

SOCIAL COGNITION

The linguistic dimension of social cognition

Byurakn Ishkhanyan

Email: byurakn@cc.au.dk



WHAT DO YOU REMEMBER FROM LAST WEEK?



SCHOOL OF COMMUNICATION AND CULTURE

AARHUS UNIVERSITY

BYURAKN ISHKHANYAN
POSTDOC



TODAY

1. Linguistic diversity, how the environment affects language
2. Christensen et al. paper discussion
3. Mid-way evaluation
4. Exam paper structure/exam topics



LANGUAGE STRUCTURE THEORIES

- UG – innate and genetically determined (Chomsky and his team)
- Cognitive biases & cultural transmission (Christiansen & Chater, 2008)
- Inherent semantic relations – S and O are semantically primary (Hall et al., 2014)



LANGUAGE USE AND FORMATION

- Joint action coordination
- Communication



LANGUAGE AND THOUGHT

Linguistic relativity hypothesis

Strong: language determines thought

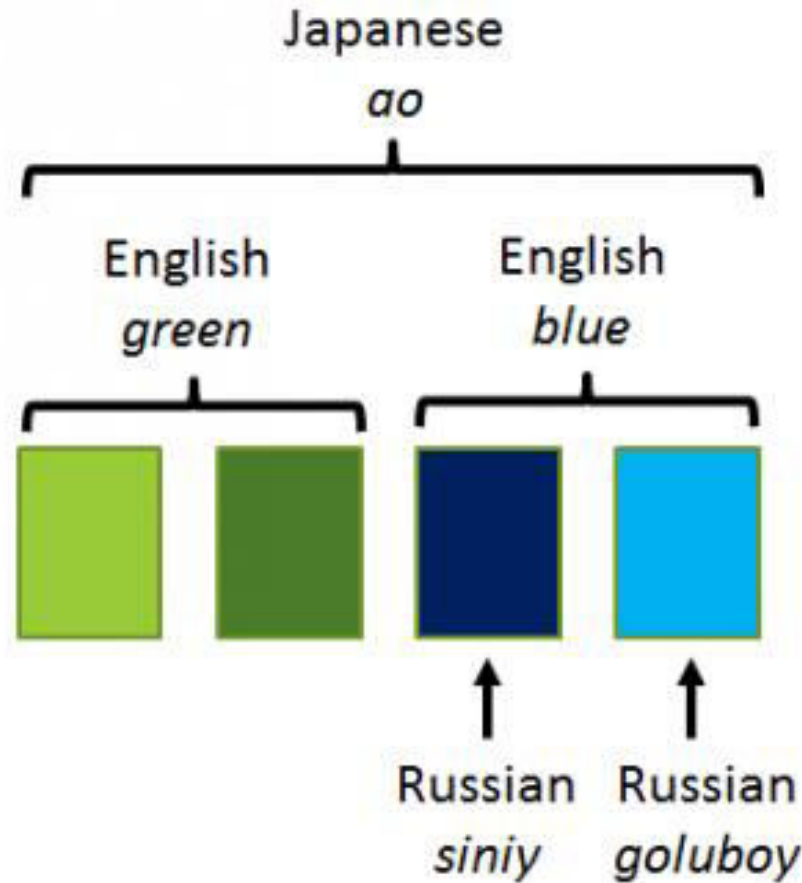
Weak: language influences thought

- language influences perception
- language influences memory (weakest)

Cognitive approach: the computational costs different languages impose on thinking



Color naming



BUT: these colors are perceived as different, despite not having different names (Berlin & Kay, 1969)

Also: regional UV light may affect color perception (Lindsey & Brown, 2002)

FRAME OF REFERENCE

- 1. Relative (egocentric)
- 2. Intrinsic (object-centered)
- 3. Absolute



Relative: The fork is to the left of the spoon
Absolute: The fork is to the north of the spoon
Intrinsic: The fork is at the nose of the spoon

