

# Language simplification in the laboratory

A behavioural experiment for  
linguistic typology

- Peeter Tinitis -

# Uniformitarian principle

- In so far as:
  - People now = people then
  - Conditions now = conditions then
- It is possible to do experiments now to investigate events in the past.

# Language simplification

- Integrating a large number of adult L2-learners to the language community can lead to language simplification (e.g. Trudgill, 2012).
- Which interactions does this emerge from?

# Artificial language learning

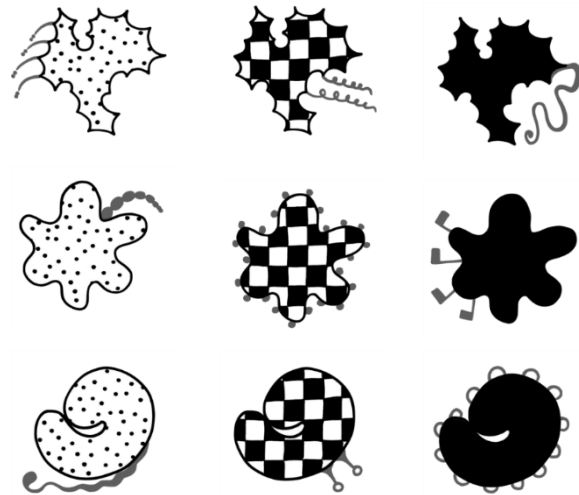
- (Typological) biases in learning or interaction
- Specially designed language
- Specially designed interactions
- Contrast different conditions

# Practical limitations

- Languages are miniature
- Communities are small (1-3 people)
- Timescales are short
- (Participants are modern)

# Miniature artificial language

- Objects (can be systematically related)
- Mapped to words (can be systematically related)



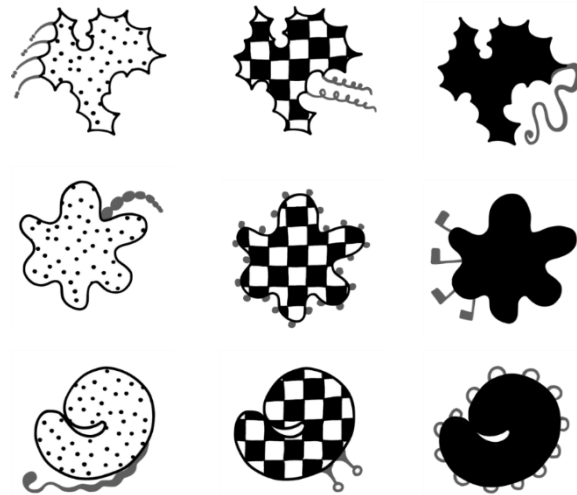
# Miniature artificial language

- Objects (can be systematically related)
- Mapped to words (can be systematically related)

TAPILI NISULI FUMALI

TAPIKU NISUKU FUMAKU

TAPIWA NISUWA FUMAWA












Example systematic expressive language










Images created for Tamariz et al. 2012

# Manipulating variables

Fully transparent  
and regular language

 <b>TAPI</b> LI	 <b>NISU</b> LI	 <b>FUMA</b> LI
 <b>TAPI</b> KU	 <b>NISU</b> KU	 <b>FUMA</b> KU
 <b>TAPI</b> WA	 <b>NISU</b> WA	 <b>FUMA</b> WA

Language with  
irregularity inserted

 <b>KINU</b> FU	 <b>NISU</b> LI	 <b>FUMA</b> LI
 <b>TAPI</b> KU	 <b>NISU</b> KU	 <b>PALISA</b>
 <b>TAPI</b> WA	 <b>NISU</b> WA	 <b>FUMA</b> WA



# Study

- Completed in Edinburgh, 2012, sup. Simon Kirby & Hannah Cornish
- Investigates „language contacts“ with two very similar languages in very small groups
- Languages are different enough to create problems in communication

# Study

## Condition 1

Minority (1 speaker)

Regular  
language

Majority (2 speakers)

Irregular  
language

Contact

## Condition 2

Minority (1 speaker)

