

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Is More Always Better? Grammatical Gender Acquisition in a Trilingual Context.

Megan M. Brown

Boston University

Harvard LangCog
February 14th, 2023



Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Outline

- 1 Third Language (L3) Acquisition
- 2 Experiment 1: Cross-Sectional Grammaticality Judgement Task
- 3 Experiment 2: Longitudinal Gender Development

Is More
Always
Better?
Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3

Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

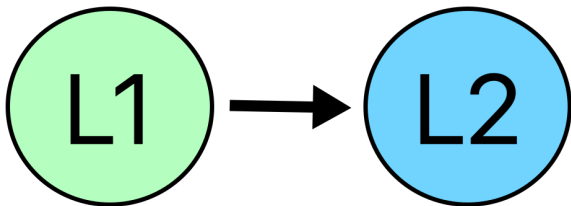
Procedures

Results

Key Findings

Experiment
2:

Cross-Linguistic Influence (CLI) in L2 Acquisition



Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3

Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

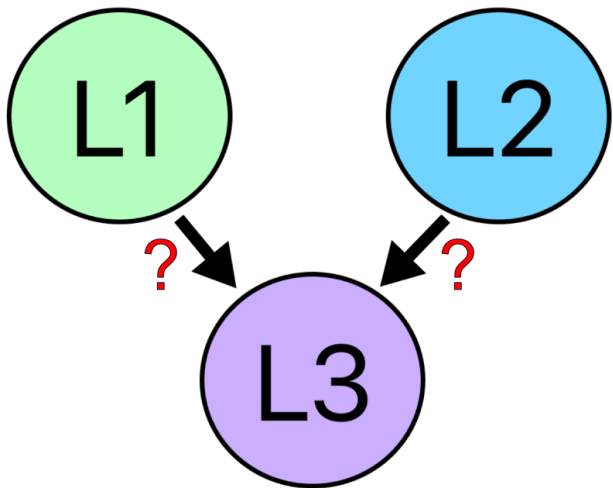
Procedures

Results

Key Findings

Experiment
2:

CLI in L3 Acquisition



Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Factors that may impact CLI

Third
Language
(L3)
Acquisition

**Theories and
Models in L3**

Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Factors that may impact CLI

- Naive vs. non-native status/Age of acquisition/Order of acquisition.
- Proficiency in all known languages.
- Linguistic similarity between languages.
- Perceived similarity between languages.
- Language dominance.
- Language status.

Third
Language
(L3)
Acquisition

**Theories and
Models in L3**

Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Theories and Models of L3 CLI and Transfer

Is More Always Better?
Grammatical Gender Acquisition in a Trilingual Context.

Megan M. Brown

Third Language (L3) Acquisition

Theories and Models in L3

Grammatical Gender

Experiment 1: Cross-Sectional Grammaticality Judgement Task

Experiment 1: Cross-Sectional Grammaticality Judgement Task

Procedures

Results

Key Findings

Experiment 2:

Theories and Models of L3 CLI and Transfer

- **Cumulative Enhancement** (Flynn et al., 2004)
- **L2 Status Factor** (Bardel & Falk, 2007)
- **L1 Transfer** (Hermas, 2010)
- **Typological Primacy** (Rothman, 2010)
- **Language of Community** (Fallah et al, 2016)
- **Linguistic Proximity** (Westergaard et al., 2017)
- **Scalpel Model** (Slabakova, 2017)
- **Top-Down Cognitive Control** (Green, 2017)
- **Full Transfer Potential** (Westergaard, 2021)
- **Grammatical Mapping** (Fernández-Berkes & Flynn, *in press*)
- **Cumulative Input Threshold Hypothesis** (Cabrelli & Iverson, *in press*)

Is More
Always
Better?
Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results
Key Findings

Experiment
2:

Theories and Models of L3 CLI and Transfer

L3 models differ in terms of:

Is More
Always
Better?
Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

**Theories and
Models in L3**

Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Theories and Models of L3 CLI and Transfer

L3 models differ in terms of:

- Initial state/stages transfer vs. longer-term development

Is More
Always
Better?
Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

**Theories and
Models in L3**

Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Theories and Models of L3 CLI and Transfer

L3 models differ in terms of:

- Initial state/stages transfer vs. longer-term development
- Wholesale vs piecemeal initial transfer

Is More
Always
Better?
Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

**Theories and
Models in L3**

Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Theories and Models of L3 CLI and Transfer

Is More Always Better?
Grammatical Gender Acquisition in a Trilingual Context.

