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## ■ FORMAL SEMANTICS, LEXICAL SEMANTICS, AND COMPOSITIONALITY: THE PUZZLE OF PRIVATIVE ADJECTIVES<sup>1</sup>

### 1. INTRODUCTION

Semantics is an inherently interdisciplinary subject, with roots in linguistics, psychology, anthropology, logic and philosophy of language, artificial intelligence, and more; it is a subject that benefits from interdisciplinary perspectives. "Semantics" has meant different things in different disciplines, reflecting the many ways that different disciplines are concerned with meaning. Even within a single discipline, there are often disputes about the nature of meaning and the best way to study semantics, including disagreements about which kinds of data are most important, and even disagreements about such foundational issues as whether semantics is best viewed as a "branch of mathematics" or as a "branch of psychology" (Partee 1979).

In this paper I take the perspective of formal semantics, a field with roots in logic, philosophy of language, and formal linguistics (Partee 1996), and examine the interaction of word meaning and the compositional building up of sentence meaning. A central concern for the study of meaning is how the meanings of complex expressions are composed from the meanings of their constituent parts. Even without deciding just what meanings are, the fact that language users can understand novel sentences, of which there are a potential infinity, provides an argument that they must be governed by some version of the Principle of Compositionality, or Frege's Principle:

**Principle of Compositionality:** The meaning of a whole is a function of the meanings of the parts and of the way they are syntactically combined.

There have been challenges to this principle; my own view is that (a) there are so many variables in linguistic theories that it can hardly be a straightforwardly empirical claim, but (b) it makes a good working principle: apparent counterexamples are invitations to work hard to uncover new descriptive accounts or to make revisions somewhere in the theoretical framework.

The focus of the paper is the dynamic interaction of meaning and context. One important challenge faced by compositional approaches such as formal semantics is how to account for context-dependent meaning shifts without abandoning

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compositionality. We argue here that in fact compositionality can be seen as one of the driving forces in context-sensitive meaning shifts. Our case study will be the semantics of different kinds of adjectives. The interplay of context-dependence and intensionality will be illustrated in showing why *skillful* is intensional but *large* is not, even though both are “relative”. We will also take up the puzzles of “privative” adjectives like *fake* and “redundant” adjectives like *real*. The perspective we will take is how attention to the semantics of syntactic structure (compositional semantics) sheds light on the word meaning, and how compositional semantics, lexical semantics, and the context of the utterance all interact.

The paper is structured as follows. Section 2 briefly reviews the adjective classification summarized in Kamp and Partee (1995) and in Partee (1995). The Polish NP-splitting data (Nowak 2000) and the problem they pose for the familiar hierarchy are presented in Section 3. In Section 4 I propose a solution to the problem presented in Section 3 that offers some new insight into the interaction of lexical meaning, compositionality, and context.

## 2. THE SEMANTICS OF ADJECTIVES

There are many semantically interesting properties of adjectives. Here we focus on just a few central issues in the formal semantics of adjectives, concerning their semantic type and their logical properties. The central claim in work by philosophers of language in the 1970's (Clark 1970; Kamp 1975; Montague 1970a; Parsons 1970) was that some adjective meanings must be analyzed as functions from properties to properties. Adjectives that require such a semantics include *alleged*, *proposed*, *former*.

Since Montague (1970b, 1973) required a uniform semantic type for each syntactic category, he analyzed all adjectives that way. “Simpler” adjectives, those that are intersective (*purple*, *carnivorous*), or subsective (*skillful*, *good*), have their meanings further restricted by meaning postulates. Contemporary theories do not insist on a single type for all adjectives, and the intersective adjectives are now most often analyzed as simple one-place predicates, type  $\langle e, t \rangle$ .

