Grammatical gender acquisition in sequential trilinguals: A test of L3 acquisition models

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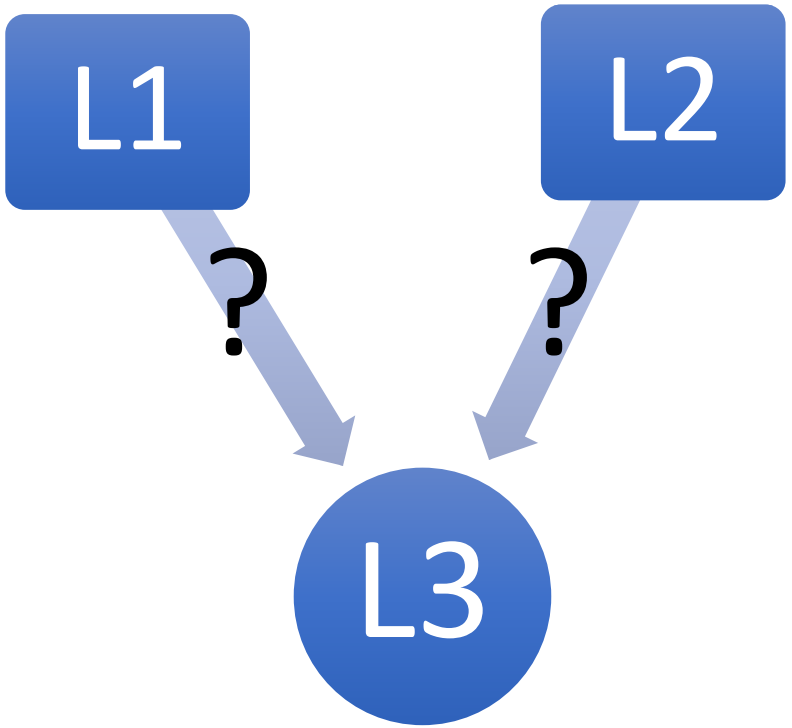
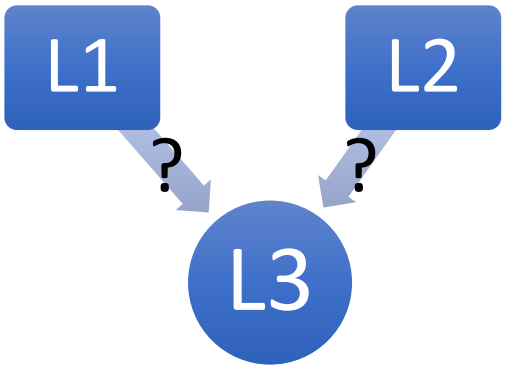
Cross Linguistic Influence

- In **L3 acquisition**, there are two potential sources of transfer.
- Which language transfers and why?



L3 Transfer Models

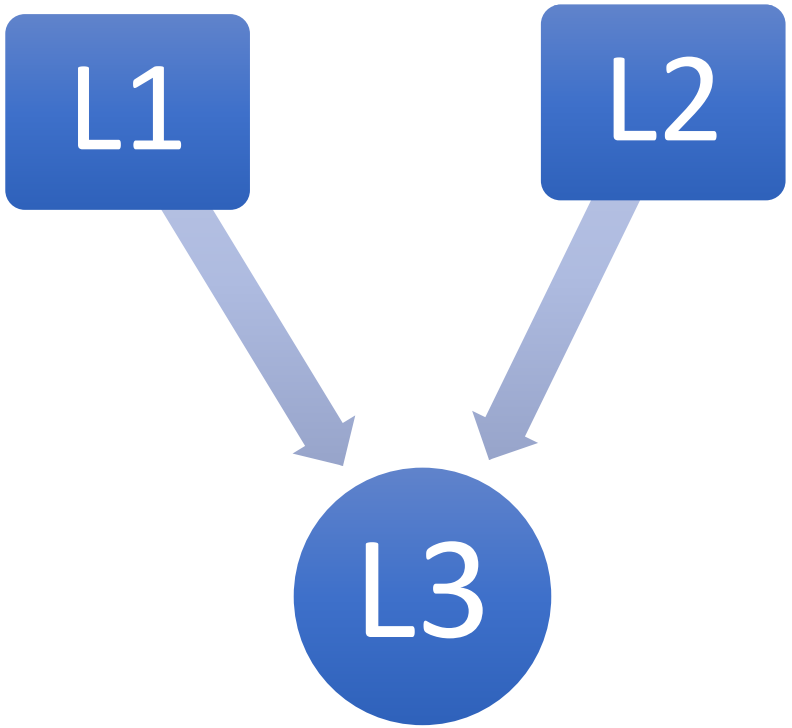
- Whole Transfer Models
  - **L2 Status Model** **(Bardel & Falk, 2007; Falk & Bardel, 2011; Falk et al., 2015)**
  - **Typological Primacy Model** **(Rothman, 2010, 2011, 2013, 2015)**
  - Language of Communication Proposal (Fallah et al. 2016)
- Partial Transfer Models
  - **Cumulative Enhancement Model** **(Flynn et al., 2004; Berkes & Flynn, 2012)**
  - Linguistic Proximity Model (Westergaard et. al 2017)
  - Scalpel Model (Slabakova, 2017)



