Meanings of Cases, Cases of Meaning

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Case and Meaning

Question: How are cases used?

The answer gives us two kinds of information

• Meanings of cases
  – grammatical meaning

• Meanings of words (cases of meaning)
  – lexical meaning
Overview

• Meanings of cases (Part 1)
  – Analysis of case meaning
  – Pedagogical applications
  – Cross-linguistic comparisons

• Meanings of words (Part 2)
  – Constructional profiles of nouns
  – Constructional profiles of verbs
Assumptions

• Grammatical and lexical meaning observe the **same** principles

• **Polysemy** is common to both types of meaning

• **Radial categories** of relationships among meanings:
  – **prototype** based on physical experience
  – extension via **metonymy**
  – extension via **metaphor**

• Difference in **form** implies difference in **meaning**
Part 1: Meanings of cases

• Analysis of case meaning: the Dative case in Russian
  – Prototypical meaning and extensions via metaphor and metonymy

• Pedagogical applications
  – Interactive text and exercises in the Case Book for Russian

• Cross-linguistic comparisons
  – Use of case in various Slavic languages
Why worry about the meaning of the Dative case?

• There are approximately 300 words in Russian that govern the Dative case (most are verbs, there are some nouns, adjectives and adverbs, and a few prepositions)

• On the face of it, these words look like a rather random assortment of items. See dative words.doc

• Dative is also used in other ways, in impersonal and modal constructions
The Dative Case in Russian

• Prototypical meaning
  – Physical experience of an object transferred from one person to another
    Dative: A Receiver
      • Dative used with verbs of giving, communication, payment, appearance
  – Dative: An Experiencer
    • Dative used with verbs of benefit, harm
  – Dative: A Competitor
    • Dative used with verbs of symmetrical forces or submission
Metonymy relationships

Dative: A Recipient

Dative: An Experiencer

Dative: A Competitor

Metonymy: transfer of experience only

Metonymy: comparison only

More prototypical

Less prototypical
Dative: A Recipient

- **Dat’ ‘give’**
  - synonyms (pokazat’ ‘show’, poslat’ ‘send’, predostavit’ ‘grant’)
  - Metaphorical extension: Vse dušu d’javolu prodajut, a ja podaril besplatno ‘Everyone sells their soul to the devil, but I gave mine for free’
  - Metonymical extension:
    - Verbs of communication: pozvonit’ ‘call’, napomnit’ ‘remind’, otvetit’ ‘answer’
    - Verbs of signalling: pomaxat’ ‘wave’, telegrafirovat’ ‘send a telegram’
    - Verbs of giving money: kompensirovat’ ‘compensate’, zaplatit’ ‘pay’
Dative: An Experiencer

- Something happens and the Dative item absorbs the experience
  - Verbs of benefit: *ponravit’sja* ‘please’, *pozvolit* ‘allow’, *služit* ‘serve’
  - Verbs of harm: *ugrožat* ‘threaten’, *naskučit* ‘bore’, *zapretit* ‘forbid’
  - Verbs of having/need: *prinadležat* ‘belong to’, *xvatat* ‘suffice’, *trebovat’sja* ‘be necessary to’
Dative: A Competitor

- Comparison between Nominative Subject and Dative Object
  - Symmetrical forces: *ravnjat’sja* ‘be equal to’, *sootvetstvovat’* ‘correspond to’, *
    protivostojat’* ‘withstand; stand opposite’
  - Submission: *podčinit’sja* ‘submit to’, *povinovat’sja* ‘obey’, *ustupit’* ‘yield to’
Pedagogical Applications

  - Interactive book and exercises with audio
  - Uses no linguistic terminology
  - Covers ALL meanings of cases
  - ALL examples are authentic


- *The Case Book for Polish* (forthcoming)
  (All are co-authored with Steven Clancy)
Cross-linguistic comparisons