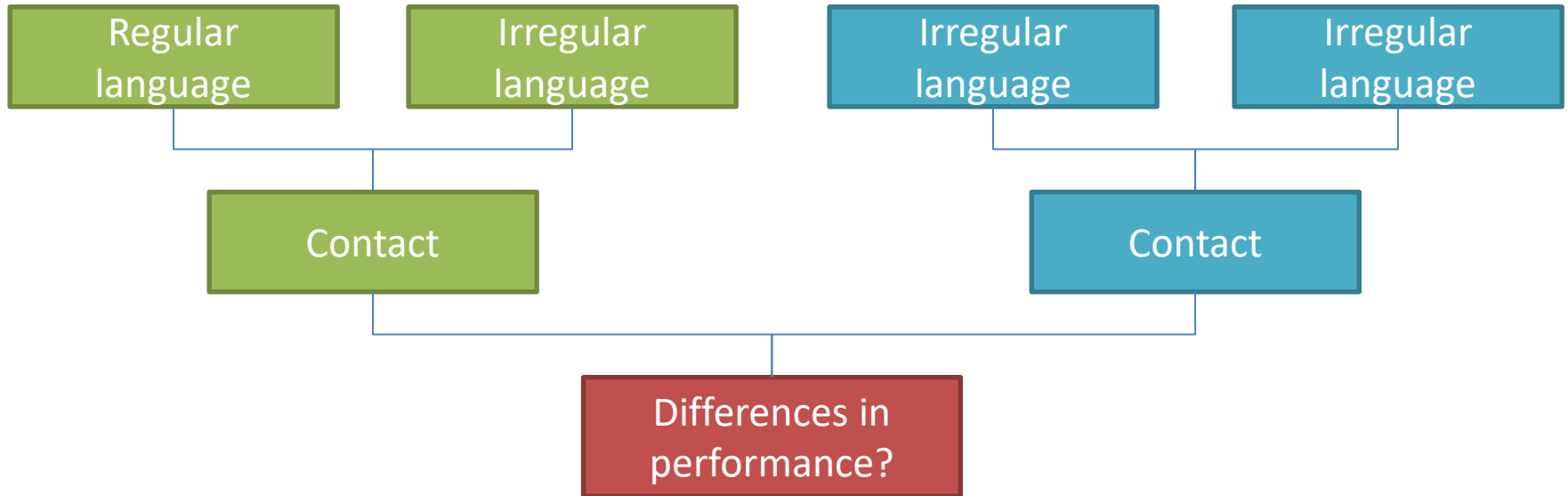
Irregular  
language

Majority (2 speakers)

