Information Status and Word Order in Heritage and L2 Russian

Oksana Laleko
SUNY New Paltz

Tenth National Heritage Language Research Institute
University of Illinois Urbana Champaign
May 22-25, 2017
“Grandma lost her glasses”

- SVO: Babushka poteryala ochki.
- SOV: Babushka ochki poteryala.
- OVS: Ochki poteryala babushka.
- OSV: Ochki babushka poteryala.
- VSO: Poteryala babushka ochki.
- VOS: Poteryala ochki babushka.
Word order in Russian

- All six orders are possible, but not all created equal:
  - Miller & Weinert (1998), based on Bivon (1972) and Kapanadze & Zemskaja (1979):

Mainly Written:
- **SVO**: 79% (Preferred by NSs in GJ tasks)
- **OVS**: 11% (Kallestinova, 2007)
- **OSV**: 4%
- **VOS**: 2%
- **SOV**: 1%
- **VSO**: 1%

Spoken:
- **SVO**: 42%
- **SOV**: 34%
- **OSV**: 11%
- **OVS**: 3%
Word order in Russian

- Associated with informational-structural factors (Bailyn, 2014; Holmberg, 1998; Jasinskaja, 2016; Kallestinova, 2007; Yokoyama, 1987)

- Reflects the distinction between topic (given/old information) and comment/focus (new information) in discourse (Birner & Ward, 1998; Gundel, 1975; King, 1995; É. Kiss, 1987)
Grandma/lost glasses

- Q: What happened? What did grandma lose?
- Q: Who lost glasses?
- Q: What did grandma do with the glasses?

SVO: Babushka poteryala ochki
OVS: Ochki poteryala babushka
SOV: Babushka ochki poteryala

Assuming ‘neutral’ intonation with nuclear accent on the last word, HL* (Jasinskaja, 2016)
Given Before New

- The “given before new” principle (Gundel, 1988):
  - The constituent occupying the sentence-final (or right-edge) position is interpreted as presenting new information.
  - The constituent in the left periphery is interpreted as the topic (given/old information).

→ Given (topical) elements are more likely to undergo leftward movement.
The “end-weight” principle (Quirk et al., 1972; Hawkins, 1983; Wasaw, 1997)

- Heavy constituents tend to be placed after light constituents

→ Light elements are more likely to undergo leftward movement

- Both syntactic weight (heavy/light) and discourse status (new/old) have been shown to affect constituent order independently of each other (Arnold et al., 2000).
IS in Heritage Language

- Narrow presentational focus in Spanish (Hoot, 2017)
- Clefts and information focus in near-native French (Donaldson, 2012)
- Clitic left dislocation and topicalization in Spanish (Zapata et al., 2005)
- Topic and focus particles in Korean and Japanese (Laleko & Polinsky, 2013, 2016)
Word order in Heritage Russian: What we know

- Reduction of word order flexibility and predominant use of SVO in production;
- The status of VS?
  - Relatively strong retention (Polinsky, 2006)
  - Infrequent use or absence (Isurin & Ivanova-Sullivan, 2008)
  - Infrequent use but fewer errors with VS than with other non-canonical orders (Dubinina & Laleko, 2014)
- Limitation: only production data available so far
Word order in Heritage Russian: What we know

- Cross-linguistic transfer?
- Heritage Russian in Germany (Brehmer & Usanova, 2015):
  - German is V2 in declarative main clauses, V1 in imperative sentences, V-final in subordinate clauses
  - No V2 transfer detected in main clauses, but some evidence for transfer effects in subordinate clauses (significant trend towards V-final, also extending to main clauses)
  - “The bilingual adolescents show an even higher degree of variation concerning word order patterns if compared to the monolingual controls” but it is not clear if all of the non-canonical patterns that occur are pragmatically acceptable (p. 198).
Advantages and limitations of production studies

- Great way to see the ‘big picture’; quantifiable data for correct/incorrect occurrences

- But:
  - Use of narratives: principles of discourse organization that are not necessarily present in other linguistic situations, i.e. interactions with interlocutors;
  - Participant samples tend to be smaller;
  - Non-occurrence: lack of knowledge, avoidance strategies, or lack of appropriate context?

- Question: what do HL speakers really know?
The Study

Exp. 1: Written AJT (intransitive and transitive verbs)
Exp. 2: Auditory AJT (transitive verbs)
Questions

- In what contexts and under what conditions do HL and L2 speakers use the canonical (SV/SVO) and non-canonical orders?
  - Inversion: (O)VS
  - Object fronting without inversion: SOV, OSV

- Do the HL/L2 speakers differentiate between pragmatically acceptable/unacceptable constructions in all contexts?

