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The Many Shades of Blue

Color Term Acquisition in Russian–German Bilinguals Across Three Generations

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What Do You Call This?



What Do You Call This?



One color? Two colors? More?

Same light. Different maps.
The human eye sees a continuum.
Languages draw borders on it.

Roadmap

1. Why color terms matter
2. Cross-linguistic variation in “blue”
3. Russian *sinij* and *goluboj*
4. What bilingualism can change
5. Our Blue Task
6. Results: stability, loss, and restructuring

Berlin & Kay: The Classic 11

A fully developed basic color system has up to **11 basic color terms.**



In many languages, these 11 words cover the basic color system.
Russian is the interesting exception: it behaves like a **12-term** system.

Berlin & Kay 1969

Beyond Berlin & Kay: Different Borders

Some languages split the blue area:

- Greek: *μπλε / γαλάζιο*
- Lithuanian: *mėlyna / žydra*
- Uruguayan Spanish: *azul / celeste*
- Russian: *синий / голубой*

Other languages group colors differently:

- Berinmo: *nol* covers blue–green and *wor* covers yellow–green
- the boundary is not universal

Roberson et al. 2000; Thierry et al. 2009; Gonzalez-Perilli et al. 2017; Bimler & Uuskula 2014

What Is a Basic Color Term?

Basic term

- single word
- frequent in everyday language
- psychologically salient
- not restricted to one object or domain

Secondary term

- more context-dependent
- often modifier-like
- used when fine distinctions matter
- less obligatory in default naming

Russian: Two Basic Blues

sinij

dark blue

goluboj

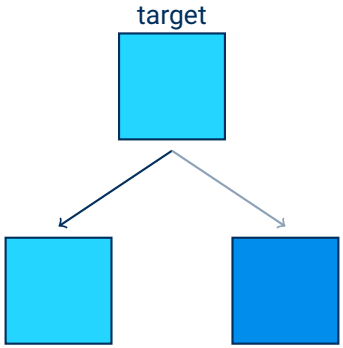
light blue

Both terms meet basic-term criteria:

- frequent Russian color terms
- productive: *sinevatyj*, *golubovatyj*
- psychologically salient in listing tasks
- *goluboj* is not just “light *sinij*”

Corbett & Morgan 1988; Morgan 1989; Vasilevich 1983; Lyashevskaya & Sharov 2009

Winawer et al.: Does Language Affect Perception?



Which bottom square matches the top?

Russian speakers were faster when the contrast crossed the *sinij–goluboj* boundary.

When verbal interference blocked language, the advantage became weaker.

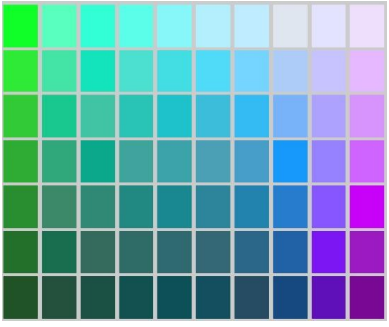
Winawer et al. 2007

The Bilingual Puzzle

Russian has two basic blue terms.
English has one: *blue*.

What happens when speakers grow up with both systems?

Andrews 1994: Where Does Blue Change?



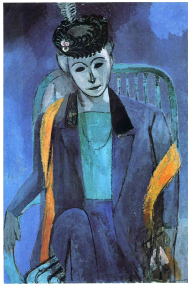
- Russian–English bilinguals
- adults mostly maintained the contrast
- heritage speakers often merged categories
- task: boundaries and focal points on color chips

Bilingual experience can move the boundary, especially for *goluboj*.