Cumulative Enhancement Model (CEM)

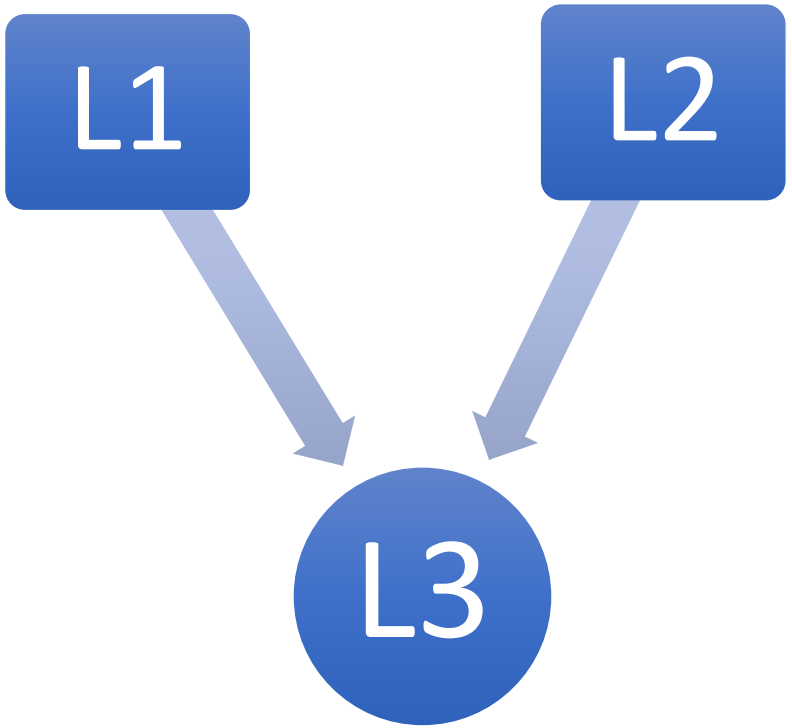
- Every language can play a role in the construction of a new grammar.

- Language learning is **cumulative**.
  - (Flynn et al., 2004; Berkes & Flynn, 2012)



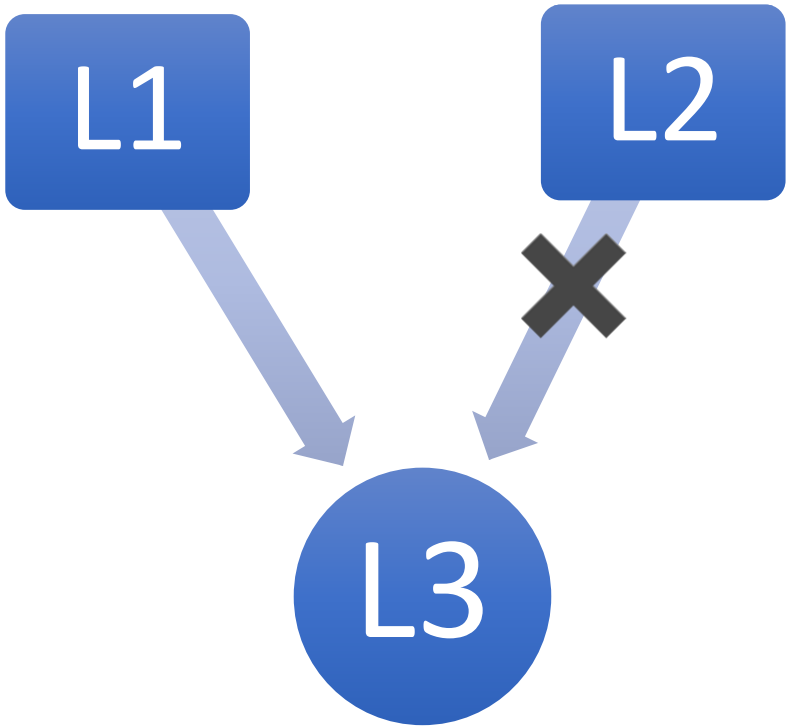
L2 Status Factor Model (L2S)