Adjectives have been considered to form a hierarchy of classes, from the simplest intersective type to the privative adjectives like *counterfeit*, *fake*, Russian *fal'sivij* ‘false’, *mnimyj* ‘imaginary’, as we will show in more detail below. But data from Polish and Russian NP-splits can be used to argue for a radically different view of the privative adjectives, and a correspondingly different view of the adjective hierarchy.

### 2.1. MEANING POSTULATES FOR CLASSES OF ADJECTIVES

Adjectives like *carnivorous*, *rectangular*, *red*, and *German* are **intersective**: the informally stated meaning postulate in (1) holds for any N.

$$(1) \ ||\textit{carnivorous N}|| = \ ||\textit{carnivorous}|| \cap \ ||N||$$

Intersective adjectives are one-place predicates: a *red dress* is *red* and is a *dress*.

But *skillful* is not intersective, as shown by the invalid inference pattern in (2), familiar from the work of Kamp, Parsons, Clark, and Montague.

- (2) Premise: Francis is a skillful surgeon.  
 Premise: Francis is a violinist.  
 -----  
 Conclusion: Francis is a skillful violinist. INVALID

*Skillful*, *typical* are not intersective, but are **subjective**: Meaning Postulate (3) holds for any N.

- (3) Subjectivity:  $||\textit{skillful N}|| \subseteq ||N||$

The adjectives *former*, *alleged*, *counterfeit*, Russian *fal'sivyj* 'false', *mnimyj* 'imaginary' are neither intersective nor subjective. They are **nonsubjective**.

- (4) a.  $||\textit{former senator}|| \neq ||\textit{former}|| \cap ||\textit{senator}||$   
 b.  $||\textit{former senator}|| \not\subseteq ||\textit{senator}||$

**Nonsubjective** adjectives may either be **modal** – expressing possibility or other modal meanings -- or **privative**, entailing negation. The meaning postulate for privative adjectives is stated in (5).

- (5)  $||\textit{counterfeit N}|| \cap ||N|| = \emptyset$

There is no meaning postulate for the **modal** adjectives, since they have no entailments – an *alleged murderer* may or may not be a murderer, and similarly for adjectives like *possible*, *proposed*, *expected*, *doubtful*.

The adjectives thus form a hierarchy from intersective to subjective to nonsubjective, with the privative adjectives an extreme case of the nonsubjective adjectives.

## (6) Adjective hierarchy: Intersective < Subjective < Modal < Privative

Classification of examples is not always easy. Sometimes there is empirical uncertainty, e.g. whether *dead* is privative or intersective. The question, "Is a dead poet a poet?" does not have a context-independent answer. We answer differently in the context of the question, "How many poets are there in Amherst?" than in the context of the question, "How many poets are included in that anthology?" And sometimes different senses of an adjective fall into different classes: Russian *točnye časy* 'exact (accurate) watch' has an intersective sense of *točnyj*, while in *točnaja kopija* 'exact copy', *točnaja* is subjective. We have an intersective sense of *strogij* 'strict' in *strogij kostjum* 'strict (tailored) suit' and a subjective sense in *strogij učitel'* 'strict teacher'.

Among many debated points, one which has always been troubling is the question of whether a modifier like *fake* is really privative. One nagging problem, to which we

will offer a solution in Section 4, is the evident tension between the apparent truth of (7a) and the undeniable well-formedness and interpretability of (7b).

- (7) a. A fake gun is not a gun.  
b. Is that gun real or fake?

## 2.2. IS *TALL* INTERSECTIVE OR SUBJECTIVE?

An early argument for the importance of considering context-dependence in interpreting adjectives came from Kamp (1975), who argued that *tall*, which at first seems non-intersective, is really intersective but context-dependent. In section 2.1 above we indicated that the inference pattern (2) was a test of whether an adjective was intersective. By this test, it looks like vague adjectives like *tall* are non-intersective:

- (2') Premise: Tom is a tall 14-year-old.  
Premise: Tom is a basketball player.  
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Conclusion: Tom is a tall basketball player. INVALID??

