

## Thursday Interdisciplinary Colloquium

Winter 2019-Spring 2019

Thursdays, 16:00-17:30, Webb 103

13.06.19

**Yuval Katz**

Tel Aviv University

### ***The Cognitive Neuropsychology of Verbal Alternations***

In this work I present evidence that some individuals with language impairment suffer from a specific difficulty in the production of alternating verbs, e.g., *ca'ad-hic'id* (march.INTR – march.TR), *niftax-patax* (open.INTR – open.TR), *paxad-hifxid* (fear – frighten) and *hitraxec-raxac* (wash.REF – wash.TR). I will discuss various syntactic and morpho-phonological errors that occur in the production of alternating verbs, and assess linguistic accounts for verbal alternations in light of these results. I will argue that syntactic approaches to argument structure such as Doron (2003), Borer (2004), and Arad (2005) cannot capture the error pattern revealed in the data, whereas lexicalist approaches such as Reinhart (2000, 2003), Reinhart and Siloni (2004, 2005), and Horvath and Siloni (2011) can. I will then present a cognitive neuropsychological model for the production of alternating verbs, based on both a neuropsychological model for lexical retrieval and insights from theoretical linguistics. Finally, I will present the HIF'IL test battery that was designed to assess this model.

06.06.19

**Maria Gepner**

Bar-Ilan University

### ***The Semantics of Prenominal Possessives in Russian***

This paper will discuss prenominal possessives in Russian, like those in (1):

- |                        |               |                       |              |
|------------------------|---------------|-----------------------|--------------|
| 1. a. <i>mamIna</i>    | <i>podrug</i> | b. <i>soldatOVo</i>   | <i>ružje</i> |
| mother.poss.F.SG       | friend.F.SG   | soldier.poss.F.SG     | gun.F.SG     |
| '(my) mother's friend' |               | 'the/a soldier's gun' |              |

Prenominal possessives are formed by attaching one of two suffixes *-in-* or *-ov-* to nouns as in (1). These denote animate objects: proper names (2a), kinship terms (2b), animal nouns (2c), and professions (2d) (as noted in Babyonyshev, 1997):

- |                     |                |                      |                |
|---------------------|----------------|----------------------|----------------|
| 2. a. <i>vasina</i> | <i>kniga</i>   | b. <i>papin</i>      | <i>telefon</i> |
| Vasja.poss.F.SG     | book.F.SG      | father.poss.M.SG     | telephone      |
| 'Vasja's book'      |                | 'father's telephone' |                |
| c. <i>koškina</i>   | <i>igruška</i> | d. <i>aktrisino</i>  | <i>platje</i>  |
| cat.poss.F.SG       | toy            | actress.poss.N.SG    | dress          |
| 'the cat's toy'     |                | 'the actress' dress' |                |

Prenominal possessives agree in gender, number, and case with the head noun that always has a singular reference (Townsend, 1980; Koptjevskaja-Tamm and Shmelev, 1994):

3. a. *papin/y*                      *kluč/i*                      b. # *roditeliny*                      *kluči*  
 father.poss.M.SG/PL keys.M.SG/PL                      parents.poss.PL keys.PL  
 'Dad's keys'                      'the parents' keys'

Babyonyshev (1997) discusses the puzzling property of prenominal possessives, namely that they make reference to individual, the possessor, which can be the antecedent of a deictic pronoun (4):

4. *tanini*                      *košelek ležal na stole. onai opjat ego zabyła*  
 Tanya.poss.M.SG purse lay on table she again him forgot  
 'Tanya's purse was lying on the table. She left it at home again.'

She analyzes prenominal possessives as determiners with a nominal base that have undergone N-to-D raising, following Longobardi (1994) in assuming that the D position is associated with reference. I argue that prenominal possessives are adjectives and not determiners. Discussion about determiners in Russian is particularly difficult because in the absence of indefinite and definite articles, there are so few clear candidates for lexical determiners. However, the following data strongly suggests that prenominal possessives in Russian are adjectival.