- The L2 grammar serves as the initial state for L3.
- Transfer can be facilitative or non-facilitative
  - (Bardel & Falk, 2007; Falk & Bardel, 2011; Falk et al., 2015)



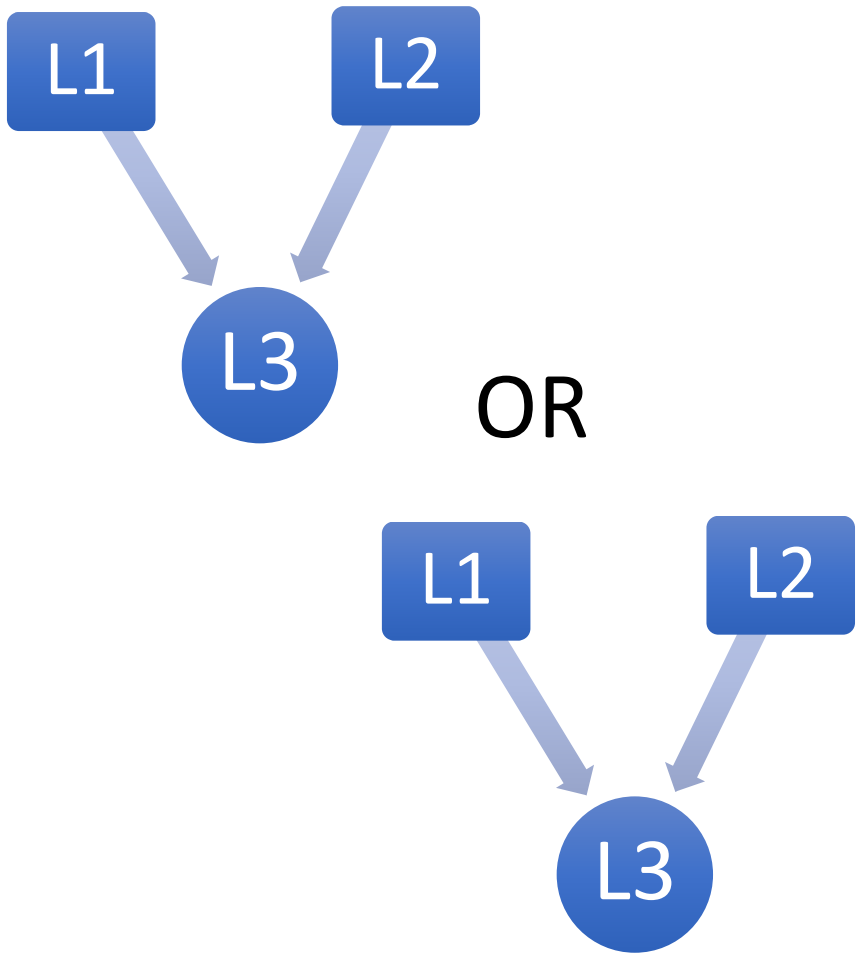
L1 Transfer (L1T)

- L1 grammar serves the initial state for new languages.
- Transfer can be facilitative or non-facilitative.
  - Hermas, A. (2010)



Typological Primacy Model (TPM)

- One language is selected based on similarities in:
  1) Lexicon
  2) Phonological/Phonetic Cues
  3) Functional Morphology
  4) Syntactic Structure
  - (Rothman, 2010, 2011, 2013, 2015)



Grammatical Gender Acquisition

- **Grammatical gender** is a system of sorting nouns into two or more classes, gender categories, or groups.