- Are HL/L2 speakers sensitive to the same factors as baseline speakers in their judgments?
# Experiment 1: Written AJT

<table>
<thead>
<tr>
<th>Participants</th>
<th>HL (N=27)</th>
<th>L2 (N=20)</th>
<th>L1 (N=15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>19.3 (18-24)</td>
<td>19 (18-22)</td>
<td>24 (18-38)</td>
</tr>
<tr>
<td>Age of arrival to the U.S.</td>
<td>2.1 (0-7)</td>
<td>0</td>
<td>n/a</td>
</tr>
<tr>
<td>Age of switch to Eng</td>
<td>4.6 (0-7)</td>
<td>0</td>
<td>n/a</td>
</tr>
<tr>
<td>Average daily use of Rus (%)</td>
<td>26.3 (5-45)</td>
<td>10.7 (1-20)</td>
<td>100</td>
</tr>
<tr>
<td>Understanding spoken Rus (1-10)</td>
<td>8.3 (5-10)</td>
<td>5.2 (3-7)</td>
<td>n/a</td>
</tr>
<tr>
<td>Speaking Rus (1-10)</td>
<td>7.1 (4-10)</td>
<td>4.6 (2-7)</td>
<td>n/a</td>
</tr>
<tr>
<td>Reading in Rus (1-10)</td>
<td>6.5 (4-10)</td>
<td>6.1 (3-9)</td>
<td>n/a</td>
</tr>
<tr>
<td>Writing in Rus (1-10)</td>
<td>6.1 (4-10)</td>
<td>5.7 (2-9)</td>
<td>n/a</td>
</tr>
</tbody>
</table>
Experiment 1: Written AJT

- **Design:**
  - Question-answer pairs targeting SV(O), (O)VS, SOV, OSV orders in broad-focus and narrow-focus contexts.
    - unaccusative, unergative, transitive
  - Participants asked to evaluate the answer on a 1-5 scale

- **Predictions for HL/L2:**
  - underuse of non-SVO and overuse of SVO orders;
  - overuse of infelicitous constructions/ lack of differentiation between acceptable/unacceptable contexts
Inversion in Russian

- Broad focus (“What happened”?)
  - Unaccusative
  - ??Unergative
  - #Transitive

- Narrow focus on S: (“Who lost glasses?”)
  - Unaccusative
  - Unergative
  - Transitive
Inversion in Baseline Russian

<table>
<thead>
<tr>
<th></th>
<th>Broad</th>
<th>Narrow(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unaccusative</td>
<td>4.1</td>
<td>4.6</td>
</tr>
<tr>
<td>Unergative</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Transitive</td>
<td>4.8</td>
<td>3.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Broad</th>
<th>Narrow(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unaccusative</td>
<td>4.0</td>
<td>4.5</td>
</tr>
<tr>
<td>Unergative</td>
<td>3.8</td>
<td>2.2</td>
</tr>
<tr>
<td>Transitive</td>
<td>2.2</td>
<td>4.4</td>
</tr>
</tbody>
</table>

Blue bars represent SV, red bars represent VS.
Baseline Russian: VS vs. SV

<table>
<thead>
<tr>
<th>Category</th>
<th>VS</th>
<th>SV</th>
</tr>
</thead>
<tbody>
<tr>
<td>BroadUnacc</td>
<td>4.6</td>
<td>4.1</td>
</tr>
<tr>
<td>Nar(S)Unacc</td>
<td>4.7</td>
<td>4.0</td>
</tr>
<tr>
<td>Nar(S)Unerg</td>
<td>4.5</td>
<td>4.0</td>
</tr>
<tr>
<td>Nar(S)Tran</td>
<td>4.5</td>
<td>4.4</td>
</tr>
</tbody>
</table>
Heritage Russian: VS vs. SV

- BroadUnacc: SV 4.4, VS 4.0
- Nar(S)Unacc: SV 4.4, VS 3.8
- Nar(S)Unerg: SV 4.5, VS 3.7
- Nar(S)Tran: SV 4.5, VS 3.4
L2 Russian: VS vs. SV

- BroadUnacc: 3.8 (SV), 3.6 (VS)
- Nar(S)Unacc: 3.9 (SV), 3.4 (VS)
- Nar(S)Unerg: 3.8 (SV), 3.3 (VS)
- Nar(S)Tran: 4.0 (SV), 3.3 (VS)
VS in L1: What factors are involved

![Bar chart](chart.png)