• Linguistic analysis makes systematic comparison possible
• Geographical distribution of case use across Slavic; cf. also MDS studies by Steven Clancy
  – Dative is used for ‘taking’ in addition to ‘giving’ in Czech and Polish: Vzali mi peníze/Zabrali mi pieniądze ‘They took my money’ (Lit: They me-DAT took money)
  – Dative is used for verbs of domination in addition to submission in Czech
    • dominovat ‘dominate’, předsedat ‘preside over’, vévodit ‘rule over’, vládnout ‘govern’
Results of Comparison

• Shows West-East continuum (24 out of 28 contrastive sets)
• Parallels dialect geography of Slavic languages established on basis of phonology and morphology
• Pinpoints areas of divergence (e.g., time expressions, emotion expressions)
Segue between Part 1 and Part 2

- Part 1 established grammatical meanings as networks > Part 2 will establish lexical meanings as networks
- Precise and complete understanding of case developed in Part 1 provides basis for analysis of constructional profiles in Part 2
Part 2: Meanings of words

• Constructional profiles of nouns: Russian words for ‘sadness’ and ‘happiness’ (collaboration with Valery Solovyev)
  – synonymy
  – metaphor

• Constructional profiles of verbs: Russian words for ‘load’ (collaboration with Svetlana Sokolova, Olga Lyashevska and Tore Nesset)
  – are the “empty” prefixes really empty?
Constructional Profiles of Nouns

• A constructional profile is “the distribution of relative frequencies of constructions associated with a given word”
• There are about 70 constructions of the form “[((preposition) [noun]_{case})” in Russian
• The null hypothesis is that all nouns should have equal frequency in all constructions
• But only about 6 (or fewer) constructions are needed to characterize a given noun
• (cf. similar findings by Karlsson 1985, 1986 and Arppe 2001, 2005)
• Example of constructional profile of восторг
vostorg 'ecstasy'

percent frequency

v+Acc  v+Loc  Inst  s+Inst  ot+Gen

'into'  'in'  agent  'with'  'from'
Where the data come from

- Russian National Corpus ([http://www.ruscorpora.ru](http://www.ruscorpora.ru)) >120M words
- Biblioteka Maksima Moškova ([http://lib.ru/](http://lib.ru/)) >600M words
- 500 sentences extracted and coded for use of preposition & case
Synonymy

- Hypothesis: Each word has a unique constructional profile
- Corollary: Words with similar meanings should have similar constructional profiles
- Hierarchical cluster analysis shows which constructional profiles are closest (closer synonyms) and which are further apart, using squared Euclidean distances based on constructional profile data
‘Sadness’ in Russian

• *grust’, *melanxoliya, *pečal’, *toska, *unynie, *xandra
• The constructions they appear in:

- $v + \text{Acc} ‘\text{into}’$
- $v + \text{Loc} ‘\text{in}’$
- Inst: Agent
- $s + \text{Inst} ‘\text{with}’$
- $ot + \text{Gen} ‘\text{from}’$
- (Direct Object)
- (Other Constructions)

Graphs will show only these five, as percentages

Hierarchical Cluster Analysis is computed from all data
The ‘sadness’ nouns

• They can’t all be the same:
  
  *Uxodiš’, i ja gljažu vsled tebe s grust’ju, no bez toski.*
  ‘You leave and I watch you go with sadness, but without sadness.’

• Dictionaries differ on how synonyms are grouped:
  
  – Most usual grouping: *grust’, pečal’, toska*, vs. *melanxoliija, unynie, xandra*
  
  – Disagreements over *unynie*:
    
    • Apresjan et al. 1997: *unynie* goes with *pečal’*
    • Aleksandrovna 1989: *unynie* goes with *melanxoliija* and *xandra*
    • Evgen’evna 2001: *unynie* goes with *grust’* and *xandra*
    • Švedova 2003: *unynie* goes with *grust’, melanxoliija* and *xandra*
‘Sadness’
Hierarchical Cluster

pečal’
toska
xandra
melanxolija
grust’
unynie
‘Happiness’ in Russian

- likovanie, naslaždenie, radost’, sčastie, udovol’stvie, vostorg
- Antonyms are words that are virtually identical, but differ in one value
- ‘Happiness’ nouns focus on the same constructions in their constructional profiles as ‘sadness’ nouns
- Dictionaries differ widely in grouping of ‘happiness’ synonyms
  - Aleksandrova 1998: naslaždenie & udovol’stvie vs. radost’ & likovanie vs. vostorg
  - Švedova 2003 and Abramov 1994: naslaždenie & udovol’stvie vs. likovanie, radost’ & vostorg
‘Happiness’
Hierarchical Cluster

naslaždenie  radost’  udovol’stvie  likovanie  sčastie  vostorg
About the results...

