



# Affectedness in Child Language

with a focus on experimental design

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Affectedness Workshop

Nanyang Technological University

Singapore



- › Language Acquisition / Variation
- › Methodology
- › Aspect, passives



## COST Action A33

- › PI: Uli Sauerland (ZAS, Berlin)
  - Vice-chair: Heather van der Lely (Harvard University)
- › *Crosslinguistically Robust Stages of Children's Linguistic Performance, with Applications to the Diagnosis of Specific Language Impairment*
- › 25 languages, 40+ researchers
- › 2006-2010
- › Funded by COST European Cooperation in Science and Technology
- › <http://cost.zas.gwz-berlin.de/cost/>



# Van Hout, A, Gagarina, N & Dressler W. and many others (2010)

## Co-authors & Languages

- › Basque: Marie-José Ezeizabarrena
- › Croatian: Gordana Hržica, Melita Kovačević, Jelena Kuvač, Ana Bosnic
- › Danish: Kristine Jensen-Lopez
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- › Spanish: Isabel Garcia del Réal, Yolanda Rodriguez



# Perfective and Imperfective Aspect





# Why is Aspect Interesting?

## Crosslinguistic variation

- › Parameterized
- › Form
- › Markedness
- › Grammaticalization



# Crosslinguistic Expression of Aspect

- › Germanic English
  - › Greek Modern Greek
  - › Slavic Russian, Polish, Croatian, Serbian

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  - › Romance Italian, Spanish
  - › Isolate Basque

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  - › Germanic Danish, Dutch
  - › Fin-Ugric Estonian
- Morphological aspect**
- Aspectual past tenses**
- Aspect periphrasis**
- No aspect on verb**



# Crosslinguistic Expression of Aspect

## › Morphological aspect

	Imperfective built <sup>IMP</sup> bridge	Perfective built <sup>PF</sup> bridge
Greek	ehtize mia yefira	ehtise mia yefira
Russian	stroil most	postroil most
Polish	budował most	zbudował most
Croatian	je gradio most	je sagradio most
Serbian	je gradio most	je sagradio most
English	was building	built





# Crosslinguistic Expression of Aspect

## › Aspectual tenses

	Imperfective built <sup>IMP</sup> bridge	Perfective built <sup>PF</sup> bridge
Spanish	construía un puente	construyó un puente
Italian	costruiva un ponte	ha costruito un ponte
Basque	zubia <u>egiten ari zen</u> bridge build <sup>IMP</sup> PROG was	zubia <u>egin du</u> bridge build <sup>PF</sup> has



# Crosslinguistic Expression of Aspect

## › Aspect periphrasis

### Imperfective

built<sup>IMP</sup> bridge

---

Dutch was een brug aan het bouwen  
was a bridge on the build

Danish var ved at bygge en bro  
was by to build a bridge

### Perfective

built<sup>PF</sup> bridge

---

heeft een brug gebouwd  
has built a bridge

havde bygget en bro  
had built a bridge



# Crosslinguistic Expression of Aspect

- › No verbal aspect, but object case marking

Imperfective

built bridge<sup>IMP</sup>

Perfective

built bridge<sup>PF</sup>

---

Estonian

ehitas sil-da

ehitas sil-la

built bridge<sup>PART</sup>

built bridge<sup>GEN</sup>



# RESEARCH QUESTIONS AND HYPOTHESIS



# Research questions

- › Are there universal milestones in aspect acquisition?
- › Are there language-specific effects?



# General Hypothesis

- › Reliable form-meaning relations are easy to acquire
  
- › What determines reliability?
  - More obligatoriness >> more optionality
  - Less ambiguity >> more ambiguity
    - One-one >> one-many >> many-many

Clark 1993, Slobin 1973, 1985



# METHODS



# Participants

## › 5-year-olds

- $N \approx 20$  in 12 lgs
- Total  $N=247$

## › Adults

- $N \approx 10$  in 12 lgs
- Total  $N=135$





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# Tasks & Design

› Truth value judgment

While the music was playing, ...

- › the clown built-PERF a bridge
- › the clown was building-IMP a bridge

› Elicited production

› While the music was playing, ...

	Imperfective	Perfective
Complete	yes	yes
Incomplete	yes	no

	Form
Complete	
Incomplete	

**Completion entailment**



# Materials

- › Telic VPs: Transitive V + singular count noun
- › 6 Items per condition
- › Lexical effect: Verbs from 2 aspectual classes
  - Incremental theme
    - *Build, make, draw*
  - Change of state
    - *Open, close, blow out*