Irregular  
language

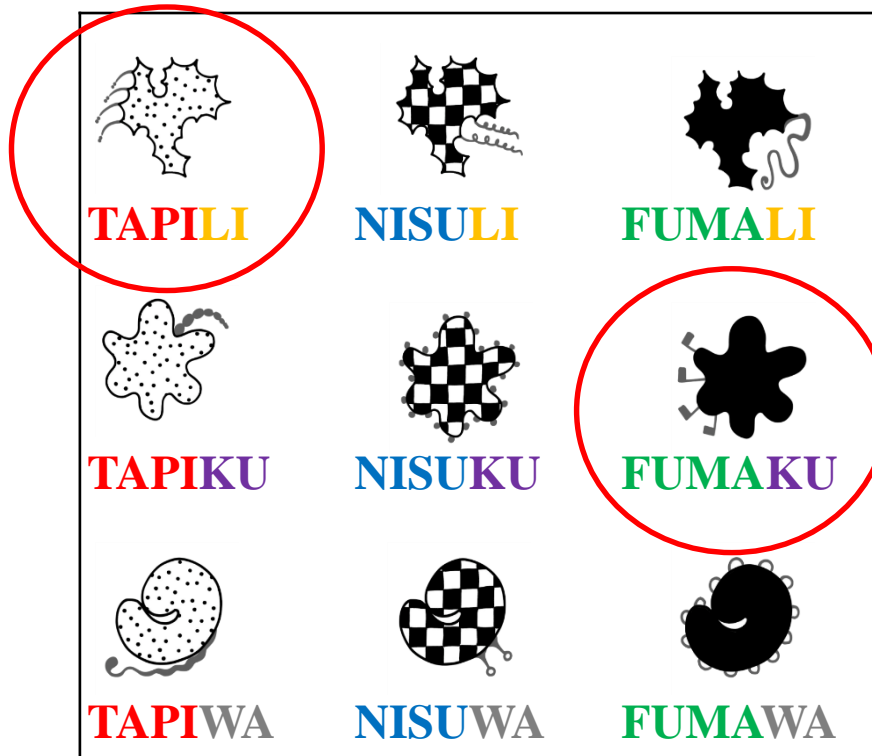
Contact

Differences in  
performance?



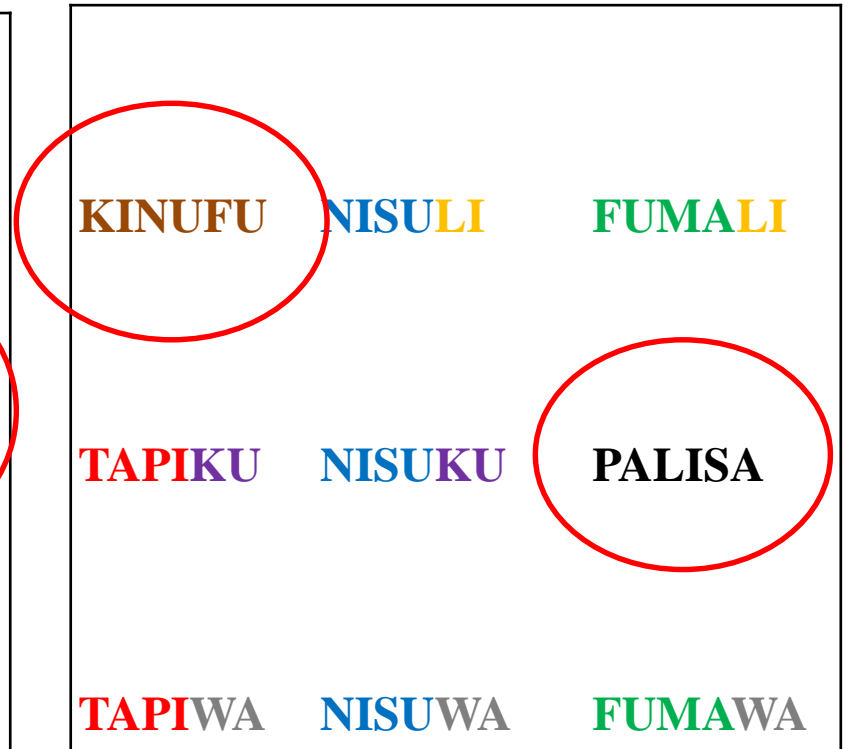
# Condition 1

Minority language (1 speaker)



Simplicity score: 4.66

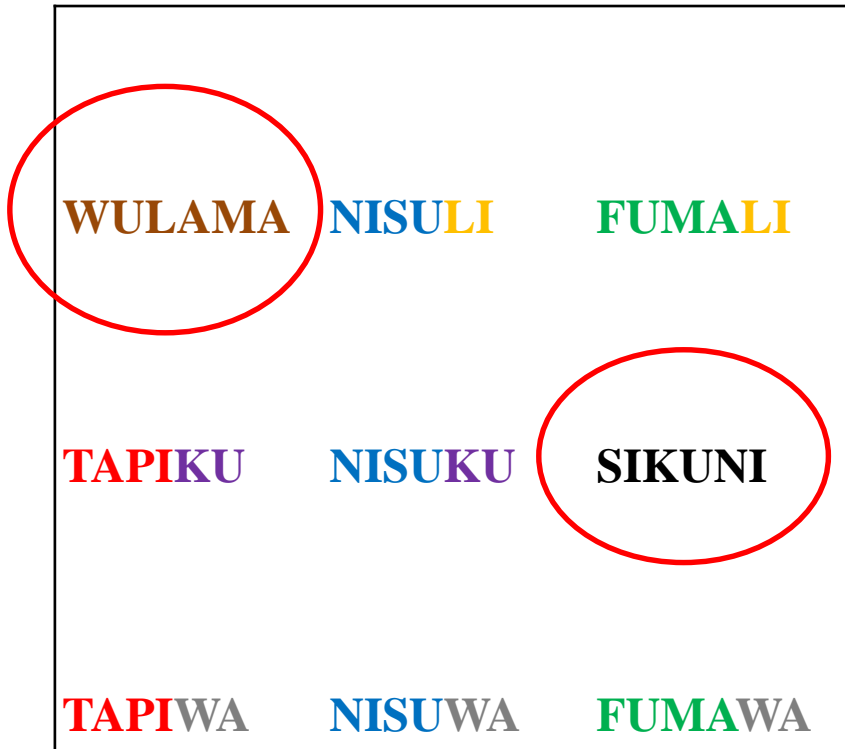
Majority language (2 speakers)