Der Mann	**Die** Frau	**Das** Mädchen
The man (M)	The woman (F)	The girl (N)

- L1 gender can transfer to beginner L2-ers (Franceschina, 2005; White et. al, 2004)
  - Even if they are typologically different langauges (Sabourin, 2001)

- L2ers without gender in their L1 are able to develop a gender system (White et al., 2004; Hawkins, 1998; Franceschina, 2004; Sagarra and Herschensohn, 2010)

- To what degree are the L1 vs L2 gender systems transferrable to L3?

Grammatical Gender Acquisition in L3

- Jaensch (2012)
  - **L1 Spanish L2 English L3 German**
  - L1 Japanese L2 English L3 German

- L1 Spanish speakers were less able to use phonological gender cues to correctly apply gender to novel nouns.

- Would L3 German grammatical gender be more accessible to speakers with L2 Spanish instead?

Predictions of L3 Models

	L1 English L2 Spanish	**L1 Spanish L2 English**
Cumulative Enhancement Model	Yes	Yes
L2 Status Factor Model	Yes	No
L1 Transfer	No	Yes
Typological Primacy Model	No	No

Participants

- All participants were sequential bilinguals who acquired their L2 as a teenager or later
- L3 German was being learned as a foreign language
- L2 proficiency was intermediate or higher based on a combination of self-reporting and scores on a LexTALE vocabulary test (Lemhöfer & Broersma, 2012; Izura et al., 2014)
- Online survey-style task

Participants

Language Background	Abbreviation	German Level	Number of Participants
L1 English L2 Spanish L3 German			
L1 Spanish L2 English L3 German			
L1 English L2 German			
Native German			

Participants

Language Background	Abbreviation	German Level	Number of Participants
L1 English **L2 Spanish** **L3 German**	**ESG**	**Beginner (Beg)**	**8**
		Advanced (Adv)	7
L1 Spanish **L2 English** **L3 German**	**SEG**	**Beginner**	**10**
		Advanced	8
L1 English **L2 German**	**EG**	**Beginner**	**9**
		Advanced	9
Native German	**NG**	Native	7

Procedure and Scoring

- German Grammaticality Judgement Task
  - Gender **Mismatch**

    Das Baum ist groß

    The$_{[N]}$ tree$_{[M]}$ is tall

- Words where grammatical gender also reflected biological gender such as Der Mann were not included

- Error questions were balanced in terms of:
  - German Gender
  - Error Type
  - Spanish Gender

Procedure and Scoring

- Lexical vs. Grammatical Gender
- Grammatical Gender Task
- Tür (*Door*$_{\text{feminine}}$)