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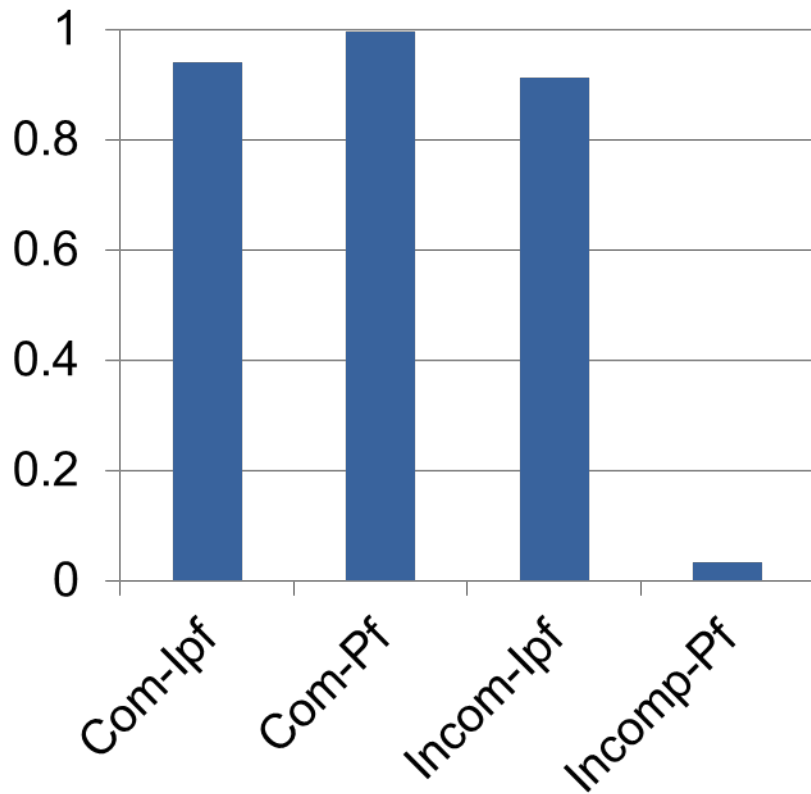