Simplicity score: 2.89

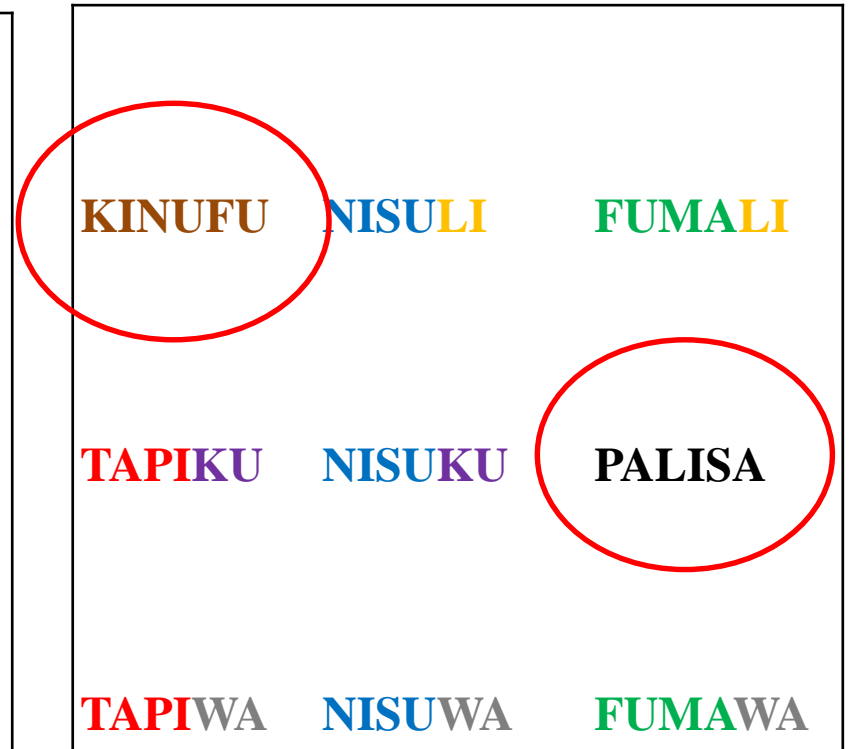
# Condition 2

Minority language (1 speaker)