Kamp argued that *tall* is intersective but **vague** and context-dependent. One argument is that we can get the same effect as above without changing the noun, by changing other aspects of the context.

- (8) a. *My 2-year-old son built a really tall snowman yesterday.*  
b. *The linguistics students built a really tall snowman last weekend.*

Further evidence of a difference between truly nonintersective subjective adjectives like *skillful* and vague intersective adjectives like *tall* came from Siegel (1976), who observed that adjectives like *skillful* can take *as*-phrases, as in *He is skillful as a surgeon*, while adjectives like *tall* take not *as*-phrases but *for*-phrases to indicate comparison class: *He is tall for a 14-year-old, but not for a basketball player.*

An adjective can be nonintersective and *also* vague, like *good*, and then it can take both an *as*-phrase and a *for*-phrase: *He is very good as a diagnostician for someone with so little experience.*

## 3. MODAL AND PRIVATIVE ADJECTIVES AND NP-SPLITS

The phenomenon of “split NPs” in Slavic was brought to my attention by Anita Nowak (Nowak 2000). It has been studied by Siewierska (1984), Sekerina (1997), Gouskova (2000), Junghanns (2001), Melhorn (2001), Bašić (2004), Fanselow and Ćavar (2002), Kučerová (2007), and especially Pereltsvaig (2008). My earlier work on this topic uses Polish examples from Nowak; here I add Russian and Polish examples from Pereltsvaig (2008 and p.c.), Trugman (p.c.), and Rozwadowska (p.c.).

The Russian examples (9a-b) from Sekerina (1997) are typical “direct” and “inverse” NP-splits. Underlining indicates the parts of the split NP.

- (9) a. Čěrnjy on ljubit kofe. (Sekerina 1997)  
 black he likes coffee  
 ‘He likes black coffee.’
- b. Kofe on ljubit čěrnjy.  
 coffee he likes black  
 ‘He likes black coffee.’

The facts are that an NP consisting of Adj and N in Polish or Russian may be “split”, with either the Adj sentence-initial and the N sentence-final, or the N sentence-initial and the Adj sentence-final. Sequences of Adj’s can be sentence-initial; only a single element can be sentence-final. Examples of Polish NP-splits from Nowak (2000) (all actually PP-splits, which combine properties of NP-splits with constraints on where the preposition can end up) are given in (10 - 11) below, with the relevant constituents underlined.

- (10) a. Kelnerki rozmawiały o przystojnym chłopcu.  
 waitresses talked about handsome-LOC boy-LOC  
 ‘The waitresses talked about a handsome boy.’
- b. O przystojnym kelnerki rozmawiały chłopcu.  
 about handsome-LOC waitresses talked boy-LOC  
 ‘The waitresses talked about a handsome BOY’
- (11) a. Włamano się do nowego sklepu.  
 broke-in (one) REFLEX to new-GEN store-GEN  
 ‘Someone broke into the new store.’
- b. Do sklepu włamano się nowego.  
 to store-GEN broke-in (one) REFLEX new-GEN  
 ‘Someone broke into the NEW store.’

What is of particular interest here is that some adjectives can participate in the splitting construction and some cannot. According to Nowak’s judgments, intersective, subjective, and privative (!) adjectives can split easily enough. But nonsubjective modal adjectives cannot. The contrast is shown in (12) and (13).

- (12) a. Do rozległej weszliśmy doliny.  
 to large-GEN (we)entered valley-GEN  
 ‘We entered a large VALLEY.’
- b. Do doliny weszliśmy rozległej  
 to valley-GEN (we)entered large-GEN  
 ‘We entered a LARGE valley.’

- (13) \*Z \_\_\_\_\_ potencjalnym                      widzieli się                      kandydatem.  
 with                      potential-INSTR                      (they)saw REFL                      candidate-INSTR  
 'They met with a potential CANDIDATE'

But others disagree about modal adjectives; the data are apparently more complex, in Polish and in Russian. Some NP-splits with modal adjectives are fine, others are not.