# RESULTS

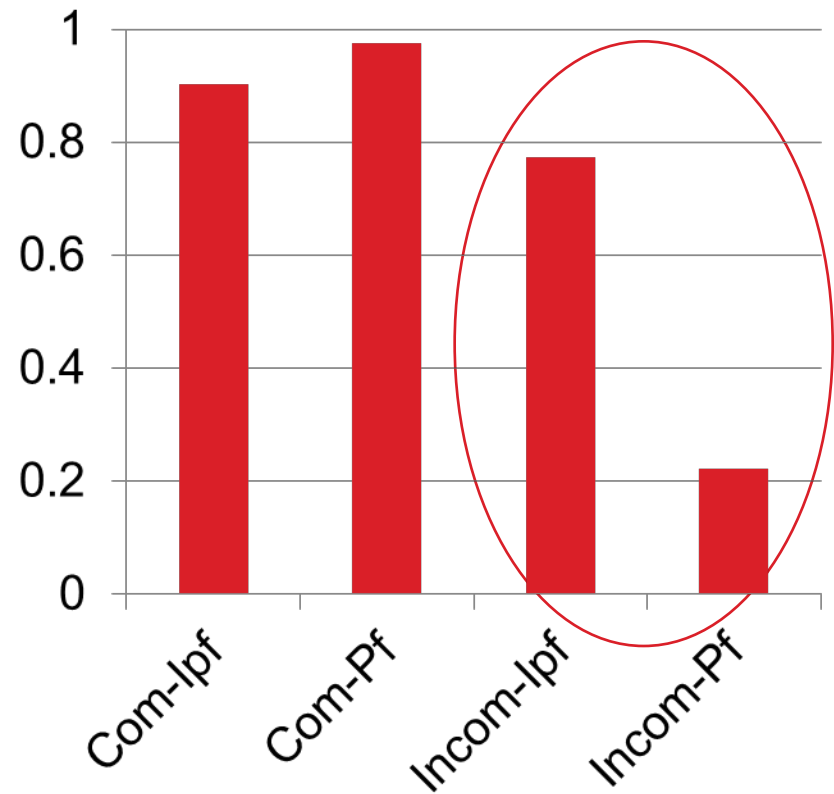


# Comprehension

## Adults



## Children



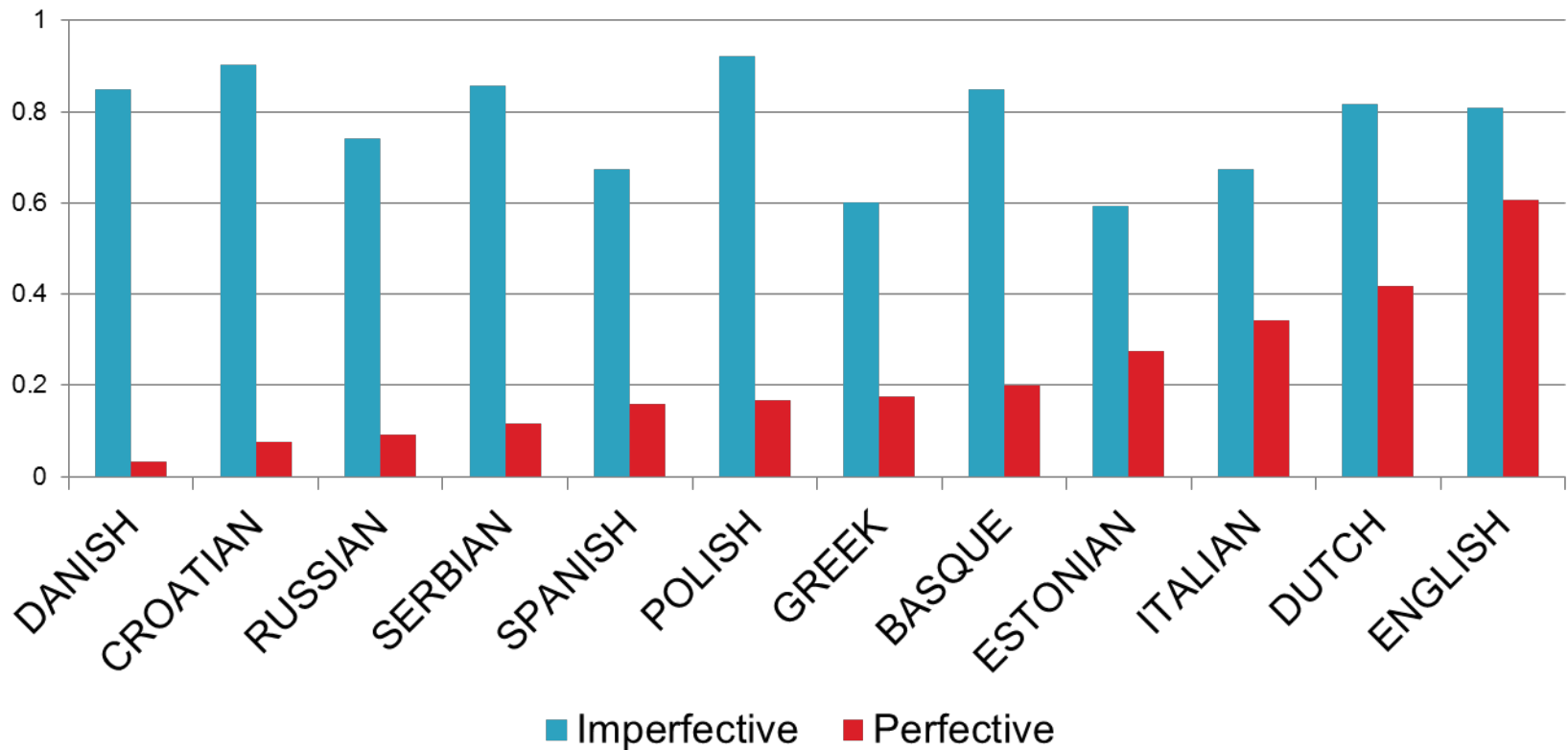
Age not significant



*Reject IMP  
 for Incomplete*

*Accept PERF  
 for Incomplete*

## Children–Incomplete: imperfective vs perfective



Aspect; Language; Aspect x Language across lgs:  $p < .001$ ; Aspect within each lg:  $p < .001$