**A. Prenominal possessives agree with the head noun in number, gender and case:**

5. a. *sosedkinoj*                      *sobaki*  
 neighbour.poss.F.SG.GEN dog.F.SG.GEN  
 'the neighbor's dog'
- b. *sosedkinu*                      *sobaku*  
 neighbour.poss.F.SG.ACC dog.F.SG.ACC  
 'the neighbor's dog'

**B. Examples like (1) can be either definite or indefinite (data in talk).**

**C. They can permute with other adjectives – unlike quantifiers (*každyj* 'every') but like 'indexical adjectives' *etot/ eta/ eto* 'this':**

6. a. *mamina*                      *novaja rabota*                      b. *novaja mamina*                      *rabota*  
 mom.poss.F.SG new job                      new mom.poss.F.SG job  
 'mom's new job'                      'mom's new job'
- c. *každaja novaja rabota*                      d. # *novaja každaja rabota*  
 every new job                      new every job  
 'every new job'

e. *eta novaja kniga*  
this new job  
'this new job'

f. *novaja eta kniga*  
new this book  
'this new book'

**D. They can be arguments of quantifiers (*každyj* 'every'):**

7. *každaja mamina rabota*  
every mom.poss.F.SG job  
'every mom's job'

**E. They can be sentential predicates, again unlike determiners; (8a) vs. (8b):**

8. a. *gosti vošli v komnatu. eto byli petiny družja*  
guests entered in room. this were petja.poss.PL friends  
'The guests entered the room. They were Petja's friends.'

b. *gosti vošli v komnatu. eto byl \*každyj drug*  
guests entered in room this was every friend  
'The guests entered the room. This was \*every friend.'

Landman (2003), argues that appearing in this position is evidence that a nominal is a predicate, using the contrast between *the guests were two boys* and *#the guests were every boy* to argue that *two* and *two guests* are predicates in English, and that *two* is an adjective.

**F. Genitive of Negation.**

Given that it is so difficult to identify determiners in Russian, the most important argument comes from the interaction of prenominal possessives with the genitive of negation. It is well known that in Russian, verbs under negation can take arguments in Accusative or Genitive case (Timberlake, 1975; Babby, 1980; Neidle, 1982). Genitive NPs get non-specific/indefinite interpretation, while Accusative NPs tend to be interpreted as specific/definite. Partee and Borschev (2004), Partee (2008), Kagan (2005, 2007, 2013), and Khrizman (2014) explain this semantic contrast by arguing that NPs in genitive case are predicative expressions at type  $\langle e, t \rangle$ , while accusative NPs are arguments at type  $e$  or  $\langle \langle e, t \rangle, t \rangle$ . This makes a prediction: If prenominal possessives are determiners, they should head DPs at the argument type  $\langle \langle e, t \rangle, t \rangle$ , and should not occur in the genitive under the scope of negation. However, this is not the case. In (9a) *maminy sovety* is in the accusative and gets a specific interpretation at the argument type. It means 'the pieces of advice that my mother gave me'. The Genitive NP in (9b) gets a non-specific interpretation, the sentence roughly meaning 'I did not listen to any pieces of advice that my mother gave me', as predicted by Partee (2008) and others. This strongly suggests that it cannot be an argument at type  $\langle \langle e, t \rangle, t \rangle$  since, as Partee shows,

the non-specific interpretation follows from the fact that the genitive is a predicative NP. This means that the prenominal possessive is not a determiner, but an adjective which is part of the NP.

9. a. *ja ne slušala maminy sovety*  
 I not listen mom.poss.PL.ACC advice.PL.ACC  
 'I did not listen to my mother's advice.'

b. *ja ne slušala maminyx sovetov*  
 I not listen mom.poss.PL.GEN advice.PL.GEN  
 'I did not listen to my mother's advice.'

As shown in the talk, prenominal possessives also appear in genitive case in other positions which are argued to be predicative, e.g., the complement of *na-* and *po-* prefixed verbs (Filip, 2004).

**Semantics:** Prenominal possessives are adjectival modifiers. We assume that the possessive morpheme expresses an operation, which maps individuals and a relation onto a predicate: *-in/-ov*:  $\lambda y \lambda R \lambda x. R(x, y)$ . This function first applies to an individual to form a prenominal possessive: *PetIN* 'Petja's' –  $\lambda R \lambda x. R(x, p)$  that can straightforwardly combine with relational nouns, e.g., *mama* 'mother' to derive a predicate *Petina mama* 'Petja's mother':  $\lambda R \lambda x. R(x, p)$  ( $\lambda y \lambda x. \text{MOTHER}(x, y)$ ) =  $\lambda x. \text{MOTHER}(x, p)$ . Sortal nouns undergo a meaning shift to a relational interpretation  $\lambda x. \text{CAR}(x) \rightarrow \lambda y \lambda x. \text{POSS}(x, y) \wedge \text{CAR}(x)$ . This new relational noun combines with a prenominal possessive to derive a predicate that denotes a set of cars possessed by Petja –  $\lambda R \lambda x. R(x, p)$  ( $\lambda y \lambda x. \text{POSS}(x, y) \wedge \text{CAR}(x)$ ) =  $\lambda x. \text{POSS}(x, p) \wedge \text{CAR}(x)$ . What mechanisms are used to derive argumental readings from predicates will be discussed in the talk.