Simplicity score: 2.87

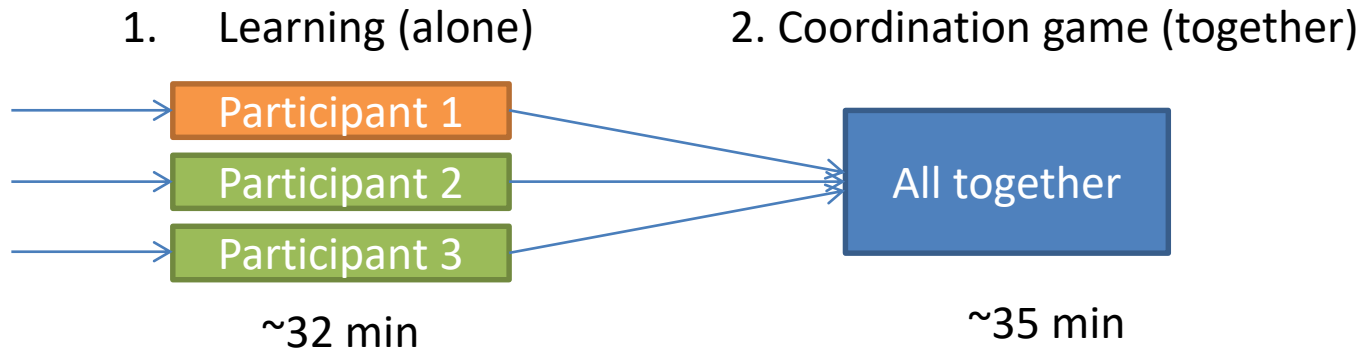
Majority language (2 speakers)



Simplicity score: 2.89

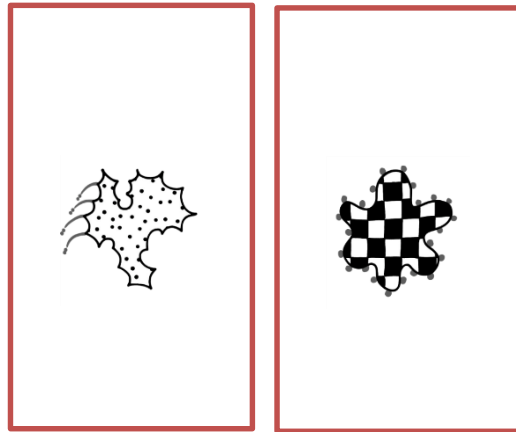
# Setup

- 1) They learn the miniature language designed for the experiment
- 2) They use it to play coordination games in trying to get co-players to pick the right card

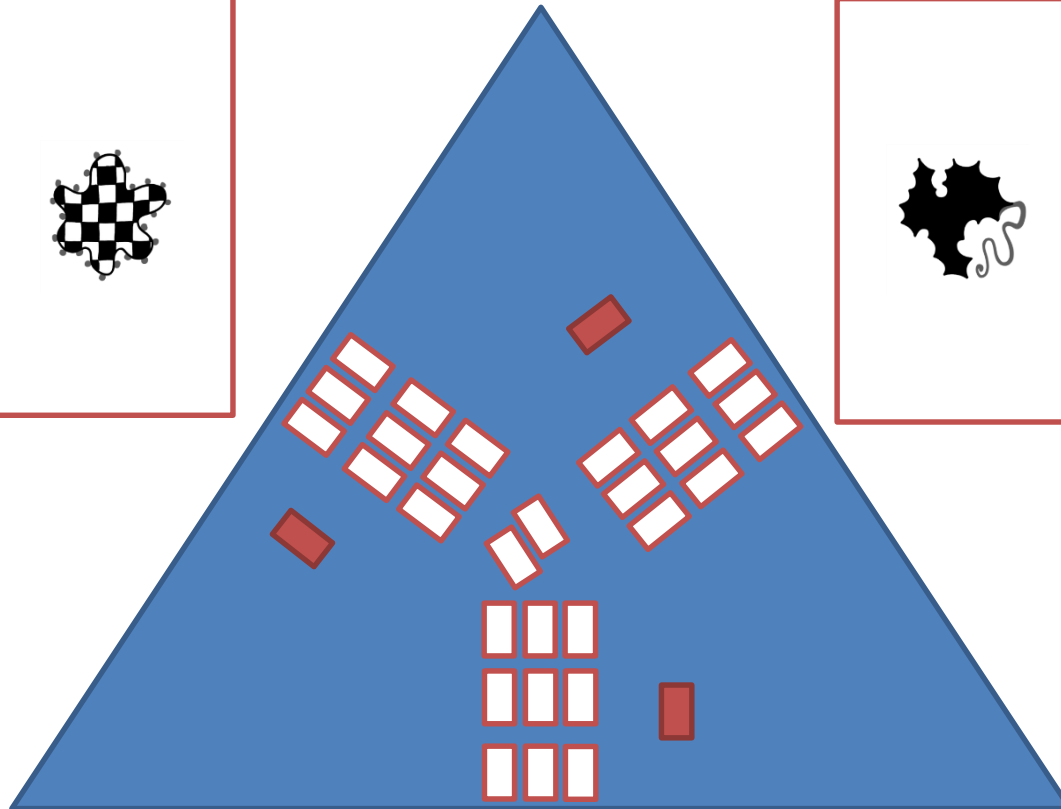
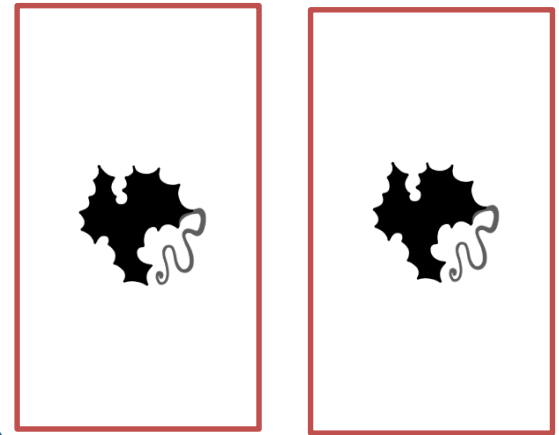