# Lexical effects

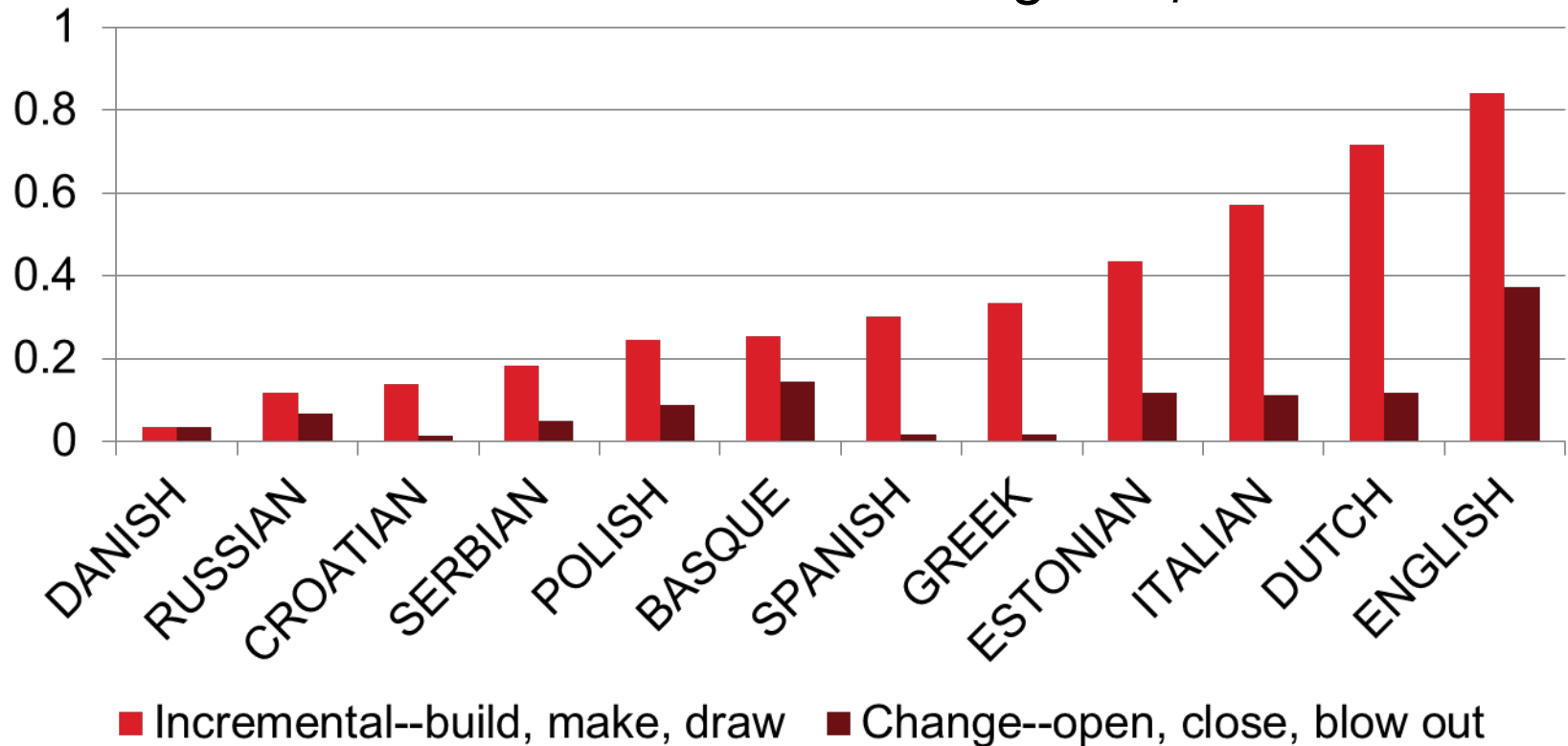
## Aspectual class plays role too

- › Change verbs -- *open, close, blow out*
  - Firm completion entailment in all lgs
- › Incremental verbs -- *build, make, draw*
  - Fewer completion entailments
  - Even for adults in some lgs
  - Crosslinguistic variation