TRENDS in Cognitive Sciences

Majid et al., 2004



SCHOOL OF COMMUNICATION AND CULTURE

AARHUS UNIVERSITY

BYURAKN ISHKHANYAN
POSTDOC



INTRINSIC FRAME OF REFERENCE

1. 'Parsing' objects into their major parts (front/back/left/right)
2. Project the parsed object into space from a designated facet of the object



RELATIVE FRAME OF REFERENCE

1. 'Parsing' of the self into their major parts (front/back/left/right)
2. Project the parsed self into space

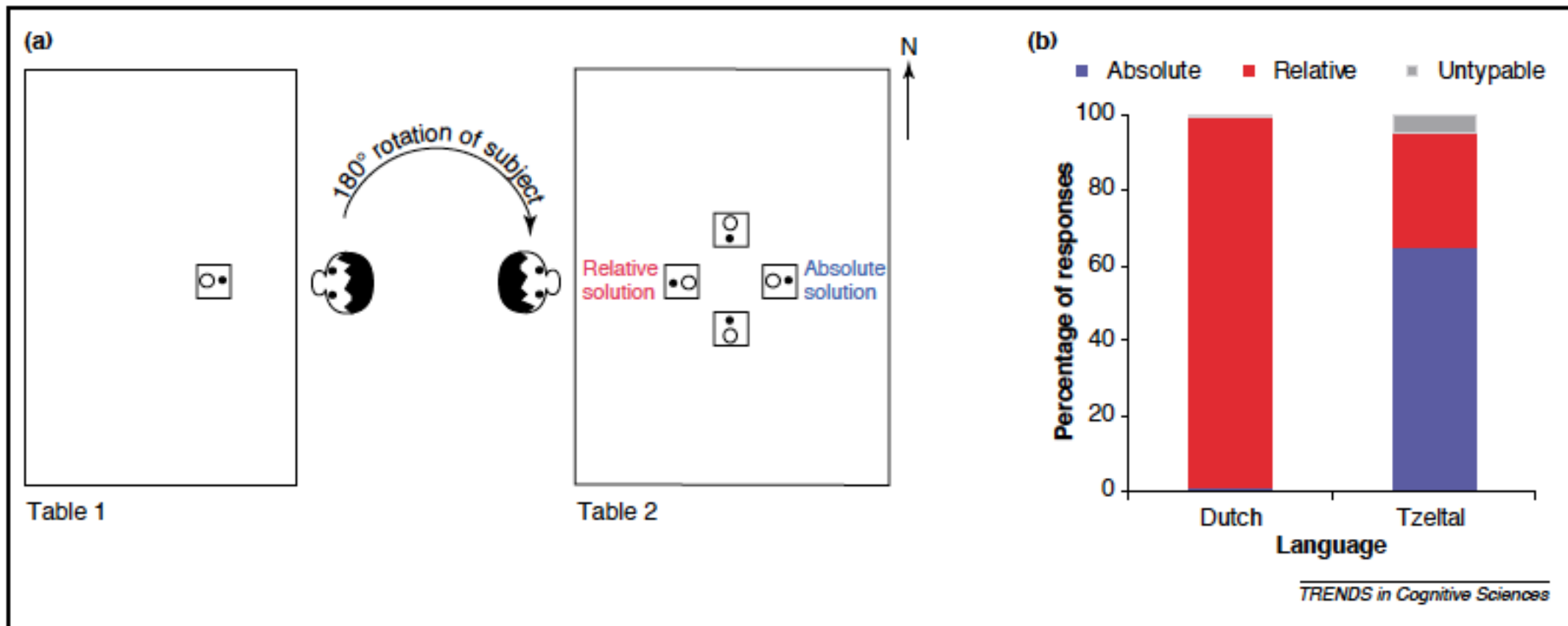
+ Sometimes from the viewer's perspective



ABSOLUTE FRAME OF REFERENCE

- Run a mental map all the time
- Computationally demanding!





IS IT REALLY THE LANGUAGE?

- Rural vs. urban societies
- Different frames of references for different actions
- Individualism vs. collectivism

...



LINGUISTIC STRUCTURE

John eats cake.

Semantically irreversible

John kisses Mary.