# The Game

Mismatch



Match

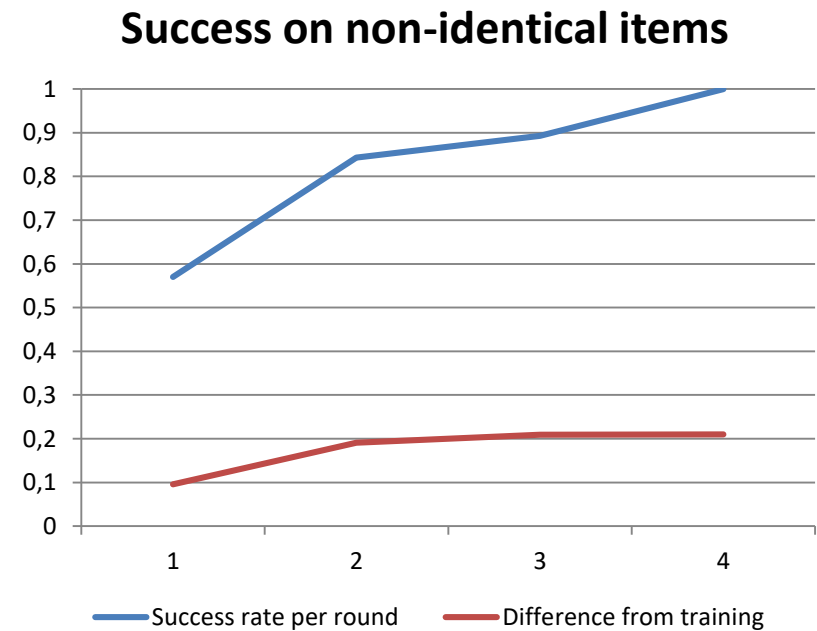
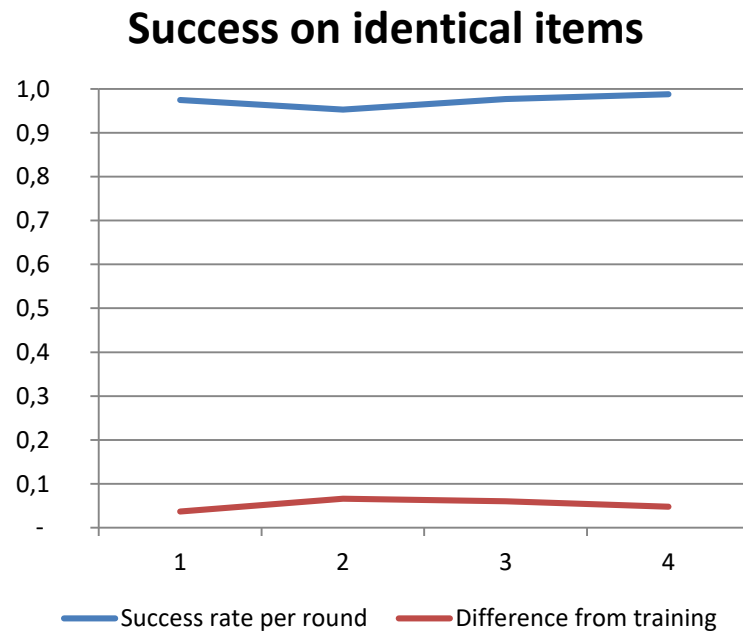