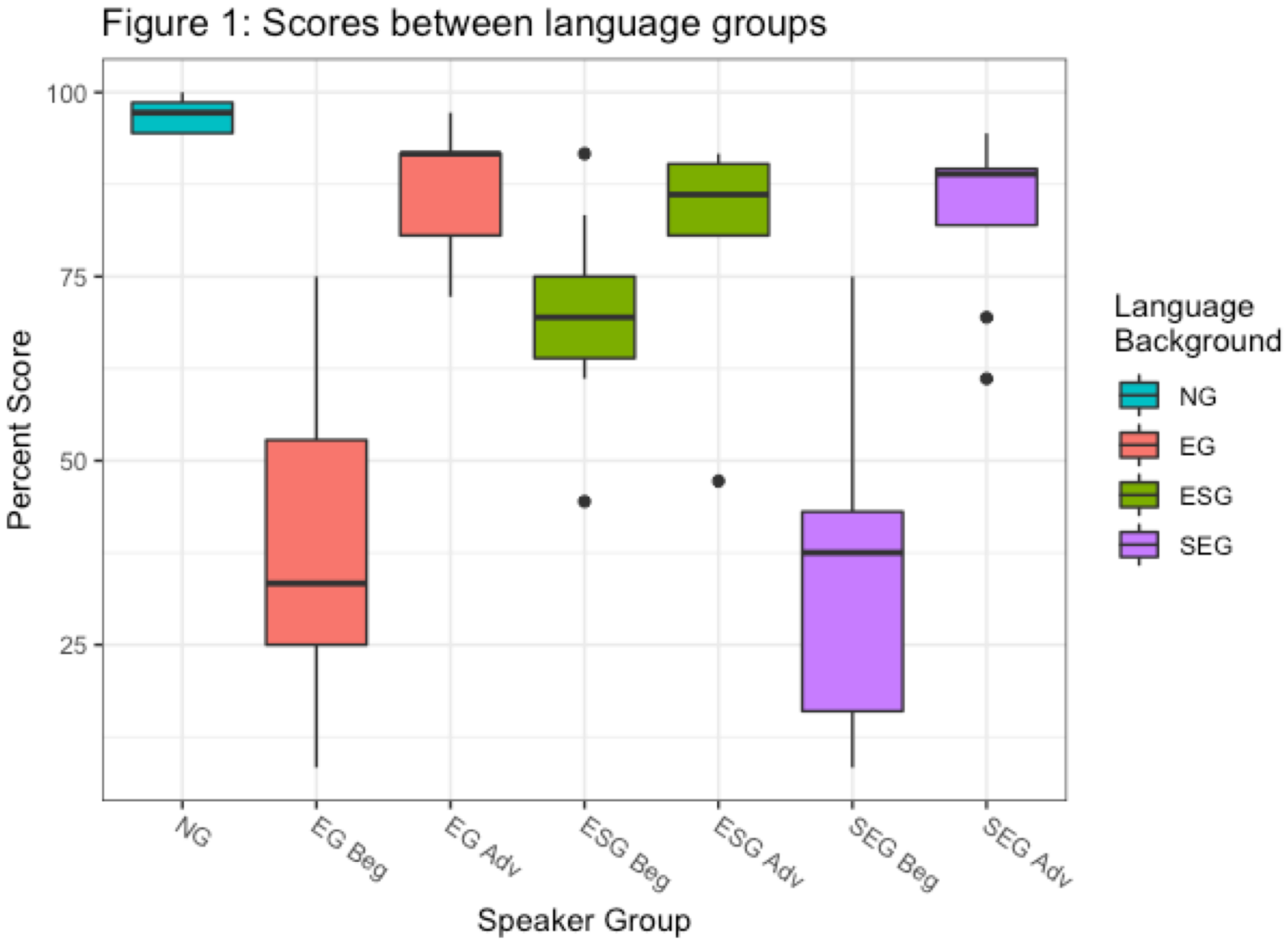
  Der$_{\text{masculine}}$ Die$_{\text{feminine}}$ Das$_{\text{neuter}}$