# Children–Incomplete perfective

Incremental -- *build, make, draw* vs Change -- *open, close, blow out*

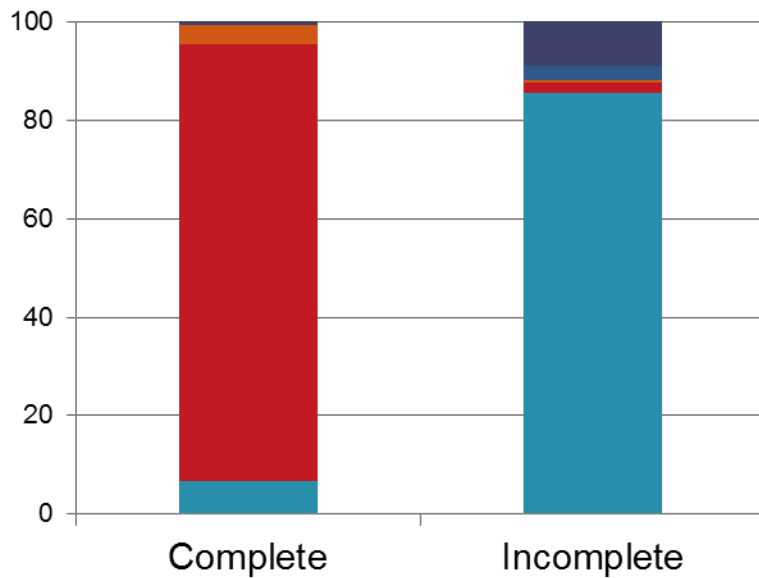


Across lgs: Language x Aspectual class x Aspect:  $p < .001$

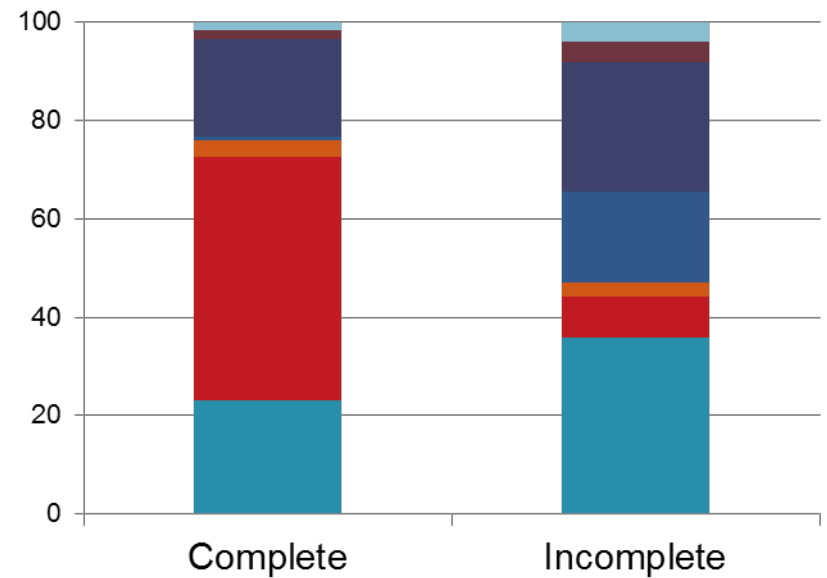


# Production

## Adults



## Children



■ 1-IMP

■ 2-PERF

■ 3-Ambiguous

■ 4-Negated PERF

■ 5-Other verb

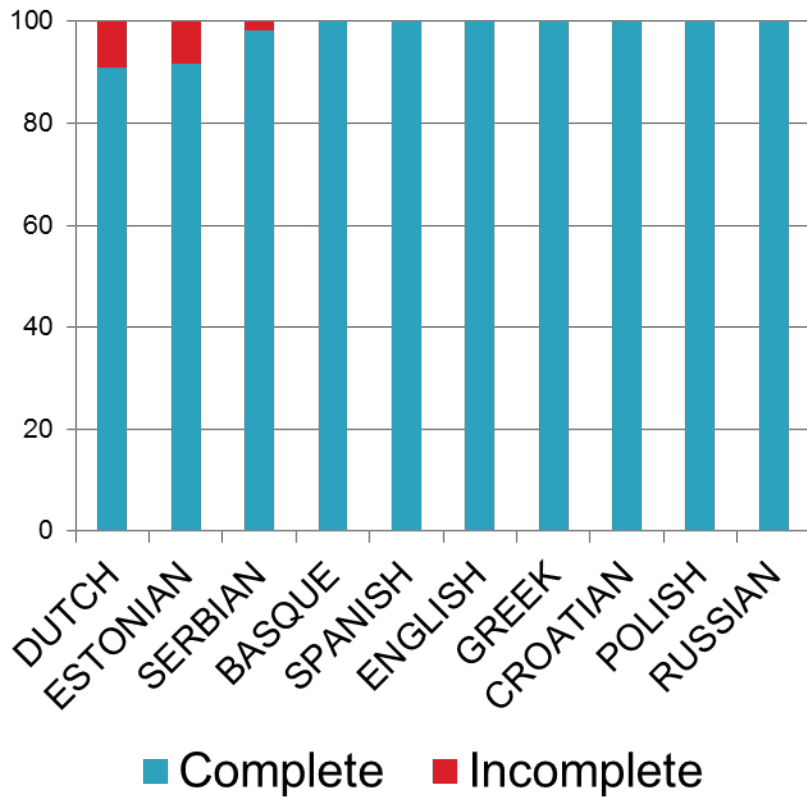
■ 6-Other

■ 7-No answer

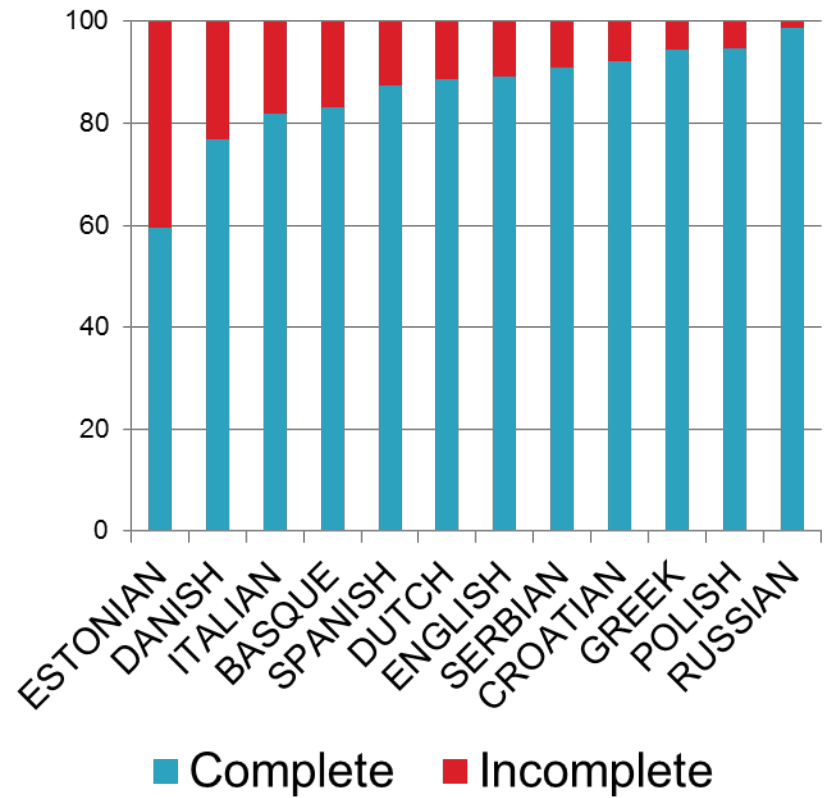


# Production PERF

## Adults



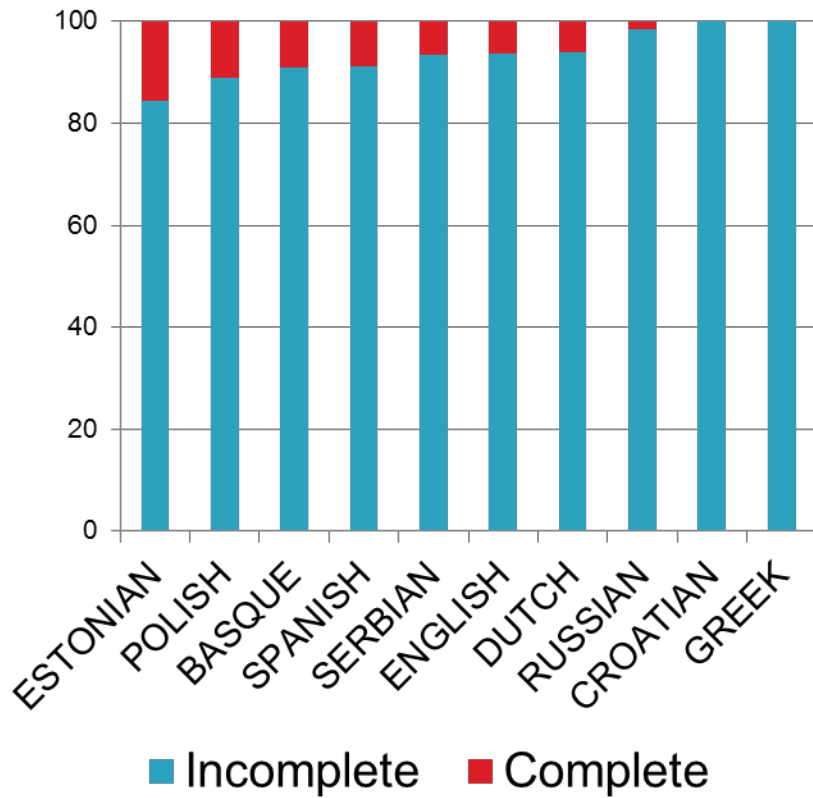
## Children



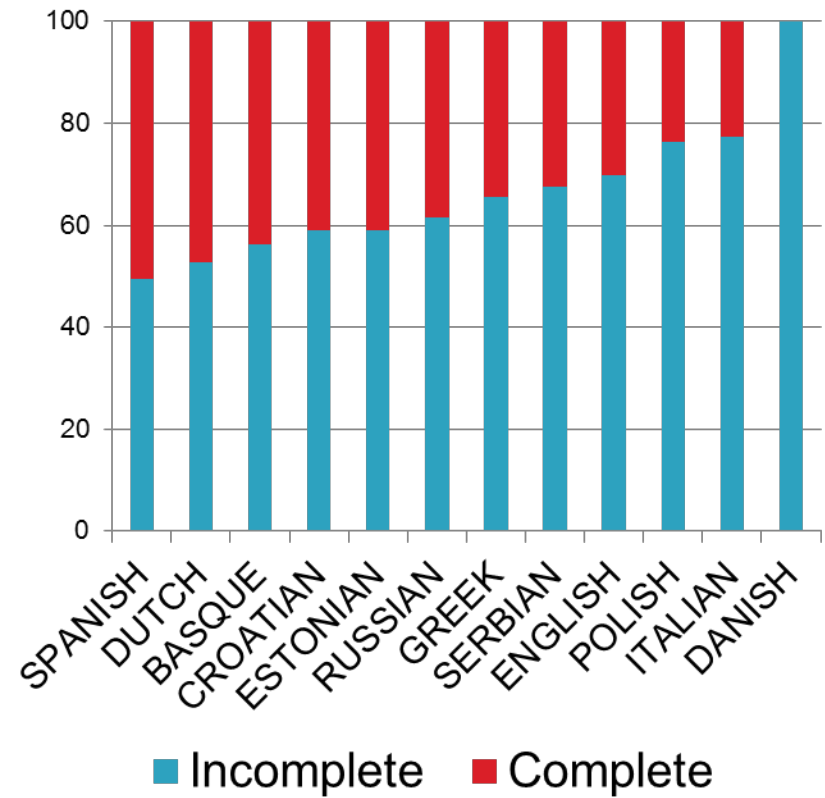


# Production IMP

## Adults



## Children





# Dutch

- › Periphrastic => Imperfective

De clown was een brug aan het bouwen.

the clown was a bridge on the build

- › Present perfect => Perfective

De clown heeft een brug gebouwd.

the clown has a bridge built.

- › Simple past => either one

De clown bouwde een brug.

the clown built a bridge



# Summarizing

- › Language variation in Indo European language acquisition
  
- › Movies for comprehension and production
  - Beavers (2013) (my modification)
    - John walked (to the cafe)
    - $\exists e \exists s \exists g [\textit{walking}'(j, s, e) \wedge \textit{result}'(s, g, e)]$



# Passives





## 11 languages (274 + 198 children)

- Catalan
- Cypriot Greek
- Danish
- Dutch
- English
- Estonian
- Finnish
- German
- Hebrew
- Lithuanian
- Polish



# Design + Materials

› Method: Picture choice

› Verbs used:

*carry, examine, comb, cover, draw, feed, hug, make-up,  
push, scratch, tickle, wash, wipe/dry.*