- **Broad**
  - Unacc: 4.6
  - Unerg: 3.8
  - *P < 0.01*

- **Narrow (S)**
  - Unacc: 4.7
  - Unerg: 4.5

Legend:
- Unacc
- Unerg
VS in HL: What factors are involved

- **Broad**
  - Unacc: 4.0
  - Unerg: 3.5
  - Difference: **P < 0.01**

- **Narrow (S)**
  - Unacc: 3.8
  - Unerg: 3.7
  - Difference: **P > 0.05**
VS in L2: What factors are involved

- Broad: Unacc 3.6, Unerg 3.2
- Narrow (S): Unacc 3.4, Unerg 3.3

P > 0.05
Interim Summary

- Inversion with intransitive verbs:
  - verb type matters for L1 and HL speakers, but not for L2 speakers
  - information status of the subject matters for L1 speakers, but not HL and L2 speakers

- What about transitive verbs?
Transitive verbs

Basic order SVO, but the following variations occur:

Inversion with object fronting:
- *Kto poteryal kluchi?*  
  *Kluchi poteryal sosed.*  
  OVS
- who lost keys.ACC keys.ACC lost neighbor.NOM

Object fronting without inversion (middle):
- *Gde igrushki?*  
  *Mama igrushki ubrala.*  
  SOV
- where toys? mom.NOM toys.ACC put-away

Object fronting without inversion (initial):
- *Gde igrushki?*  
  *Igrushki mama ubrala.*  
  OSV
- where toys? toys.ACC mom.NOM put-away
SVO/OVS with transitive verbs
(Narrow focus on S: “Who lost glasses”?)
Reduction of options

- Contact-induced change often manifested as the **narrowing of options**:  
  - elimination of optionality in favor of the less marked option (Heine, 2006),  
  - loss of discourse-pragmatic constraints governing the occurrence of specific variants (Silva-Corvalán, 1994)
- \{SVO/OVS\} $\rightarrow$ SVO
- Interaction of multiple factors:  
  - processing efficiency  
    - non-canonical sentences are harder than canonical (Gibson, 1998; Miyamoto & Takahashi, 2001; Sekerina, 2003 even with context)  
  - frequency of occurrence  
  - dominant language transfer
Loss of inversion? Not really
Givenness and Heaviness in Object Placement (SOV, OSV)

- New/unknown objects tend to appear post-verbally; old/known/given objects pre-verbally
  - Given: VO (39.1%), OV (60.9%) (Sliussar, 2007)
  - New: VO (59.7%), OV (40.3%)

- Pronominal objects (light) typically occur preverbally
  - The rate of OV constructions with pronominals reported to be as high as 84% (Dyakonova, 2004 for caregiver speech)
Object Placement in Russian: Results

- What the results show for baseline speakers of Russian:
  - The new/given distinction matters for OSV
  - The heavy/light distinction matters for SOV
Object placement in baseline
Russian

- O-new: 4.9, 3.7, 2.4
- O-given (heavy): 4.7, 3.3, 3.4
- O-given (light): 4.8, 3.9, 3.3

Bar chart showing the distribution of object placement in Russian.
Object placement in heritage Russian

![Bar chart showing object placement in Russian with bars for O-new, O-given (heavy), and O-given (light) categories. The chart compares SVO, SOV, and OSV structures.]
Object placement in heritage Russian
Object placement in L2 Russian

![Bar chart showing object placement in L2 Russian]

- **O-new**:
  - SVO: 4.2
  - SOV: 3.8
  - OSV: 3.0

- **O-given (heavy)**:
  - SVO: 3.9
  - SOV: 3.6
  - OSV: 3.4

- **O-given (light)**:
  - SVO: 3.6
  - SOV: 3.9
  - OSV: 3.9

Legend:
- SVO
- SOV
- OSV
Interim Summary

- Inversion:
  - \{SVO/OVS\} \rightarrow SVO in both HL and L2
  - OVS vs. # OVS in L1 and HL, but not in L2

- Object placement:
  - L1: givenness and weight
  - HL: weight
  - L2: no clear effects
# Experiment 2: Auditory AJT

<table>
<thead>
<tr>
<th>Participants</th>
<th>HL (N=20)</th>
<th>L2 (N=7)</th>
<th>L1 (N=16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>21 (18-26)</td>
<td>22 (18-28)</td>
<td>40 (24-69)</td>
</tr>
<tr>
<td>Age of arrival to the U.S.</td>
<td>4 (0-9)</td>
<td>0</td>
<td>n/a</td>
</tr>
<tr>
<td>Age of switch to Eng</td>
<td>6 (0-13)</td>
<td>0</td>
<td>n/a</td>
</tr>
<tr>
<td>Average daily use of Rus (%)</td>
<td>21 (5-50)</td>
<td>11.4 (0-40)</td>
<td>100</td>
</tr>
<tr>
<td>Understanding spoken Rus(1-10)</td>
<td>8.7 (6-10)</td>
<td>5.6 (3-8)</td>
<td>n/a</td>
</tr>
<tr>
<td>Speaking Rus (1-10)</td>
<td>6.8 (3-10)</td>
<td>5 (2-7)</td>
<td>n/a</td>
</tr>
<tr>
<td>Reading in Rus (1-10)</td>
<td>5.5 (1-10)</td>
<td>6.4 (4-8)</td>
<td>n/a</td>
</tr>
<tr>
<td>Writing in Rus (1-10)</td>
<td>4.9 (1-10)</td>
<td>5.1 (3-7)</td>
<td>n/a</td>
</tr>
</tbody>
</table>
Auditory presentation