- (14) O \_\_\_\_\_ potencjalnych                      rozmawiali                      korzyściach (Polish).  
 about                      potential                      they-talked                      benefits  
 They talked about potential benefits. (Rozwadowska, p.c.)

- (15) O \_\_\_\_\_ domniemanych                      rozmawiano                      przestępcach. (Polish)  
 about                      alleged                      it-was-talked                      criminals  
 (They) talked about alleged criminals. (Rozwadowska, p.c.)

- (16) \*Domniemanych                      spotkałismy                      złodziei. (Polish)  
 alleged                      we-met                      thieves  
 We met alleged thieves. (Rozwadowska, p.c.)

- (17) Potencjal'nym on byl kandidatom,                      ne                      bolee                      togo! (Russian)  
 Potential-INSTR he was candidate-INSTR, NEG                      more                      that-GEN  
 'He was a *potential* candidate, no more!' (Trugman, p.c.)

- (18) Predpologaemyx oni arestovali uže                      pjat' ubijc,                      a vot  
 Alleged                      they arrested already 5                      murderers, and PRT  
 est' li sredi nix nastojaščij,                      kto znaet? (Russian)  
 is there among them actual,                      who knows?

'They already arrested five *alleged* murderers, and who knows whether there is an actual one among them.' (Trugman, p.c.)

- (19) Ožidaemye ne nastupili peremeny,                      xotja                      ožidali                      ix  
 Expected NEG arrived changes,                      although they-awaited them  
 dolgo i terpelivo. (Russian)  
 long and patiently  
 'The expected changes didn't come, although they had awaited them long and patiently.' (Trugman, p.c.)

Pereltsvaig (2008), using a substantial corpus of colloquial Russian, with intonation patterns verifiable for a substantial part including movies and their scripts, has reached the following conclusions: (i) In NP-splits, the first segment is either a contrastive topic or a contrastive focus. (ii) The same word orders are possible for contrastive topic examples and contrastive focus examples. (iii) Intonation reliably distinguishes the two types, with Intonation Contour 2 (IK-2) in Švedova (1980) for contrastive focus, and Intonation Contour 5 (IK-5) for contrastive topic<sup>2</sup>.

Pereltsvaig's conclusions are illustrated in Russian examples (20-23) below. Examples (20-21) have contrastive focus, and show intonation pattern IK-2, whether with scrambling or with split NP. Boldface indicates intonational prominence.

- (20) **Malinovogo** varen'ja ona mne prislala! (a ne klubničnogo)  
 raspberry jam she to-me sent! (and not strawberry)  
 'She sent me *raspberry* jam! (and not strawberry)'
- (21) **Malinovogo** ona mne prislala varen'ja! (a ne klubničnogo)  
 raspberry she to-me sent jam! (and not strawberry)  
 'She sent me *raspberry* jam! (and not strawberry)'

Examples (22-23) have contrastive topic, and have the intonation pattern Pereltsvaig calls IK-4 whether with scrambling or with split NP.

- (22) **Malinovogo** varen'ja ona mne prislala! (a klubničnogo Saše)  
 raspberry jam she to-me sent! (and strawberry to Sasha)  
 'She sent *raspberry* jam to *me*! (and strawberry to Sasha)'
- (23) **Malinovogo** ona mne prislala varen'ja! (a klubničnogo Saše)  
 raspberry she to-me sent jam! (and strawberry to Sasha)  
 'She sent *raspberry* jam to *me*! (and strawberry to Sasha)'

Pereltsvaig makes the crucial observation (Pereltsvaig, p.c.) that in all the good Russian examples of split NPs with **modal** adjectives, the modal adjective must have **contrastive focus**; other adjectives have no such restriction.

So the generalization so far is that intersective and subsecutive adjectives can freely participate in NP-split constructions. But modal adjectives are more restricted; they cannot split freely, although it seems that they can split when they are the contrastive focus.