Megan M. Brown

L3 models differ in terms of:

- Initial state/stages transfer vs. longer-term development
- Wholesale vs piecemeal initial transfer
- Role of additional factors
 - Typological similarity
 - Age/order of acquisition
 - L2/L3 proficiency
 - Language status
 - Cognitive factors

Third Language (L3) Acquisition

Theories and Models in L3

Grammatical Gender

Experiment 1: Cross-Sectional Grammaticality Judgement Task

Experiment 1: Cross-Sectional Grammaticality Judgement Task

Procedures

Results

Key Findings

Experiment 2:

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

**Theories and
Models in L3**

Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Research Questions

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3

Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Research Questions

- Does previous **grammatical gender** knowledge from the L1 and/or L2 influence L3 grammatical gender acquisition?

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3

Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Research Questions

- Does previous **grammatical gender** knowledge from the L1 and/or L2 influence L3 grammatical gender acquisition?
- Does the role/influence of previous grammatical gender knowledge change throughout the L3 acquisition process?

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3

Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Research Questions

- Does previous **grammatical gender** knowledge from the L1 and/or L2 influence L3 grammatical gender acquisition?
- Does the role/influence of previous grammatical gender knowledge change throughout the L3 acquisition process?
- How might age/order of acquisition and language similarity promote or inhibit the transfer of previous grammatical gender knowledge to the L3?

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3

**Grammatical
Gender**

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Grammatical Gender

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3

Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Grammatical Gender

German:

Der Mann	Die Frau	Das Mädchen
The man Masculine	The woman Feminine	The girl Neuter

Romance:

Spanish	El chico	La chica
French	Le garçon	La fille
Italian	Il ragazzo	La ragazza
Portuguese	O menino	A garota
English	The boy Masculine	The girl Feminine

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3

**Grammatical
Gender**

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Grammatical Gender in L2

- L1 gender can transfer to L2 (i.e. Franceschina, 2005)

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Grammatical Gender in L2

- L1 gender can transfer to L2 (i.e. Franceschina, 2005)
 - Even between more typologically distant languages (i.e. Sabourin, 2001)

Third
Language
(L3)
Acquisition

Theories and
Models in L3

**Grammatical
Gender**

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Grammatical Gender in L2

- L1 gender can transfer to L2 (i.e. Franceschina, 2005)
 - Even between more typologically distant languages (i.e. Sabourin, 2001)
- L2ers without gender in their L1 are able to develop a gender system (White et al., 2004; Sagarra and Herschensohn, 2010)

Grammatical Gender in L2

- L1 gender can transfer to L2 (i.e. Franceschina, 2005)
 - Even between more typologically distant languages (i.e. Sabourin, 2001)
- L2ers without gender in their L1 are able to develop a gender system (White et al., 2004; Sagarra and Herschensohn, 2010)
- Key differences between offline vs. online experimental grammatical gender tasks (Długosz, 2021)

Grammatical Gender in L2

- L1 gender can transfer to L2 (i.e. Franceschina, 2005)
 - Even between more typologically distant languages (i.e. Sabourin, 2001)
- L2ers without gender in their L1 are able to develop a gender system (White et al., 2004; Sagarra and Herschensohn, 2010)
- Key differences between offline vs. online experimental grammatical gender tasks (Długosz, 2021)
- **How do L1 vs L2 gender systems influence L3 gender development?**
 - At the onset of L3 acquisition
 - At later points in the development process

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Experiment 1: Brown (2020a)

Experiment 1: Brown (2020a)

- Online survey and grammaticality judgement task via Qualtrics
- Sequential Spanish/English bilinguals
- “Beginner” German learners
 - <1 year (two semesters) L3 German instruction

Experiment 1: Brown (2020a)

- Online survey and grammaticality judgement task via Qualtrics
- Sequential Spanish/English bilinguals
- “Beginner” German learners
 - <1 year (two semesters) L3 German instruction
- Intermediate or higher L2 proficiency

Experiment 1: Brown (2020a)

- Online survey and grammaticality judgement task via Qualtrics
- Sequential Spanish/English bilinguals
- “Beginner” German learners
 - <1 year (two semesters) L3 German instruction
- Intermediate or higher L2 proficiency

Language Background	Number of Participants
L1 English L2 Spanish L3 German	11
L1 Spanish L2 English L3 German	10
L1 English L2 German	11

German Grammaticality Judgement Task

Is More Always Better?
Grammatical Gender Acquisition in a Trilingual Context.

