / which-one-cl-book Qyes-no
'Will Hufei buy anything / any book?'

This connection with bare indefinites in German and Chinese automatically falls out from the present proposal but can hardly be made explicit if MEC wh-words are operators.

3 Conclusion

This paper attempts to explain the long-standing observation that MECs behave in a similar way as non-specific NPs. First I argued that syntactically, MEC wh-words form a natural class with indefinites rather than (relative/interrogative) operators. Then I went on to propose that MEC wh-words are Hamblin pronouns. As such, they scope immediately below their licenser – a quantifier that turns Hamblin alternatives induced by the pronoun into a proposition. I argued that the licenser is the MEC-selecting verb BE/HAVE, which in effect receives the interpretation of an existential modal quantifier. This structural configuration makes the right prediction concerning the scopal relation between the MEC and the modality that it is obligatorily associated with. Finally, I sketched a way of approaching a number of MEC-related problems that have not been solved hitherto.

References

Aloni, Maria. 2007. Free choice, modals, and imperatives. *Natural Language Semantics* 15: 65-94.

Berman, Stephen. 1991. On the semantics and logical form of wh-clauses. Doctoral dissertation, University of Massachusetts.

Bhatt, Rajesh. 1999. Covert modality in non-finite contexts. Doctoral dissertation, University of Pennsylvania.

Bošković, Željko. 1998. Wh-phrases and wh-movement in Slavic. Position paper for the Comparative Slavic Morphosyntax Conference, Bloomington, IN.

Caponigro, Ivano. 2003. Free not to ask: On the semantics of free relatives and wh-words cross-linguistically. Doctoral dissertation, University of California.

Cheng, Lisa. 1991. On the typology of wh-questions. Doctoral dissertation, MIT.

Dotlačil, Jakub. 2007. Why clitics cannot climb out of CPs: A discourse approach. In *Proceedings of FASL 15,* eds. Richard Compton, Magdalena Goledzinowska, and Ulyana Savchenko, 76-93.

Geist, Ljudmila. 2008. Specificity as referential anchoring: Evidence from Russian. In *Proceedings of Sinn und Bedeutung 12,* ed. Atle Grønn, 151-164. Oslo: ILOS.

Giannakidou, Anastasia. 2001. The meaning of free choice. *Linguistics and Philosophy* 6, 659-735.
Grosu, Alexander. 2004. The syntax-semantics of modal existential wh constructions. In *Balkan syntax and semantics,* ed. Olga Miseska Tomić, 405-438. Amsterdam: John Benjamins.
Hagstrom, Paul. 1998. Decomposing questions. Doctoral dissertation, MIT.
Hamblin, Charles L. 1973. Questions in Montague grammar. *Foundations of Language* 10, 41-53.
Izvorski, Roumyana. 1998. Non-indicative wh-complements of possessive and existential predicates. In *Proceedings of NELS*, eds. Pius N. Tamanji and Kiyomi Kusumoto, 159-173.
Kondrashova, Natalia. 2008. Negated wh-items in Russian: Syntactic and semantic puzzles. Presented at the Third Meeting of the Slavic Linguistic Society (SLS), Ohio State University.
Kratzer, Angelika. 1977. What 'must' and 'can' must and can mean. *Linguistics and Philosophy* 1, 337-355.
Kratzer, Angelika. 1991. Modality. In *Semantik: Ein internationales Handbuch der zeitgenössischen Forschung,* eds. Arnim von Stechow and Dieter Wunderlich
Kratzer, Angelika. 1998. Scope or pseudoscope? Are there wide-scope indefinites? In *Events and grammar,* eds. Susan Rothstein, 163-196. Dordrecht: Kluwer.
Kratzer, Angelika and Junko Shimoyama. 2002. Indeterminate pronouns: The view from Japanese. In *Proceedings of the Third Tokyo Conference on Psycholinguistics, Hituzi Syobo,* eds. Y. Otsu, 1-25.
Rappaport, Gilbert C. 1986. On a persistent problem of Russian syntax: Sentences of the type 'mne negde spat'. *Russian Linguistics* 10, 1-31.
Rudin, Catherine. 1986. *Aspects of Bulgarian syntax: Complementizers and wh-constructions.* Columbus, OH: Slavica Publishers.
Šimík, Radek. 2008a. Czech modal existential wh-constructions as vP-level free relatives. In *Linguistics in the Netherlands 2008,* eds. Marjo van Koppen and Bert Botma, 121-132.
Šimík, Radek. 2008b. Multiple questions, indefinites, and discourse-based ambiguity resolution. Presented at the Crosslinguistic semantics meeting, Amsterdam.
Yanovich, Igor. 2005. Choice-functional series of indefinites and Hamblin semantics. Presented at SALT 15, UCLA.