30.05.19

**Jurgis Škilters**

University of Latvia

***Towards a Relational Eigenplace***

The eigenplace function represents the idea that every object in space is mapped onto a concrete location. I will discuss several modifications and improvements of eigenplace, e.g., by generation of cartesian products out of objects (or regions) and time intervals that are mapped onto concrete segments of space. Applications to static and directional expressions will be discussed (Mador-Haim and Winter, 2015).

Further, I will discuss the version of eigenplace function that is combined with a relational formalism (a modified version of Region Connection Calculus; Randell, Cui, and Cohn, 1992).

Applications to the analysis of prepositional information are discussed (e.g.,

Wunderlich, 1991; Zwarts and Winter, 2000). Finally, some approaches for resolving vagueness in spatial information as represented by natural language description will be demonstrated based on the relational eigenplace function (Galton and Hood, 2005).

### **References**

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- Randell, D. A., Cui, Z., & Cohn, A. G. (1992). A spatial logic based on regions and connection. In *Proceedings of the 3rd International Conference of Knowledge Representation and Reasoning*, KR, 92, 165-176.
- Wunderlich, D. (1991). How do prepositional phrases fit into compositional syntax and semantics? *Linguistics*, 29(4): 591-622.
- Zwarts, J., & Winter, Y. (2000). Vector space semantics: A model-theoretic analysis of locative. *Journal of logic, language and information*, 9(2): 169-211.

### **16.05.19**

**Keren Khrizman**

Bar-Ilan University

#### ***Russian Diminutives and the Semantics of Measure, Size, and Individuation***

As in many other languages, diminutives in Russian have three main uses: (i) expression of smallness (1a); (ii) expression of individuation into small/minimal units accompanied by a grammatical shift from mass to count nouns (1b); and (iii) emotional evaluation (1c):

- (1) a. *dom* - *domik*                      b. *pyl'* - *pylinka*  
    'a house' 'a small house'            'dust' 'a speck of dust'
- c. *akter* - *akteriška*  
    'actor' 'an immature actor'

Cross-linguistic studies of the semantics of diminutives have so far focused on the contrast between 'proper' diminutives expressing small size/measure as in (1a) and emotive diminutives as in (1c) (e.g., Schneider, 2003/2013; Fortin, 2011), while there has been little semantic study of diminutives with an individuation function as in (1b).

The present work focuses on the contrast between "proper" diminutives expressing smallness (1a) and individuating diminutives (1b). In the first part of the talk, I explore the phenomena in the context of recent work on

the semantics of counting, measuring, and the mass/count distinction, and argue that non-individuating and individuating diminutives belong to the class of counting and measuring operators, respectively, in the sense of Rothstein (2011/2017) and Landman (2004/2016). In particular, proper diminutives are modifiers expressing measure properties, whereas individuating suffixes are operators which map from the mass to the count domain and which allow parts/quantities of substances to be counted. In the second part of the talk, we shall take a closer look at the semantics of a very productive individuating diminutive, the *-inka* suffix. I will show that this apparently individuating suffix can also be used as a nominalizer which attaches to gradable adjectives and derives mass nouns denoting gradable properties which hold to a low degree. This then brings further evidence that diminutive morphemes can express a wide range of counting and measuring functions.

**02.05.19**

**Ori Shachmon**

The Hebrew University

***Intra-Dialect Diversity in Palestinian Arabic***

Palestinian Arabic is spoken in a relatively small geographical area, yet it is characterized by a great internal variation of typologically distinct dialects. The particular features of any one dialect are best explained by mapping them onto the larger dialect group, in which these features are dominant. Moreover, when shifting between dialects, valid predictions can only be arrived at based on a true understanding of the complex combinations of characteristics in the various dialect groups, both within the area studied and on a broader scale.

In this talk, I discuss the background to the development of intra-dialect diversity in Palestinian Arabic, and connect each variety with a more general dialect group in the Arabic-speaking world. I examine several ways to classify the different varieties, and point to key features that allow the identification of the speaker's origin according to phonological, morphological, and lexical criteria. I also briefly address the socio-linguistic significance and implications of the use of some stigmatized features.