Megan M. Brown

Third Language (L3) Acquisition

Theories and Models in L3 Grammatical Gender

Experiment 1: Cross-Sectional Grammaticality Judgement Task

Experiment 1: Cross-Sectional Grammaticality Judgement Task

Procedures

Results

Key Findings

Experiment 2:

German Grammaticality Judgement Task

Gender Mismatch

*Das Baum ist groß
The_[N] tree_[M] is tall

Is More
Always
Better?
Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

German Grammaticality Judgement Task

Gender Mismatch

*Das Baum ist groß
The_[N] tree_[M] is tall

Words reflecting biological gender were not included

Is More
Always
Better?
Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results
Key Findings

Experiment
2:

German Grammaticality Judgement Task

Gender Mismatch

*Das Baum ist groß
The_[N] tree_[M] is tall

Words reflecting biological gender were not included

Error questions were balanced in terms of:

Is More Always Better?
Grammatical Gender Acquisition in a Trilingual Context.

Megan M. Brown

Third Language (L3) Acquisition

Theories and Models in L3 Grammatical Gender

Experiment 1: Cross-Sectional Grammaticality Judgement Task

Experiment 1: Cross-Sectional Grammaticality Judgement Task

Procedures
Results
Key Findings

Experiment 2:

German Grammaticality Judgement Task

Task

Gender Mismatch

*Das Baum ist groß
The_[N] tree_[M] is tall

Words reflecting biological gender were not included

Error questions were balanced in terms of:

German Gender

Error Direction (M → F, M → N ect.)

Spanish Gender

Is More
Always
Better?
Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures
Results
Key Findings

Experiment
2:

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Scoring

Gender Assignment vs. Gender Concord

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Scoring

Gender Assignment vs. Gender Concord

Grammatical Gender Task

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Scoring

Gender Assignment vs. Gender Concord

Grammatical Gender Task

Tür (Door_F)

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Scoring

Gender Assignment vs. Gender Concord

Grammatical Gender Task

Tür (Door_F)

Der_M

Die_F

Das_N

Gender Assignment vs. Gender Concord

Grammatical Gender Task

Tür (Door_F)

Der_M

Die_F

Das_N

Grammaticality judgment tasks were graded based on participants' perceived gender of individual lexical items.

Experiment 1: Scoring

Gender Assignment vs. Gender Concord

Grammatical Gender Task

Tür (Door_F)

Der_M

Die_F

Das_N

Grammaticality judgment tasks were graded based on participants' perceived gender of individual lexical items.

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

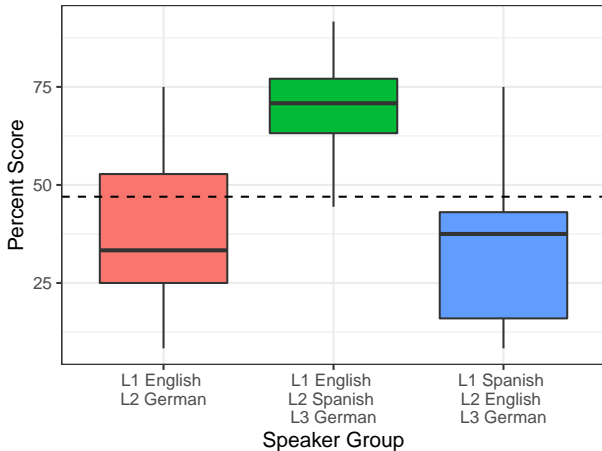
Results

Key Findings

Experiment
2:

Experiment 1 Results

Brown (2020)



Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Experiment 1: Key Findings

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Experiment 1: Key Findings

- Beginner L3 German learners with **L2 Spanish** were better at identifying gender errors in L3 German.

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Experiment 1: Key Findings

- Beginner L3 German learners with **L2 Spanish** were better at identifying gender errors in L3 German.
 - L2 Status Factor Model
 - Scalpel Model

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

BUT...

Experiment 1: Key Findings

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Experiment 1: Key Findings

BUT...

- No interference was found from nouns with different Spanish genders.

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Experiment 1: Key Findings

BUT...

- No interference was found from nouns with different Spanish genders.
- These participants were **beginners** but **not initial state** learners.

Experiment 1: Key Findings

BUT...

