Russian Children’s Comprehension of Aspectual Distinctions

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Objective

• Do Russian children (aged 3-5) know the semantics of aspectual distinctions?
# Russian Aspectual Morphology

<table>
<thead>
<tr>
<th>IMP</th>
<th>PERF</th>
</tr>
</thead>
<tbody>
<tr>
<td>stroit’</td>
<td>postroit’</td>
</tr>
<tr>
<td>sobirat’</td>
<td>sobrat’</td>
</tr>
</tbody>
</table>

- Infinitives are obligatorily marked for aspect

- Both **Past IMP** and **Past PERF** are synthetic forms

<table>
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<tr>
<th>IMP</th>
<th>PERF</th>
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<tbody>
<tr>
<td>stroitl</td>
<td>postroil</td>
</tr>
<tr>
<td>build-imp-past</td>
<td>build-perf-past</td>
</tr>
<tr>
<td>sobiral</td>
<td>sobral</td>
</tr>
<tr>
<td>assemble-imp-past</td>
<td>assemble-perf-past</td>
</tr>
</tbody>
</table>
Perfective vs. Imperfective

• Perfective
  – only used to refer to holistic/completed events

• Imperfective
  – can refer to completed or incomplete events
  – used to describe ongoing events (past, present or future)

Imperfective lacks completion entailments
Previous Research

Previous findings suggest early mastery of aspect

- **Spontaneous Speech:**
  Children produce both aspectual forms from a very young age (< 2 years) (Brun *et al.*, 1999; Gvozdev, 1961; Bar-Shalom & Snyder 2000)
Previous Research

- Picture-matching task (Vinnitskaya & Wexler, 2001)

Mal’chik chital knigu
read-past-imp
*The boy was reading the book*

Mal’chik prochital knigu
read-past-perf
*The boy read the book.*

3-4 year olds appear to use IMP vs. PERF to correctly distinguish *ongoing* from *completed* events
Evidence of Difficulties

• Comprehension studies in other languages

Many errors found once [±past] and [±completed] are independently controlled in English (Wagner 1998), Dutch (van Hout 2001)
Current Study

• Do Russian children appropriately use aspectual morphology to distinguish *completed* from *incomplete* events?
Current Study

• 11 Russian monolingual children, aged 3-5, tested in Moscow preschools

• 4 stories per child, i.e., 44 trials total

• Within-subject design
Experiment Design

• In each story, an event occurs at 3 landmarks: a flower-bed, a castle and a tree
• In each story, an event occurs
  
  (i) completely  
  (ii) incompletely  
  (iii) not at all

  \( \text{randomized order} \)

• Children were asked \textit{where} an event happened, using PERF and IMP verbs; encouraged to give more than one location as answer
### Scenarios

- **Monkey** assemble a smurf
  
  *obez’yanka* **sobrala/sobirala** **gnomika**

- **Lion** build a house
  
  *l’venok* **postroil/stroil** **domik**

- **Tiger** make a puzzle
  
  *tigrenok* **sostavil/sostavlyal** **kartinku**

- **Puppy** mould a bear
  
  *sh’enok* **vylepil/lepil** **medvedya**
A road with 3 landmarks: a flower-bed, a castle and a tree. There are parts of a smurf at each location.
A monkey starts her journey down the road.
The monkey arrives at the flower-bed.

*These are nice flowers. Oh, look there are the pieces of a smurf down here. Let me try to revive this guy.*
OK, the body goes on top of the legs, what’s next...
A bug bites the monkey.

Ouch, that hurts!!! I don’t want to stay here any longer. I’m going to leave all of it like this and continue down the road.
The monkey reaches the castle.

Oh, look, what a beautiful castle! And there are pieces of a smurf next to it. Let me try this one too!
OK, the body goes on top of the legs, what’s next...
A bug bites the monkey.

Oh no, a bug bit me again! Why am I so unlucky today?

No, this time, I’m going to finish this thing anyway!
The monkey assembles the smurf completely and continues along the road.
The monkey reaches the tree.