But the surprising fact is that **privative** adjectives are as easy to split as intersective and subsecutive ones. Polish privatives, such as *fikcyjny* (fictitious), *wymyślony* (imaginary), *fałszywy* (fraudulent), easily split, in both contrastive topic and contrastive focus constructions. The Polish examples below are from Bożena Rozwadowska (p.c.):

- (24) **Fałszywy** był to alarm.  
 false was it alarm
- (25) **Fałszywe** znaleźliśmy banknoty.  
 false we-found banknotes
- (26) **Fikcyjne** zawarła małżeństwo.  
 Fictitious she-signed marriage

Russian privatives *fałšivyj* 'false, fake', *mnimyj* 'imaginary, false', *byvšyj* 'former' similarly split easily, whether contrastive topic or contrastive focus motivates the split:

- (27) **Fal'sivyi** on polučil diplom. (H. Trugman, p.c.)  
**False** he obtained diploma
- (28) **Mnimye** nam ne **nužny** geroi! (H. Trugman, p.c.)  
**Fake** to-US NEG **needed** heroes  
 'We don't need **fake (pretend)** heroes!'
- (29) **Byvšy** k nej priexal muž (... i ustroil scenu.)  
**Former** to her came husband (... and made a scene) (Trugman)

What is peculiar about this data in the light of the traditional classification outlined in Section 2 is that the NP-split phenomenon does not apply to a "natural class". It is unexpected for the intersective, subsective, and privative adjectives to pattern together in freely splitting, while the non-subsective modal adjectives have a much more restricted participation in the NP-split.

#### 4. PRINCIPLES OF INTERPRETATION

The hypothesis I propose is that Nowak's data tells us that adjectives *fake* and *imaginary* aren't actually privative, but subsective, and that no adjectives are actually privative. In interpreting a question like (7b), repeated below, I hypothesize that we actually expand the denotation of *gun* to include both fake and real guns.

- (7) b. Is that gun real or fake?

In fact, even in (7a), it is reasonable to suppose that the first occurrence of *gun*, modified by *fake*, is similarly coerced, whereas the second, unmodified, occurrence is not.

- (7) a. A fake gun is not a gun.

Normally, in the absence of a modifier like *fake* or *real*, all guns are understood to be real guns, as is evident when one asks how many guns the law permits each person to own, for instance. Without the coerced expansion of the denotation of the noun, not only would *fake* be privative, but the adjective *real* would always be redundant<sup>3</sup>.

Kamp and Partee (1995), in discussing the "recalibration" of adjective interpretations in context, introduced a number of principles, including the following "Non-Vacuity Principle".

- (30) **Non-vacuity principle (NVP):**

In any given context, try to interpret any predicate so that both its positive and negative extension are non-empty. (Kamp and Partee 1995: 161)

The Non-Vacuity Principle applies not only to simple predicates but to predicates formed by combination of an adjective and a noun: these should



be interpreted in such a way that the ADJ + N combination is a non-vacuous predicate.

However, Kamp and Partee (1995) also argued, in part on the basis of clear examples like (31), that in ADJ + N constructions, one first interprets the noun in the given context (ignoring the adjective), and then “recalibrates” the adjective as necessary. This principle is expressed as the “Head Primacy Principle” in (32).

- (31) a. giant midget (a midget, but an exceptionally large one)  
 b. midget giant (a giant, but an exceptionally small one)

- (32) **The Head primacy principle (HPP):** In a modifier-head structure, the head is interpreted relative to the context of the whole constituent, and the modifier is interpreted relative to the local context created from the former context by the interpretation of the head. (Kamp and Partee 1995: 161)

In many cases, the Non-Vacuity Principle and the Head Primacy Principle cooperate to account for the observed results, including not only the examples in (31), but also the fact that the truth of (33b) below is compatible with a non-redundant use of the modifier in (33a).