Semantically reversible

S V O

Ջոնը տորթ է ուտում:

John cake is eating.

S O V

Ջոնը համբուրում է Մերիին:

John kissing is Mary-DAT

S V O

Itheann Seán cáca.

Eats John cake.

V S O

WORD ORDER

- SOV and SVO languages far more common
- SOV predominant in emerging sign languages
- Inherent semantic relations (agent and patient cognitively more basic than the action)



EVIDENCE FROM GESTURES

- Intensional (“X is thinking of Y”) - SVO
 - direct objects intensional, more abstract, therefore precede the action
- Semantically reversible events – SVO
 - to disambiguate the subject and the object



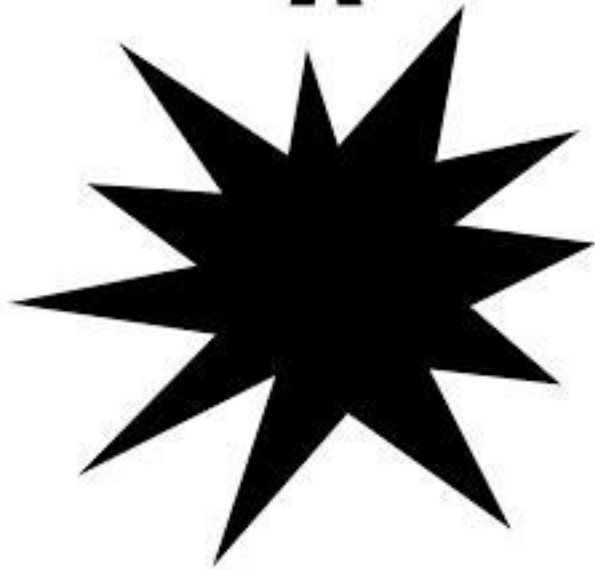
ENVIRONMENTAL AND INTERACTIONAL FACTORS

- Iconicity
- Alignment
- Conventionalization

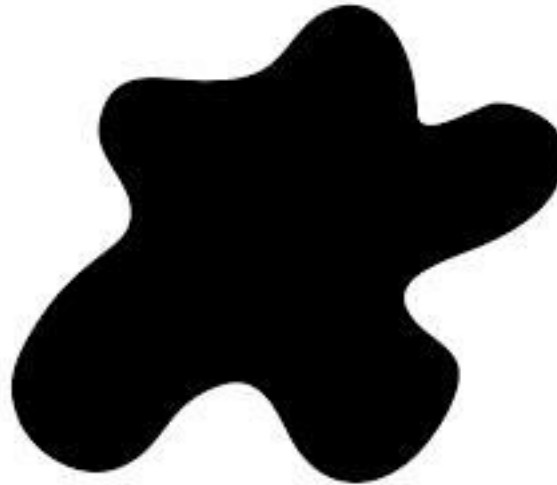


ICONICITY

A



B



Go to menti.com and name the objects
Code: 2589257



SCHOOL OF COMMUNICATION AND CULTURE

AARHUS UNIVERSITY

BYURAKN ISHKHANYAN
POSTDOC



ICONICITY

- Linguistic signs are arbitrary... but not really
- Phonetic information can help figuring out meaning
- Structural iconicity: actual sequential events
Veni, vidi, vici.



ALIGNMENT

- Speech rate
- Pitch
- Body posture
- Complexity
- Structure

...



SCHOOL OF COMMUNICATION AND CULTURE

AARHUS UNIVERSITY

BYURAKN ISHKHANYAN
POSTDOC



CONVENTIONALIZATION

- Necessary for efficient communication system
- Efficient communication system: easy to remember, produce and comprehend
 - e.g. frame of reference
- Environmental-communication interaction



DISCUSS THE EXPERIMENTS

Group 1: Exp1 – structural iconicity

“The chef ate the cake” vs. “The chef baked the cake”

Group2: Exp2 – interactive alignment

Is the word order of the interlocutor decisive?

Group 3: Exp 3 – conventionalization

Does frequency have an effect?