What a great tree, it’s so nice to sit here. And there are some smurf pieces here again. But I guess I have to go home now.
The scene at the end of the story.
Gde obez’yanka sobrala gnomika?
assemble-PERF
Where did the monkey assemble the smurf?
Where was the monkey assembling the smurf?
Summary of Results

<table>
<thead>
<tr>
<th>Adults</th>
<th>Group 2 children (n=6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perfective</td>
<td><img src="image1.png" alt="Image" /></td>
</tr>
<tr>
<td>Imperf.</td>
<td><img src="image3.png" alt="Image" /></td>
</tr>
</tbody>
</table>

Group 2 children tended to be younger, but included older children, including two 5-year olds

22/24 trials
Interruptions

- Interruptions occur twice per story; allows independent test of ability to give 2 locations as answer:

Gde obez’yanku ukusil zhuk?
*Where was the monkey stung by a bug?*

100% of adults and children answered with 2 locations
Related Finding

- Spanish picture matching task (Hodgson 2001)
  El niño *se comió* la madalena.  
  The child *ate up* the cupcake.
  El niño *comió* la madalena.  
  The child *was eating* the cupcake

For incomplete events:

<table>
<thead>
<tr>
<th></th>
<th>Adults</th>
<th>4-6 year-olds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>se-verb</strong></td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>verb</strong></td>
<td>32%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Although adults choose complete or incomplete event with simple past, children consistently avoid incomplete event choice.
Many Russian children reject IMP with past incomplete events

BUT: recall that other studies suggest they would accept IMP with *ongoing* (i.e., present incomplete) events

Cannot conclude that Russian children obligatorily associate IMP verbs with complete events!
Rejection of Imperfective with Incomplete Events

- Two possible directions

  - Semantics of imperfective aspect is deviant

  - Semantics of imperfective is adult-like
    …but children lack conceptual resources to map events onto aspectual semantics
Deviant Semantics?

- Imperfective (informal)
  - (i) ongoing event
  - (ii) past completed event
  - (iii) past incomplete event

- Unclear whether such a division is attested anywhere in world’s languages
Intact Semantics

• How could a child have intact semantics for imperfective, yet reject imperfectives with past incomplete events?
Even if they have this right....

[PROG $\Phi$] is true at $I$ and $w$ iff there is an interval $I'$ such that $I' \subset I$ [and $I$ is not a final subinterval of $I'$] and there is a world $w'$ for which $\Phi$ is true at $I'$ and $w'$, and $w$ is exactly $w'$ at all times preceding and [including] $I$.

*there is still no guarantee that the child can find the relevant inertia world to license the IMP*
Intact Semantics

Imperfective Paradox:

to define IMP so that it relates an incomplete event to a complete version of the same event without giving rise to an entailment that the event actually reached completion
Ways to Deal with IMP Paradox

I: Project Incomplete Event
II: Extended Events/Objects
I: Project Incomplete Event

This process counts as a ‘smurf building’ event…

…because it can be related to the continuation of the event to completion

Where do speakers find the complete event?
I: Project Incomplete Events: Understanding Unrealized Intentions
Children’s failure could be due to difficulty in relating incomplete event to agent’s unrealized intentions.

Would be an instance of well-known failures on Theory of Mind (i.e., false belief) tasks.

Compatible with success on ongoing events.

Predicts better performance in a task where the child thinks that the agent’s intentions could still be fulfilled.
I: Project Incomplete Events: Unrealized Facts

• Independent of knowledge of agent’s intentions, children’s failure could be due to difficulty in imagining a counterfactual extension of the incomplete event

• Compatible with success on ongoing events
This sequence counts as a ‘smurf building’ event…

…because this is building & because this counts as a smurf.

Children’s problem could be due to a failure to accept extended notions of events and objects.
This sequence counts as a ‘smurf building’ event…

…because this is *building*, and because this counts as a smurf

**BUT**…

If this is the problem, then similar problems should arise when children judge ongoing (i.e. incomplete present) events
Summary

• Russian children show failure to map imperfective verbs onto past incomplete events

• Contrasts with apparent success in using aspect to distinguish complete from ongoing events

• Failure may reflect non-adult semantics, or may reflect adult-like semantics, but without the conceptual resources needed to resolve the Imperfective Paradox
Summary

• Follow-up studies will manipulate:

  (i) Predicate type, i.e. creation vs. change-of-state
  (ii) Need for false beliefs/counterfactual reasoning
  (iii) Availability of specific past time reference for evaluating imperfective
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