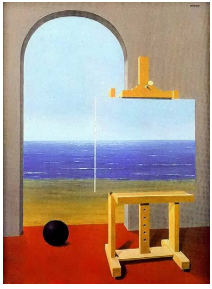
Pavlenko et al. 2016: Blue in Discourse



Matisse's *The blue window* (1911)



Portrait of Madame Matisse (1913)



Magritte's *The human condition* (1935)



Van Gogh's *The starry night* (1889)

Pavlenko et al. 2016: Blue in Discourse

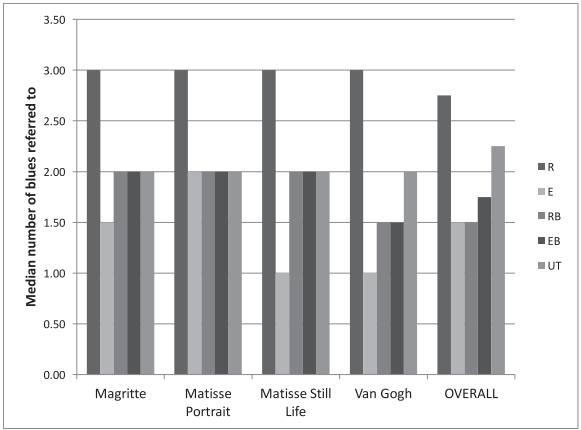


Figure 1. Median number of blues referred to (by group and painting).

- Russian–English bilinguals
- dominance affects lexical contrasts
- less stable naming than in monolingual Russian
- task: spontaneous, less controlled discourse

Pavlenko et al. 2016

What Was Still Missing?

- Most evidence comes from Russian–English bilingualism.
- German also has only one broad term: *blau*.
- Previous tasks either did not require spoken color naming or were less controlled.
- We need a controlled production task across three family generations.

What Was Still Missing?

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So we designed the Blue Task.

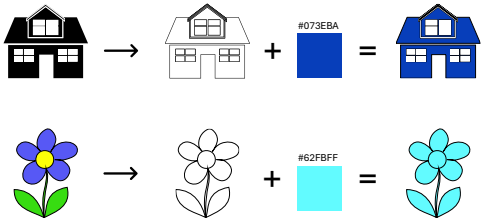
Our Design

Name the object. Name its color.

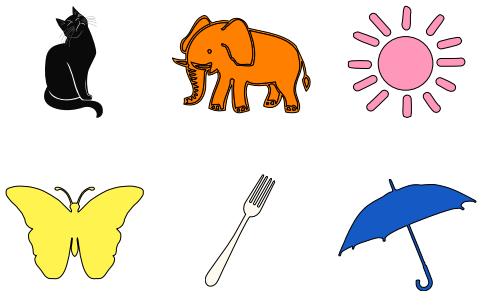
Controlled Picture Naming Task

60 images, 10 pages

spoken Russian



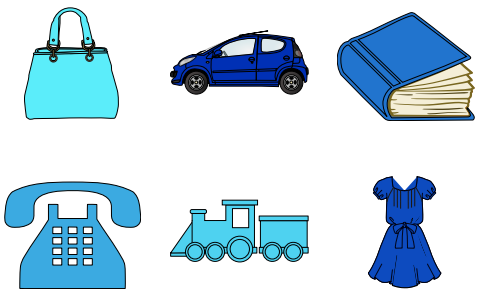
Part I: Blue Among Other Colors



Does the word appear by itself?

One blue target.
Five non-blue distractors.

Part II: Blue Among Blues



Does contrast wake up *goluboj*?

All items are blue.
The boundary becomes useful.