*The talk will be delivered in Hebrew.*

**30.04.19**

**Moshe Bar Lev**

École Normale Supérieure, Paris

***Homogeneity and the Distributive-Collective Distinction***

This talk focuses on two questions in the semantics of plural predication:

- (1) Does plural predication give rise to 'specified' (i.e., distributive or collective) meanings or to 'underspecified' ones (compatible with

both distributive and collective situations)?

(2) What is the source of variation between non-distributive predicates with respect to Homogeneity (Križ, 2015)?

Examining question (1), I argue that both specified and underspecified meanings should be derivable (following Schwarzschild, 1991; Heim, 1994), and observe that predicates differ in their Specification properties (whether they give rise to specified or underspecified meanings). I further claim that there is a correlation between the Specification properties of predicates and their Homogeneity properties, which calls for a unified perspective on questions (1)-(2). I propose such a perspective based on a novel trivalent semantics for Link's star operator (following but departing from Schwarzschild, 1994) together with a relativization of that operator to 'covers' (Schwarzschild, 1991, 1994; Heim, 1994).

**11.04.19**

**Yoav Goldberg**

Bar-Ilan University

***Hierarchical Processing with Sequential Models?***

Neural network ("deep learning") models are taking over machine learning approaches for language by storm. In particular, recurrent neural networks (RNNs), which are flexible non-markovian models of sequential data, were shown to be effective for a variety of language processing tasks. Somewhat surprisingly, these seemingly purely sequential models are very capable at modeling various syntactic phenomena, and using them result in very strong language processing models, including syntactic parsers for a variety of languages. As an NLP researcher, my research agenda has been transformed by recurrent neural networks. However, little is known about their formal capabilities to process natural language, and the way in which language knowledge is encoded in the models.

In this talk, I will briefly describe recurrent-networks, and present empirical evidence for their capabilities of learning the subject-verb agreement relation in naturally-occurring text, from relatively indirect supervision. This part is based on my joint work with Tal Linzen and Emmanuel Dupoux. I will also briefly touch on extensions to that work (based on joint work with Shauli Ravfogel, as well as other related works). Time permitting, I will present a model that uses RNNs for (dependency-based) syntactic parsing (based on my joint work with Eli Kiperwasser).

Results like these and similar ones highlight interesting questions regarding the need for explicit encoding of hierarchy in mechanisms for processing "real world" natural language texts.

**Bridget Schvarcz**

Bar-Ilan University

***Countability Expressions in Hungarian:***

***Can Classifiers and a Mass-Count Distinction Coexist?***

Hungarian provides evidence that there is considerably more typological variation in expressions of the mass/count distinction and countability than has often been suggested, and shows that the functional category of classifiers and a grammatical mass/count can co-occur. It further provides insight into possible constraints into which nouns can be used as classifiers, and what the semantic operations are which shift nouns into classifiers.

In this talk, I argue three major points:

- (i) There is considerably more evidence that Hungarian has a genuine mass/count distinction than originally suggested in Schvarcz and Rothstein (2017). Hungarian has purely mass nouns, purely count nouns and a wide range of flexible nouns that can occur in both mass and count contexts.
- (ii) However, unlike what e.g. Chierchia (1998, 2010) proposes, Hungarian, though a mass/count language, allows individual level sortal classifiers. The received wisdom is that languages with a mass/count distinction do not have a functional category of 'classifier', but derive classifiers, when necessary, from count nouns. Hungarian has both types.
- (iii) The Hungarian classifiers can be divided into functional heads (1), analogous to the sortal classifiers we find in Mandarin, and sortal classifiers derived from purely count nouns that never appear in mass contexts (2).

(1) *húsz tő szőlő*  
 twenty CL<sub>root</sub> grape  
 'twenty roots of grape'

(2) *két bokor feketeribizli*  
 two CL<sub>bush</sub> blackcurrant  
 'two bushes of blackberries'

While container nouns like, *pohár* ('glass') shift easily from a sortal to a relational reading (3a), a general process allowing sortals to shift to relational nouns, easily available in English, does not seem to be available in Hungarian (3b). Nouns like *könyv* ('book') can be used as classifiers only after having undergone *-nyi* suffixation.

(3) a. *egy pohár bor*                      b. \**egy könyv vers*                      c. *egy könyv-nyi vers*  
 one glass wine                              one book poem                              one book- NYI poem  
 'a glass of wine'                              'a book of poems'                              'a book of poems'

The talk will present a semantic analysis of classifiers in the framework of Khizman et al (2015) showing the differences between functional and lexically based classifiers.



The Hungarian paradigm suggests that a division into mass/count vs. classifier languages (Chierchia, 1998, 2010) is too simple, and that a more nuanced account of variation in systems is required.