- (33) a. This is a sharp knife.  
 b. Knives are sharp. (Kamp and Partee 1995: 162)

If the Head Primacy Principle were absolute, the proposed shift in the interpretation of the head noun under coercion by a privative adjective like *fake* or a “tautologous” adjective like *real* would be impossible. But there are other examples as well that suggest that the Head Primacy Principle is non-absolute. In particular, there is a large and productive class of “constitutive material” modifiers that occur in examples like *stone lion*, *wooden horse*, *velveteen rabbit*, *rubber duck*. In such examples we easily shift nouns from their literal meaning to a meaning “representation/model of ...”.

The perspective of Optimality Theory suggests that we can account for this situation by saying that the Non-Vacuity Principle outranks the Head Primacy Principle. We normally try to obey both. But if there is no reasonable way to obey the Non-Vacuity Principle without shifting the noun outside its normal bounds (as in the case of *fake* and *real*), then it may be shifted in such a way as to make the compound predicate obey the Non-Vacuity Principle. And if there is an extremely productive and “easy” shift of the noun that makes it satisfy the Non-Vacuity Principle, as in the case of “representations”, there too we can override the Head Primacy Principle.

So I suggest that no adjectives are privative (Partee in press). “Normal” adjectives are always subsective, and there should be some ways to identify “modal” adjectives as a special subclass, such that only they are not necessarily subsective.

If this hypothesis is correct, then the classification of adjectives can be much more neatly constrained. Adjectives are still functions from properties to properties in the

most general case, but in harmony with the traditional notion of *modifiers*, they are normally constrained to be subselective. We still need to allow for the ‘modal’ adjectives, which are not so constrained; the Slavic NP-splitting data provide fuel for a proposal to consider them syntactically as well as semantically distinct.

## 5. CONCLUSIONS

The adjective puzzles that I have been discussing illustrate several general principles. One is that we need to study lexical semantics and principles of semantic composition together; decisions about either may affect decisions about the other. More importantly, while contextually influenced meaning shifts pose challenges for compositionality, we can see that compositionality plays an essential role in constraining the kinds of meaning shifts that take place. We hold the principle of compositionality constant in working out (unconsciously) what shifts our interlocutors may be signaling. In the extreme case we (like children) depend on compositionality to figure out the meanings of novel words: if we can use contextual clues to guess what the whole sentence means, we can then “solve” for the meaning of the unknown word. Compositionality thus appears to be one of the most cognitively basic principles in the realm of semantics. While many important questions in the field remain open, I believe that the principle of compositionality has shown its value as a central working hypothesis guiding semantic research.

- 1 For my first introduction to Polish Split-NPs and answers to my first inquiries about them, I am grateful to Anita Nowak. For further discussion and suggestions, I am grateful to Meredith Landman, Maria Gouskova, Bożena Cetnarowska, Bożena Rozwadowska, Helen Trugman, Asya Pereltsvaig, Tanya Yanko, an anonymous reviewer, and audiences at several previous discussions of this work.  
This paper partially overlaps with several papers published or in press, including (Partee 1995, Partee 2007, Partee 2009, Partee In press). This material is based on work supported by the National Science Foundation under Grants No. BCS-9905748 and BCS-0418311 to Barbara Partee and Vladimir Borshev.
- 2 Tanya Yanko (p.c.) informs me that the contrastive topic actually has Intonation Contour IK-3 (with IK-1 on the corresponding focus).
- 3 This property of *real* is noticed in passing by Lakoff (1987).