Participants

86
participants

20
Russian-speaking families in Germany

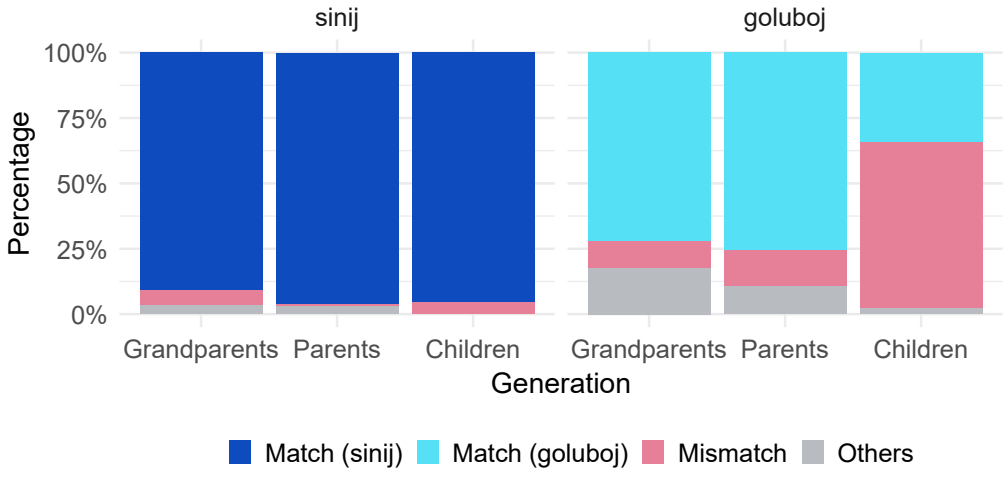
Generation	n	Mean age
Grandparents	22	68.18
Parents	35	44.66
Children	29	12.1

DFG project: Russian in Germany across Generations (RuGGe)

Research Questions

1. Do three generations differ in how they distinguish *sinij* and *goluboj*?
2. Does *goluboj* function as a secondary term, used only when finer distinctions are required?

Coding the Answers



RQ1: *sinij* Remains Stable

91–96%
expected dark-blue naming

Generation	Match
Grandparents	90.9%
Parents	96.3%
Children	95.7%

Dark blue is not the vulnerable category.

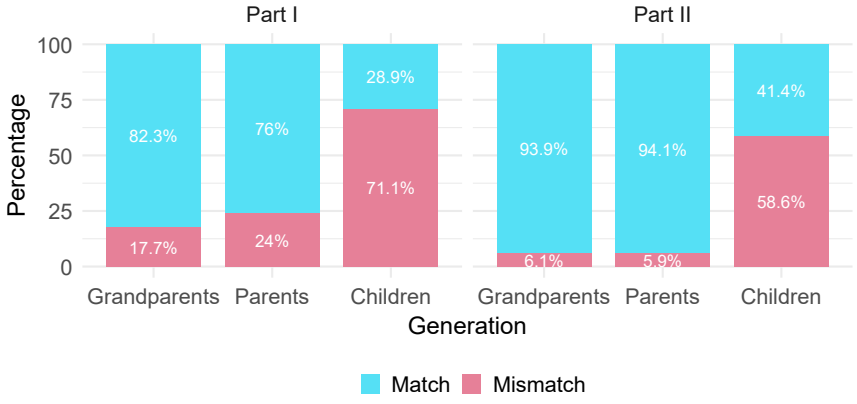
RQ1: *goluboj* Becomes Vulnerable

34.3% children's expected light-blue naming

Generation	Match	*sinij* instead
Grandparents	72.2%	10.2%
Parents	75.7%	13.6%
Children	34.3%	63.5%

Children often extend *sinij* to light-blue stimuli.

RQ2: *goluboj* Can Still Be Activated



Individual Strategies for *goluboj*

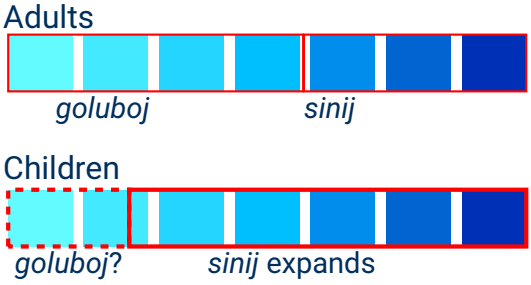
34.5% children with stable basic *goluboj*

10.3% children with secondary *goluboj*

55.2% children with no *goluboj*

The term is not simply forgotten: its functional status changes.

Schematic Interpretation



Adults mostly keep two basic categories.
In many children, the *sinij* boundary expands.

Take-Home Message

The boundary shifts before the word disappears.

Sinij remains stable.

Goluboj becomes selectively vulnerable.

Heritage language can reorganize what counts as a **basic color term**.

Grazie per l’attenzione