› Long – short passives



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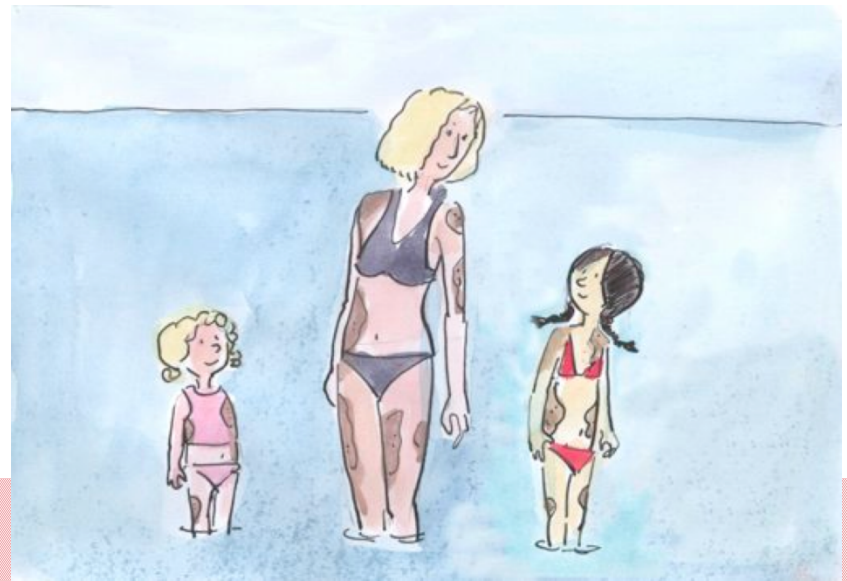
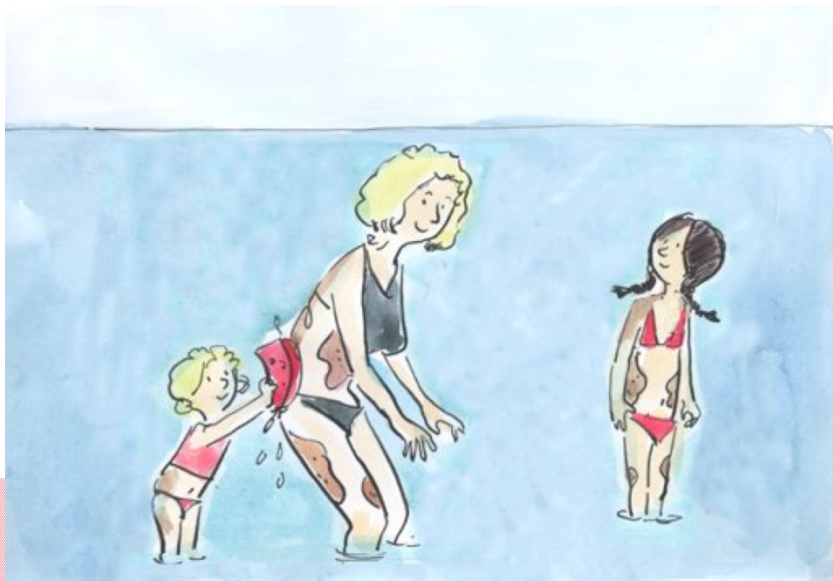
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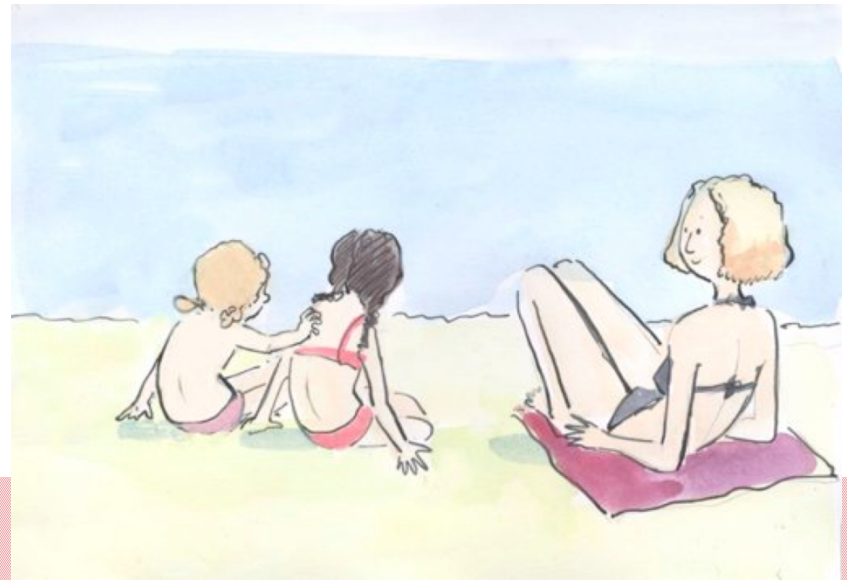
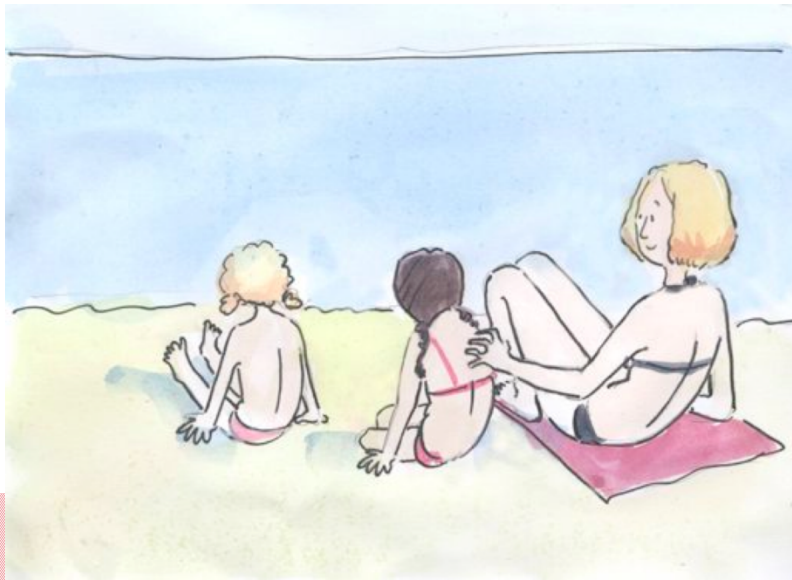
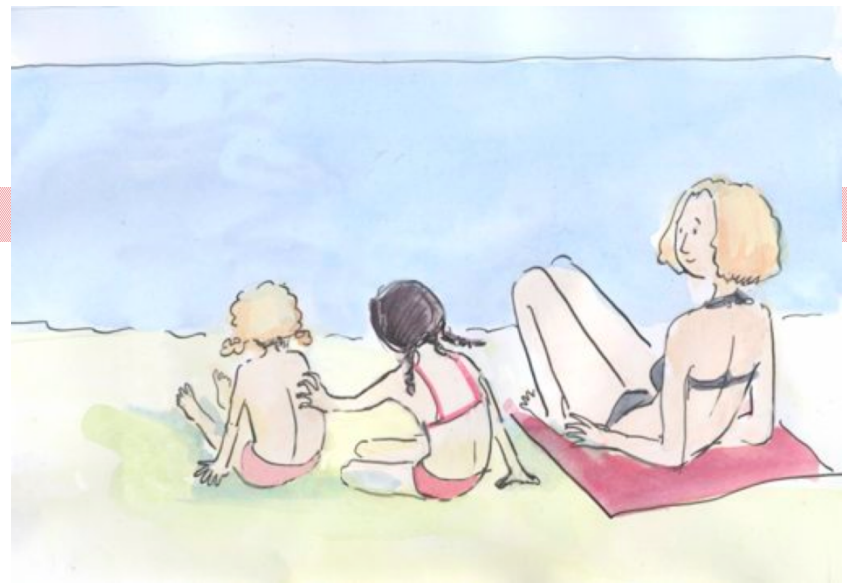
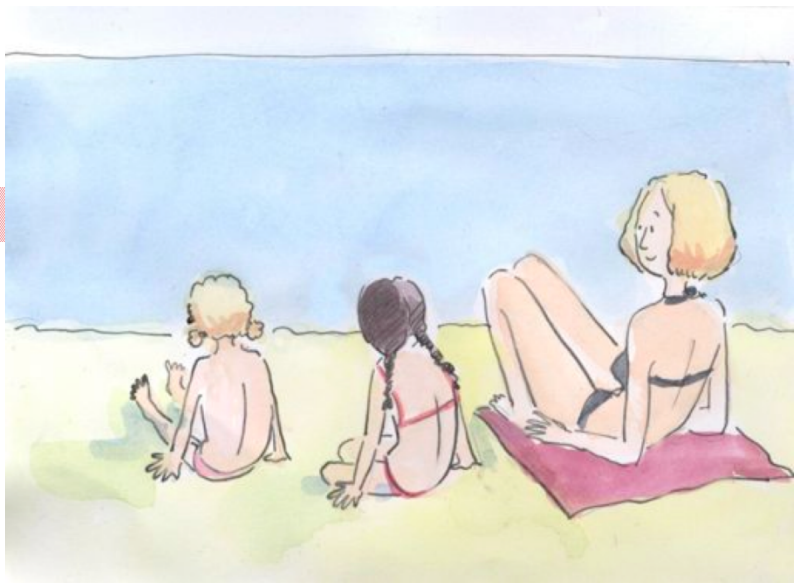