Procedure and Scoring

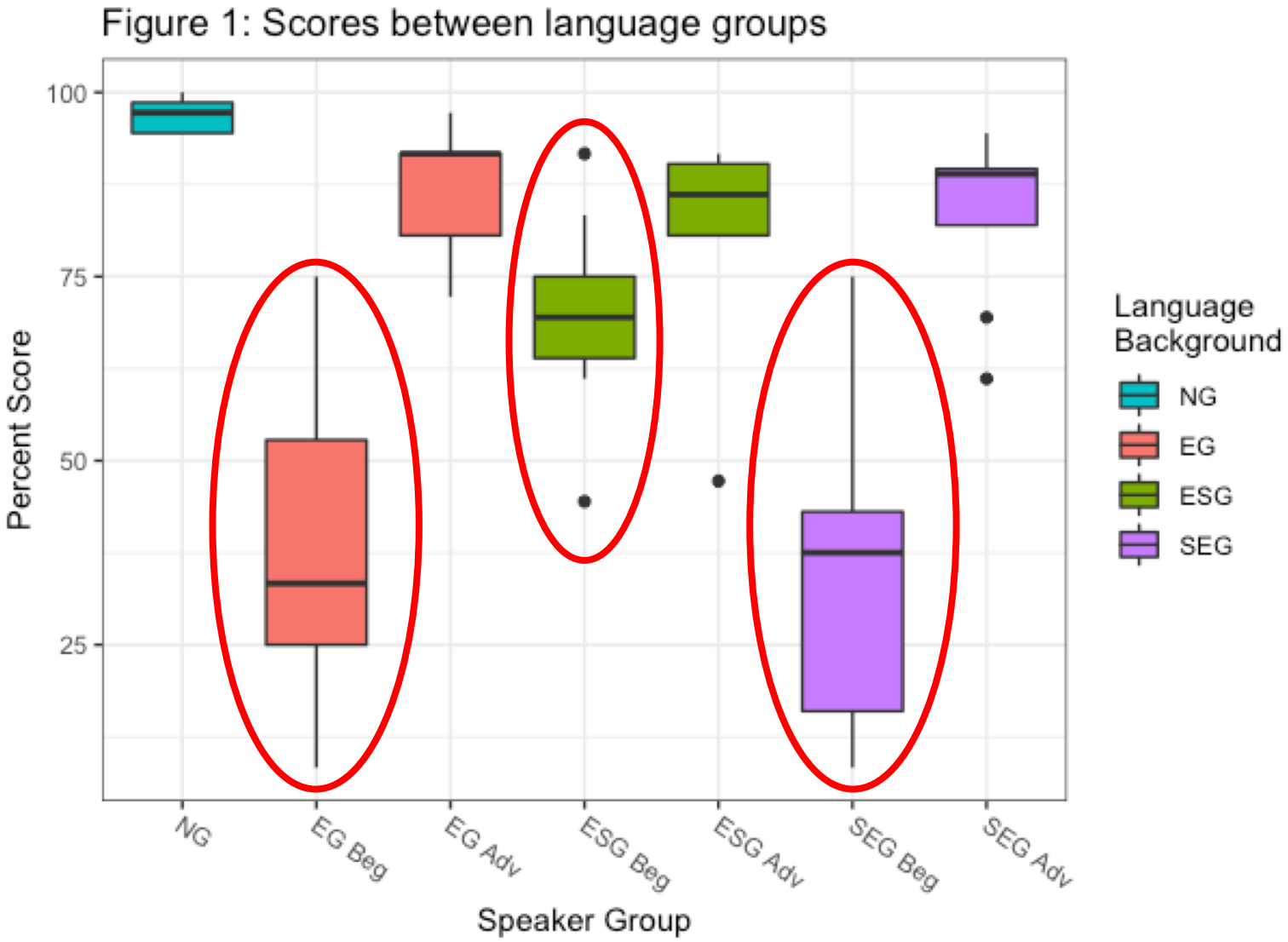
- Lexical vs. Grammatical Gender
- Grammatical Gender Task
- Tür (*Door*$_{\text{feminine}}$)

  Der$_{\text{masculine}}$ Die$_{\text{feminine}}$ Das$_{\text{neuter}}$
- Grammaticality judgement tasks were graded based on participants' **perceived** gender of individual lexical items.

Adjusted Score Results



Adjusted Score Results



Logistic Regression 1 Results

Overall Group Average = 46.91%

	Variable	Model Estimates
Intercept	EG Background	**-0.4650 *****
Language Background	ESG Background	**1.3189 *****
	SEG Background	**-0.1176**
R^2	**0.119**	