**28.03.19**

**Noa Peled**

Tel Aviv University

***Representation and Learning of Quantificational Determiners***

Quantificational determiners (Q-dets; e.g., 'every', 'some', 'five' in English) pose a representational challenge for the linguist, and a learning challenge for the child. We discuss these challenges, using semantic automata (SA; van Benthem, 1986) as a concrete representation of reference, and provide a learner that induces appropriate Q-det denotations, based on the principle of Minimum Description Length (MDL; Rissanen, 1978). Moreover, we note a way in which this response to the learning challenge allows us to probe the representational challenge: While SA and a competing representational framework that we refer to as building blocks (BB, where the denotations of Q-dets are represented using a set of primitive determiners and their combinations; cf. Keenan and Stavi, 1986) often make similar predictions about adult judgments, they make divergent predictions about the course of acquisition. We evaluate these predictions in view of recent experimental work by Chemla et al (2018) and find a tentative argument in favor of BB and against SA.

**14.03.19**

**David Erschler**

Ben-Gurion University

***On Timing of Ellipsis: Evidence from Parasitic Deletion Processes***

In current derivational approaches to ellipsis, it is fairly standard to assume that ellipsis is licensed in narrow syntax and targets constituents, while actual deletion of structure occurs at the PF, that is, the post-syntactic stage of derivation (Chomsky, 1995; Merchant, 2001; Aelbrecht, 2010; Lipták & Griffiths, 2014; Weir, 2014; Thoms, 2015; Abe, 2015; Ott & Struckmeier, 2018). With an increasingly complex picture of post-syntactic derivation emerging (Arregi & Nevins, 2012, and references there), it makes sense to try and find the appropriate ordering of deletion with respect to these other post-syntactic rules.

An (2016) has recently shown that deletion can reach into the material adjacent to the ellipsis site and, as an effect of this, delete a fragment of the sentence that does not form a syntactic constituent. He called such a phenomenon *parasitic deletion*. Specifically, he addressed fragment answer formation in Korean.

In this talk, I will introduce a hitherto undescribed ellipsis variety I have found so far in a number of head-final languages, including Eastern

Armenian, Digor and Iron Ossetic, and Turkish. I will argue that this ellipsis variety also involves *parasitic deletion* rather than mere deletion of a constituent. I will proceed to argue that the existence of *parasitic deletion* allows us to more precisely pinpoint the ordering of deletion among the various Phonological Form rules. Specifically, deletion must occur after linearization, and target contiguous strings.

**07.03.19**

**Renate Raffelsiefen**

Institute for German Language, Mannheim

***Allomorphy and Abstractness: Empirical Considerations***

The original concept of allomorphy envisioned by Structuralists was based on phonemic distinctness, resulting in the assumption of separate allomorphs also in cases of highly regular alternations. Rejecting a phonemic level of representation altogether, Generativists abandoned this approach, focusing their efforts on minimizing allomorphy by way of deriving surface variants from a single underlying representation whenever they saw grounds for motivating relevant rules. That approach has been deemed superior not only because of yielding a more parsimonious lexicon, but also because of not being plagued by missed generalizations due to non-mentioning of the rules in question.

In my presentation I will, however, take issue with this view and argue for the original approach to allomorphy based on phonemic distinctness. The arguments concern generalizations which require reference specifically to the phonemic level of abstractness, including the following:

- Phonological optimization as a conditioning factor for stable allomorphy in affixes or function words, both in "regular" and in "suppletive" cases;
- Syncretism patterns;
- Iconicity (correlations between morphological and phonological markedness in stem allomorphy);
- Systematic loss of stem allomorphs (due to violation of some phonological markedness constraint)

**28.02.19**

**Rama Novogrodsky**

University of Haifa

***The Interface between Syntax and Theory of Mind  
in Pronoun Use of Children with Autism***

Children with High Functioning Autism (HFA) show deficit in linguistic abilities involving perspective-taking and pragmatic judgments (Baron-Cohen, Leslie, & Frith, 1985). In line with this assumption, many studies showed a relationship between deficit in pronoun production and deficit in Theory-of-Mind capacity among children with autism (e.g., Fay, 1979; Hale

& Tager-Flusberg, 2005; Novogrodsky, 2013; Rumpf, Kamp-Becker, Becker, & Kauschke, 2012). In this talk I will present findings from a sentence elicitation task of children with HFA. Based on syntactic measures, Theory-of-Mind scores and type of errors in the pronoun elicitation task, the syntactic deficit in children with HFA disorder will be discussed.