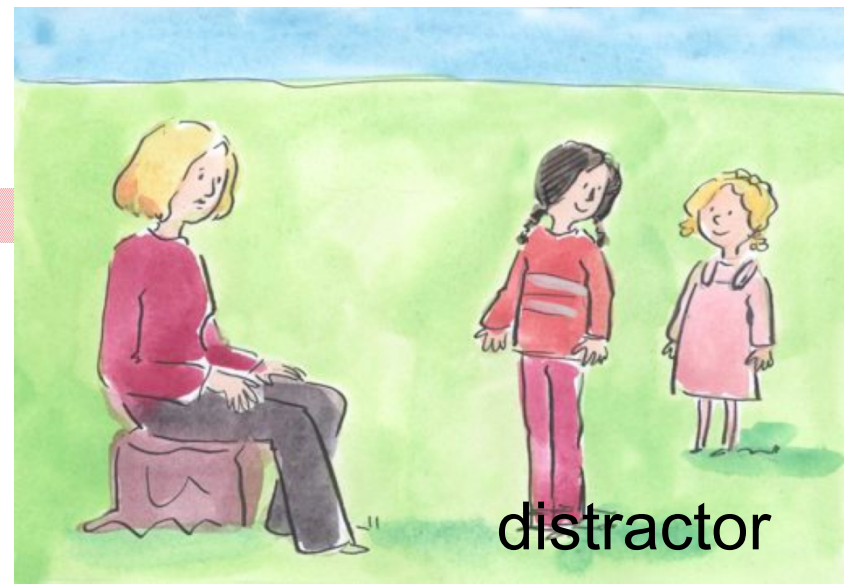




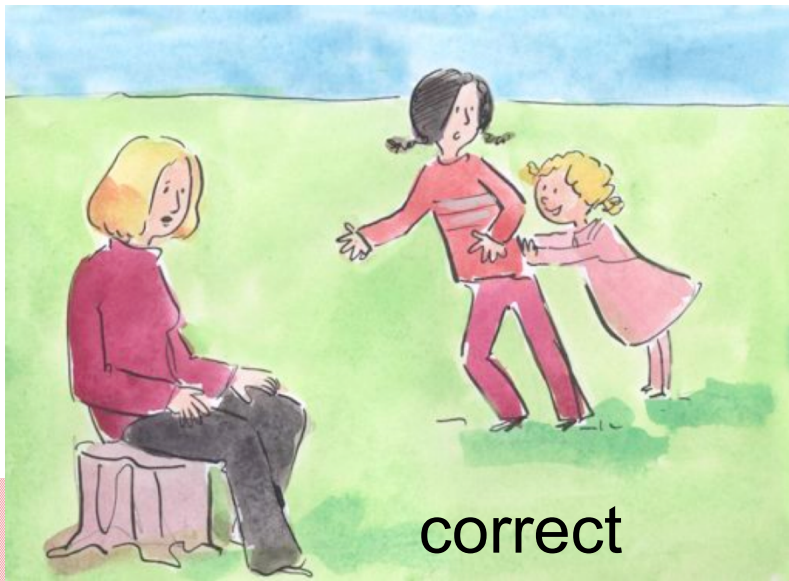








The big girl was pushed by the little girl.





# Results

- › Short earlier than long passives
- › Mistakes are reversals (to active)



**THANK YOU**