# Participants

- 18 participants (6 groups of 3 people)
  - Native English speakers
  - No impairments
  - Unfamiliar within the group
  - No linguists

# Results

- Learned to a competent level (1 outlier)
- Test items did cause problems at first



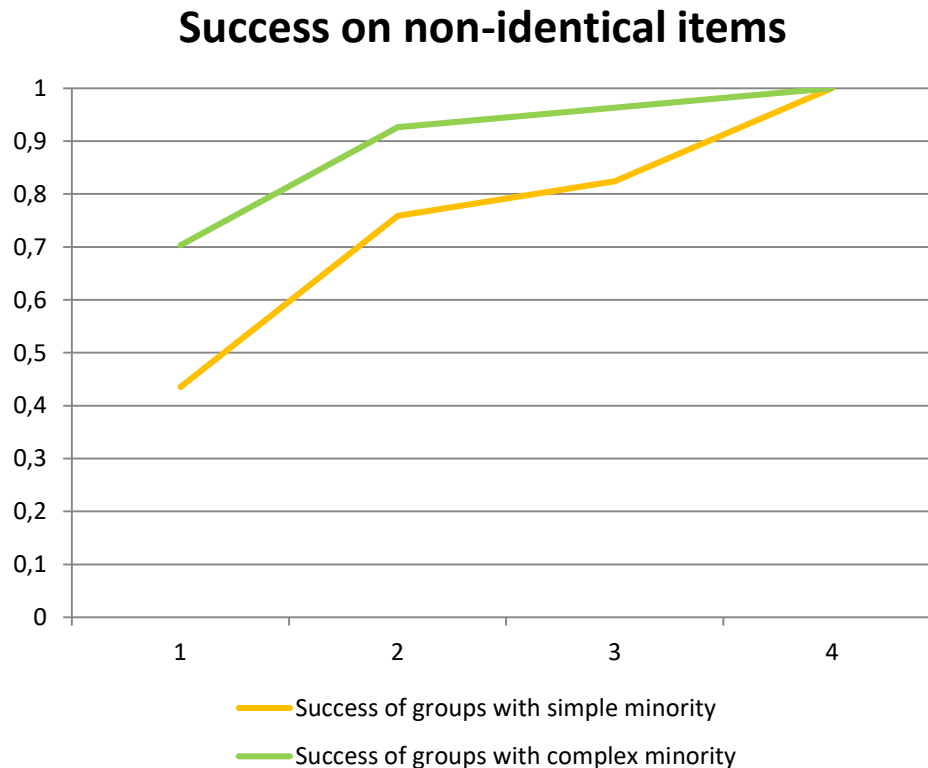


# So, how did they solve it?

- A robust trend in formulating utterances
  - Complex minority accommodated to the majority
    - Very quickly they started using only the majority variants
  - Simple minority did not accommodate
    - They reached either a mutual understanding, or for a few interactions, the majority even accommodated to the minority

# An interesting note

- The group with a simple language were slower to establish communication (= lost the game)



# Interpretation

- People may choose to use a simpler variety even when it is not strictly the quickest route?
- Thus, in a situation of language contact, even less speakers of a simplified variety may be needed for large-scale simplification to take hold?

# Conclusion

- Careful:
  - The sample in this experiment is very small – could even be pure chance!
  - It is crucial to keep investigating the comparability of these artificial settings and languages to natural ones.
- But similar methods could be useful:
  - Eventually these types of experiments could lead to more specific models within linguistic typology.