## REFERENCES

- Bašić, M. 2004. Nominal Subextractions and the Structure of NPs in Serbian and English. M.A. Thesis. Tromsø: University of Tromsø.
- Clark, R.L. 1970. Concerning the Logic of Predicate Modifiers. *Nous* 4: 311-335.
- Fanselow, G. & D. Čavar. 2002. Distributed deletion. In A. Alexiadou (ed.) *Theoretical Approaches to Universals*. Amsterdam: John Benjamins, 65-107.
- Gouskova, M. 2000. The interaction of topic, focus and constituency in Russian. Ms., Amherst.
- Junghanns, U. 2001. On rightward backgrounding. In G. Zybatow *et al.* (eds.) *FDSL-3: Current Issues in Formal Slavic Linguistics*. Frankfurt-Main: Peter Lang, 329-343.
- Kamp, H. 1975. Two theories about adjectives. In E.L. Keenan (ed.) *Formal Semantics of Natural Language*. Cambridge: Cambridge University Press, 123-155.

- Kamp, H. & B. Partee. 1995. Prototype theory and compositionality. *Cognition* 57: 129-191.
- Kučerova, I. 2007. An anti-intervention effect in Czech splits: An argument for late merge. In R. Compton et al. (ed.) *Annual Workshop on Formal Approaches to Slavic Linguistics. The Toronto Meeting 2006*. Ann Arbor, MI: Michigan Slavic Publications, 161-179.
- Lakoff, G. 1987. *Women, Fire, and Dangerous Things*. Chicago and London: The University of Chicago Press.
- Melhorn, G. 2001. Information structure of discontinuous constituents in Russian. In G. Zybatow et al. (eds.) *Current Issues in Formal Slavic Linguistics (FDSL-3)*. Frankfurt/Main: Lang, 344-352.
- Montague, R. 1970a. English as a Formal Language. In B. Visentini et al. (eds.) *Linguaggi nella Società e nella Tecnica*. Milan: Edizioni di Comunità, 189-224.
- Montague, R. 1970b. Universal grammar. *Theoria* 36: 373-398.
- Montague, R. 1973. The proper treatment of quantification in ordinary English. In K.J.J. Hintikka et al. (eds.) *Approaches to Natural Language*. Dordrecht: Reidel, 221-242.
- Nowak, A. 2000. On split PPs in Polish. Ms. Amherst.
- Parsons, T. 1970. Some problems concerning the logic of grammatical modifiers. *Synthese* 21: 320-34.
- Partee, B. 1995. Lexical semantics and compositionality. In L. Gleitman and M. Liberman (eds.) *An Invitation to Cognitive Science (Second Edition). Volume 1: Language*. Cambridge: MIT Press, 311-360.
- Partee, B.H. 1979. Semantics - mathematics or psychology? In R. Bäuerle et al. (eds.) *Semantics from Different Points of View*. Berlin: Springer-Verlag, 1-14.
- Partee, B.H. 1996. The development of formal semantics in linguistic theory. In S. Lappin (ed.) *The Handbook of Contemporary Semantic Theory*. Oxford: Blackwell, 11-38.
- Partee, B.H. 2007. Compositionality and coercion in semantics: The dynamics of adjective meaning. In G. Bouma et al. (eds.) *Cognitive Foundations of Interpretation*. Amsterdam: Royal Netherlands Academy of Arts and Sciences, 145-161.
- Partee, B.H. 2009. The dynamics of adjective meaning. In A.E. Kibrik et al. (eds.) *Computational Linguistics and Intellectual Technologies: Papers from the Annual International Conference "Dialogue 2009" (Bekasovo, May 27-31, 2009)*. Moscow: Russian State Humanities University, 593-597.
- Partee, B.H. In press. Privative adjectives: subsecutive plus coercion. In R. Bäuerle et al. (eds.) *Presuppositions and Discourse. Current Research in the Semantics/Pragmatics Interface*. Amsterdam: Elsevier.
- Pereltsvaig, A. 2008. Split phrases in colloquial Russian. *Studia Linguistica* 62: 5-38.
- Sekerina, I.A. 1997. The Syntax and Processing of Scrambling Constructions in Russian. Ph.D. dissertation. New York: CUNY.
- Siegel, M. 1976. Capturing the Russian adjective. In B.H. Partee (ed.) *Montague Grammar*. New York: Academic Press, 293-309.
- Siewierska, A. 1984. Phrasal discontinuity in Polish. *Australian Journal of Linguistics* 4: 57-71.
- Švedova, N.J. 1980. *Russkaja grammatika*. Moscow: Nauka/Akademija nauk SSSR, Institut russkogo jazyka.