Logistic Regression 2 Results

Overall Group Average = 46.91%

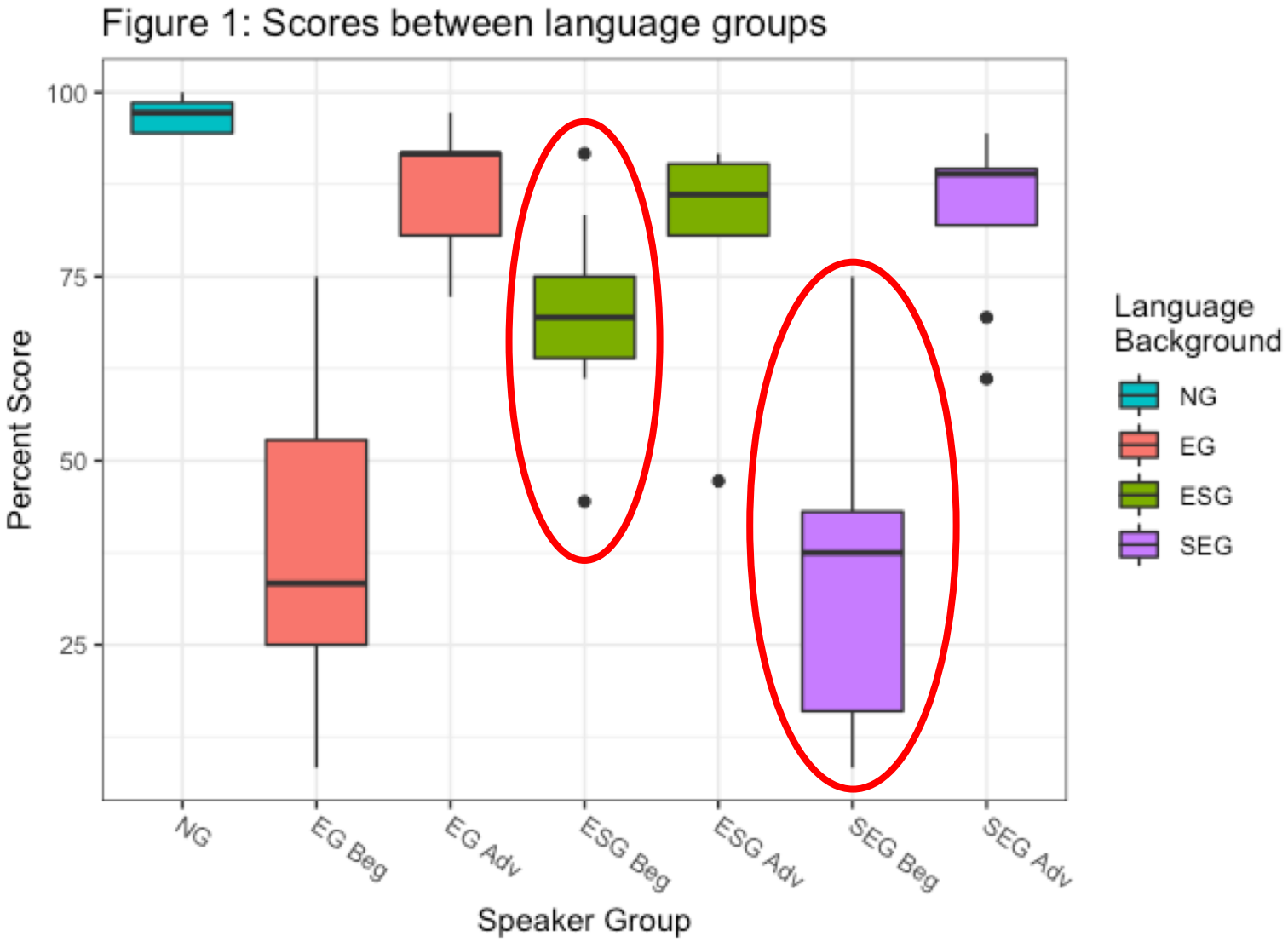
	Variable	Model Estimates
Intercept	EG Background Matching Gender	**-0.5843*** **
Language Background	ESG Background	**1.3480 *** **
	SEG Background	**-0.1202**
Spanish Gender	Opposite Gender	-0.1124
	Neuter Gender	0.4399*
Random Effects	Question	
R^2	**0.134**	

Logistic Regression 3 Results

Overall Group Average = 46.91%

	Variable	Model Estimates
Intercept	EG Background Matching Gender	**-0.6819***
Language Background	ESG Background	**1.5317****
	SEG Background	**-1.556**
Spanish Gender	Opposite Gender	-0.1296
	Neuter Gender	0.5512*
Random Effects	Question Speaker	
R^2	**0.305**	

Adjusted Score Results



Results compared with L3 Model Predictions

	L1 English L2 Spanish	L1 Spanish L2 English
Results	**Successful**	**Unsuccessful**
Cumulative Enhancement Model	Yes	Yes
L1 Transfer	No	Yes
L2 Status Factor Model	**YES**	**NO**
Typological Primacy Model	No	No

Conclusions

- Results most closely reflect the predictions of the **L2 Status Factor Model**
- These results could also reflect the more recent **Scalpel Model**(Slabakova, 2017) which also accounts for similarities in learning experience.
- Grammatical gender in L2 seems to be somehow distinct from L1 gender.
- L2 holds a special position in the initial state L3 gender.

Additional Notes

- Online data collection methods
- True beginners?
- Relatively small sample size
- Upcoming projects

Thank You!

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