Discuss:

- What has been done in the experiment
- What are the main findings



MAIN FINDINGS

- Structural iconicity in all experiments
- Exp2 : small effect of interactive alignment (at the expense of structural iconicity)
- Exp3 : tendency to conventionalize (at the expense of structural iconicity)

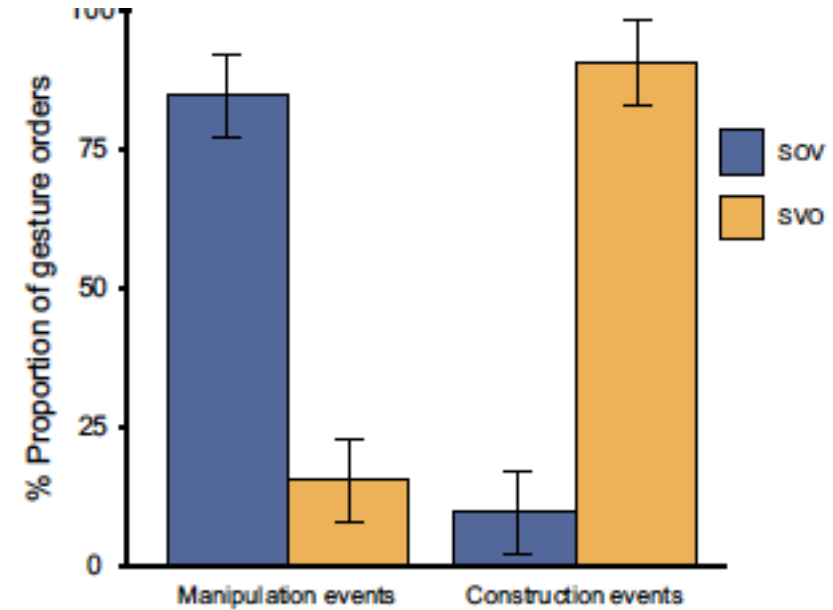


Fig. 3. Effects of structural iconicity on gesture constituent order in experiment 1. The distribution of gesture constituent orders, SOV and SVO, in response to the two types of stimulus pictures, manipulation events and construction events, respectively. Error bars represent 95% confidence intervals.

MID-WAY EVALUATION

- Appoint one or two students as your representatives
- Discuss for 5-7 minutes (Byurakn leaves the room)
 - What works well in the course?
 - What could be improved for the rest of the semester
- Have a break 😊
- The representatives orally summarize the discussion
- Potential solutions



EXAM PAPER STRUCTURE

- 10 – 13 standard pages
 - Introduction: 20 - 25%
 - Main body: 50 – 60%
 - Conclusion: 10 – 20%
-
- Toy example: the social cognitive aspects of word order development in children



INTRODUCTION

- The aim: introducing your topic and narrowing it down to your actual work
- Should show the clear connection of your topic with a topic we have discussed in the class (start defining the broad topic discussed in the class, narrow it down to your own topic)
- Start general:
 - "Language structure is a highly complex phenomenon..." (copied from Christensen et al.)
 - "Nativists claim that linguistic structure is...., whereas constructionists disagree..." (references)
- Gradually go specific:
"Social and environmental factors can determine the development of language structure..." (references)



INTRODUCTION (2)

- ...and narrow it down to your topic:
“in this paper I will discuss the social-cognitive factors that determine language structure development in young kids and what factors affect that development.”
- You might want to present the structure of the paper (not obligatory though):
“First, I will present the developmental milestones, then...”



MAIN BODY

- Your literature review (basically all the stuff you want to say)
 - More detailed introduction to the theories you are looking into
 - Evidence supporting and not supporting the theories
- You can cite and summarize experiments you have read about, cite theoretical papers and reviews, etc., etc.
- You have the freedom to structure this section as you want



CONCLUSION

- Keep it short and concise
- Summarize your paper
 - What have you found?
 - What is your general conclusion?



QUESTIONS?



SCHOOL OF COMMUNICATION AND CULTURE

AARHUS UNIVERSITY

BYURAKN ISHKHANYAN
POSTDOC