- Access to prosodic cues
  - Narrow focus associated with prosodic marking (Zubizaretta, 1998; Jasinskaja, 2016; Yokoyama, 1987)
- Closer to spoken language where non-canonical orders are more common

- Both factors predict more target-like results in HL speakers due to their early naturalistic aural exposure to prosodically rich input
Objects: Written vs. Auditory

- L1: Written - 4.9, Auditory - 3.7
- HL: Written - 4.7, Auditory - 3.9
- L2: Written - 4.2, Auditory - 3.8

Legend:
- SVO
- SOV
- OSV
Objects: Written vs. Auditory

<table>
<thead>
<tr>
<th></th>
<th>Written</th>
<th>Auditory</th>
<th>Written</th>
<th>Auditory</th>
<th>Written</th>
<th>Auditory</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>4.9</td>
<td>4.9</td>
<td>4.6</td>
<td>4.4</td>
<td>4.7</td>
<td>4.6</td>
</tr>
<tr>
<td></td>
<td>3.7</td>
<td>3.7</td>
<td>3.9</td>
<td>3.9</td>
<td>2.9</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>2.4</td>
<td>2.4</td>
<td>4.4</td>
<td>4.4</td>
<td>3.8</td>
<td>3.8</td>
</tr>
<tr>
<td></td>
<td>SVO</td>
<td>SOV</td>
<td>OSV</td>
<td>SVO</td>
<td>OSV</td>
<td>SVO</td>
</tr>
<tr>
<td>HL</td>
<td>4.2</td>
<td>4.2</td>
<td>4.0</td>
<td>4.0</td>
<td>3.8</td>
<td>3.8</td>
</tr>
<tr>
<td></td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
</tr>
<tr>
<td>L2</td>
<td>4.0</td>
<td>4.0</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Legend:
- SVO
- SOV
- OSV
Objects: Written vs. Auditory

<table>
<thead>
<tr>
<th></th>
<th>Written</th>
<th>Auditory</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>4.9</td>
<td>4.7</td>
</tr>
<tr>
<td>L2</td>
<td>4.2</td>
<td>4.0</td>
</tr>
</tbody>
</table>

P > 0.05
What explains this?

- SOV is an emerging feature of colloquial Russian (Slioussar, 2007)
- OV orders prevalent in child Russian (Gvozdev, 1961; Dyakonova, 2004)
- Higher occurrence of SOV and OSV in informal/non-academic texts; SVO bias in written/academic texts
  - Sirotinina (2003): 7-8% of OV in scientific texts, 66.4% in informal dialogues
- Overgeneralization?
#SOV

- L1: 2.7
- HL: 4
- L2: 3.1
Written vs. Auditory: SVO/OVS interchangeability

<table>
<thead>
<tr>
<th></th>
<th>Written</th>
<th>Auditory</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>4.4 4.5</td>
<td>4.8 4.8</td>
</tr>
<tr>
<td></td>
<td>4.5 4.7</td>
<td>4.3 4.8</td>
</tr>
<tr>
<td></td>
<td>4.0 4.1</td>
<td>3.3 3.8</td>
</tr>
</tbody>
</table>

P > 0.05
Overgeneralization of #OVS in HL speakers (auditory)

- Written
- Auditory

L1
- SVO: 4.4
- OVS: 4.5
- #OVS: 2.2

L2
- SVO: 4.0
- OVS: 4.1
- #OVS: 3.8

P > 0.05
Summary

- Word order in HL and L2:
  - Prevalence of SV and SVO
  - Reduction of options {SVO/OVS} and overextension of the unmarked pattern
  - Over-acceptance of infelicitous orders (esp. in auditory presentation) as a result of more relaxed pragmatic judgments
- L1 speakers: verb type, weight, givenness; auditory presentation boosts ratings for non-SVO orders
- HL speakers: verb type, weight; auditory presentation boosts ratings for non-SVO orders (O-fronting) but also in infelicitous contexts (#OVS, #SOV)
- L2 speakers: no clear improvement with auditory presentation
Thank you!