## SUMMARY

### FORMAL SEMANTICS, LEXICAL SEMANTICS, AND COMPOSITIONALITY: THE PUZZLE OF PRIVATIVE ADJECTIVES

The focus of the paper is the interaction of meaning and context with different kinds of adjectives. Adjective meanings are shown to be more constrained than was appreciated in earlier work. Facts about “NP-splitting” in Polish and Russian cast serious doubt on the standard hierarchy of adjectives, and the data become much more orderly if privative adjectives are reanalyzed as subsective adjectives. This revised account requires the possibility of coerced expansion of the denotation of the noun to which an adjective is applied. Compositionality can be seen as one of the driving forces in such context-sensitive meaning shifts.

**KEYWORDS:** Formal semantics, compositionality, coercion, context-dependence, adjectives, privative, subsective, Polish, Russian, NP-splits.

## BRIEF CV

**Barbara H. Partee** is Distinguished University Professor of Linguistics and Philosophy Emerita at the University of Massachusetts at Amherst, where she continues with part-time post-retirement teaching. She also teaches one course in formal semantics each Spring semester in Moscow. She got her Ph.D. in 1965 with specialization in syntax under Noam Chomsky at MIT, then while teaching at UCLA discovered the logician Richard Montague’s work; her calling then became the synthesis of Chomskyan generative syntax with Montague’s formal semantics, bringing formal semantics increasingly into the field of linguistics. She has done joint work with Bach and Kratzer on the semantic typology of quantification and with Hajičová and Sgall on topic, focus, and quantification. Much of her most recent work is joint with her husband Vladimir Borshev and Russian colleagues; their most recent topic has been the Russian Genitive of Negation.

## PROFESSIONAL BACKGROUND

Taught at UCLA 1965-1972, first Linguistics, then Linguistics and Philosophy.

Joined UMass Amherst faculty in 1972. Professor since 1973, department head 1987-93.

Emerita as of January 2004.

Taught at 1966, 1974, 1987, 1989, and 1991 LSA Summer Institutes.

Visiting Professorships at El Colegio de Mexico, Charles University, Prague, Moscow State University, Russian State Humanities University, University of Leipzig, University of Canterbury.

Board of Managers, Swarthmore College, 1990-2002.

## HONORS AND AWARDS

Woodrow Wilson Fellow (Hon. '61), NSF Fellow (1961-65)  
 NSF grants, Co-P.I. or P.I., 1973-75, 1979-81, 1988-92, 1989-90, 1999-2003, 2004-08.  
 Fellow, Center for Advanced Study in the Behavioral Sciences, 1976-77  
 Chancellor's Medal, University of Massachusetts, 1977  
 Faculty Fellowship, University of Massachusetts, 1981-82  
 NEH Fellowship 1982-83  
 IREX Fellowships 1989, 1995  
 Fulbright Senior Lectureship 2000, 2005  
 President of Linguistic Society of America, 1986  
 Fellow:  
     American Academy of Arts and Sciences (elected 1984)  
     National Academy of Sciences (elected 1989)  
     American Association for the Advancement of Science (elected 1996)  
     Linguistic Society of America (2005)  
     Massachusetts Academy of Sciences (2008)  
 Max Planck Research Award jointly with Hans Kamp 1992-95  
 Foreign Member: Royal Netherlands Academy of Arts and Sciences, elected 2002  
 Honorary doctorates: Swarthmore College (1989), Charles University (1992), Russian  
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 Editorial Boards: *Natural Language Semantics, Linguistics and Philosophy*