• The results are statistically significant
• For ‘sadness’ nouns: chi square = 730.35, and Cramer’s V = 0.305 which qualifies as a moderate effect (p<0.0001, df=30)
• For ‘happiness’ nouns: chi square = 774.6, Cramer’s V = 0.268 which qualifies as a moderate effect (p<0.0001, df=30)
Metaphor

• Constructional profiles reveal that emotions such as happiness and sadness in Russian are understood as
  – *metaphorical* holes
  – *metaphorical* agents
  – *metaphorical* companions
  – *metaphorical* diseases
  – *metaphorical* sources
v + Acc ‘into’

Ja že živoj čelovek i, konečno, inogda vpadaju v unynie.

‘I am a living person, and, of course, occasionally fall into sadness.’
It doesn’t occur to her that her spouse is suffering in sadness over the minutes of work and inspiration that he has lost.
Who among mortals tormented by sadness, has not indulged in an inventory of all the things that didn’t happen in their life?
s + Inst ‘with’

-Kušaeš’ ty, kak svin’ja, - s grust’ju skazal kapitan.

‘--You eat like a pig’-- said the captain with sadness.’
ot + Gen ‘from’: Healing from disease

Samor luzšee lekarstvo ot xandry -- ěto čtenie.

‘The best cure for sadness is reading.’
ot + Gen
‘from’:
Cause
Podumajte, ètot čelovek umer ot melanxolii!
‘Just imagine, that person died of sadness!’
“Happy families are all alike; every unhappy family is unhappy in its own way.”

• Was Tolstoy right?
• We can’t say for sure, but
  – ‘sadness’ nouns seem to be more diverse than ‘happiness’ nouns and lack an umbrella term
  – case meaning tells us about metaphors that motivate understanding of emotions
Constructional Profiles of Verbs

• The distribution of relative frequencies of constructions associated with verbs
• Constructional profiles show that near-synonyms can behave very differently
• Constructional profiles can show that the “empty” prefixes are not really empty
“Empty” prefixes?

When we have aspectual pairs such as 
*pisat’/napisat’* ‘write’, *morozit’/zamorozit’* ‘freeze’, *obedat’/poobedat’* ‘eat lunch’, it is assumed that the prefixes *na-, za-, po-* are “empty” (have no meaning)

Some verbs have several “empty” prefixes: 
*gruzit’* ‘load’ has the perfectives *nagruzit’, zagruzit’, pogruzit’*

Constructional profiles show that the verbs have different meanings and the prefixes are not empty
Relevant constructions

• Accusative case names the load (**theme-object**)
  – **Acc** + *na/v + Acc* (*nagruzit’ jaščiki na teležku ‘load the boxes onto the cart’*)
  – **Acc** (*zagruzit’ *ugol’ budet problematično ‘it will be difficult to load the coal’*)

• Accusative case names the **container (goal-object)**
  – **Acc** + **Inst** (*on nagruzil sanki proviziej ‘he loaded the sleds with provisions’*)
  – **Acc** (*nagrulili telegi i uexali v gorod ‘they loaded the carts and rode into town’*)

• Data comes from Russian National Corpus
About the results...

• They are statistically significant
  – Chi-square = 452.827 (p<0.0001, df=6)
    Cramer’s V = 0.507 (large effect)
• Case Constructions show that the “empty” prefixes behave differently from one another
Conclusions

• Case can tell us about
  – the meaning of grammar
  – how grammars differ
  – how closely synonyms are related
  – what metaphors underlie abstract concepts
  – whether there are semantically “empty” linguistic forms

• Plenty of opportunities for further research