- No interference was found from nouns with different Spanish genders.
- These participants were **beginners** but **not initial state** learners.
- **Are these results from initial transfer or some later developmental difference?**

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Experiment 2

Longitudinal L3 Development

- Dissertation project aiming to tease apart the findings of Experiment 1.

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Experiment 2

Longitudinal L3 Development

- Dissertation project aiming to tease apart the findings of Experiment 1.
- Longitudinal design - participants complete the experiment within the first two weeks of beginning their first German course, and again at the end of their semester.

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Experiment 2

Longitudinal L3 Development

- Dissertation project aiming to tease apart the findings of Experiment 1.
- Longitudinal design - participants complete the experiment within the first two weeks of beginning their first German course, and again at the end of their semester.
- Examination of gender in both listening and reading contexts.

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Procedure Summary

- A German listening task involving virtual eye-tracking

Procedure Summary

- A German listening task involving virtual eye-tracking
- A German self-paced reading task

Procedure Summary

- A German listening task involving virtual eye-tracking
- A German self-paced reading task
- A German gender assignment task (only at second meeting)

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Procedure Summary

- A German listening task involving virtual eye-tracking
- A German self-paced reading task
- A German gender assignment task (only at second meeting)
- Multilingual LEAP-Q

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Procedure Summary

- A German listening task involving virtual eye-tracking
- A German self-paced reading task
- A German gender assignment task (only at second meeting)
- Multilingual LEAP-Q
- Proficiency and gender knowledge assessment in other known languages

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Experiment 2 Participants

- “Ab initio” German learners
 - True beginners with no previous German exposure

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Experiment 2 Participants

- “Ab initio” German learners
 - True beginners with no previous German exposure
- Intermediate or higher L2 proficiency
 - Spanish, French, Italian, & Portuguese

Experiment 2 Participants

- “Ab initio” German learners
 - True beginners with no previous German exposure
- Intermediate or higher L2 proficiency
 - Spanish, French, Italian, & Portuguese

Language Background	Number of Participants
L1 English L2 Romance L3 German	10
L1 Romance L2 English L3 German	6
L1 English L2 German	10

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Listening Task

- Trained on 12 nouns in the target language (German)

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Listening Task

- Trained on 12 nouns in the target language (German)
 - Nouns were balanced between target language genders and translation equivalent genders

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Listening Task

- Trained on 12 nouns in the target language (German)
 - Nouns were balanced between target language genders and translation equivalent genders
- Nouns reflecting biological gender were excluded

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)

Acquisition

Theories and
Models in L3

Grammatical
Gender

Experiment

1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment

2:

Listening Task

- Trained on 12 nouns in the target language (German)
 - Nouns were balanced between target language genders and translation equivalent genders
- Nouns reflecting biological gender were excluded
- Also trained on two adjectives, "Large" and "Small"

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)

Acquisition

Theories and
Models in L3

Grammatical
Gender

Experiment

1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment

2:

Listening Task

- Trained on 12 nouns in the target language (German)
 - Nouns were balanced between target language genders and translation equivalent genders
- Nouns reflecting biological gender were excluded
- Also trained on two adjectives, "Large" and "Small"
- Virtual eye tracking serves as the key measure

Listening Task

- Trained on 12 nouns in the target language (German)
 - Nouns were balanced between target language genders and translation equivalent genders
- Nouns reflecting biological gender were excluded
- Also trained on two adjectives, "Large" and "Small"
- Virtual eye tracking serves as the key measure
- Two key experimental conditions, Gender Match and Gender Error

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Listening Task

Gender Match



(F)



(M)

(M)



(N)



Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Listening Task

Gender Match



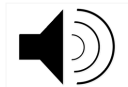
(F)



(M)

“Hier ist der große Stift richtig”
(Here, the(M) big pen (M) is correct)

(M)



(N)



Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Listening Task

Gender Match



(F)



(M)

(M)



(N)



Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Listening Task

Gender Mismatch



(F)



(M)

(M)



(N)



Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Listening Task

Gender Mismatch



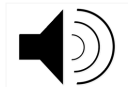
(F)



(M)

“Hier ist das große Stift richtig”
(Here, the(N) big pen (M) is correct)

(M)



(N)



Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Listening Task

Gender Mismatch



(F)



(M)

(M)



(N)



Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Listening Task

- Are learners at each data collection point able to process gender cues in real time?

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

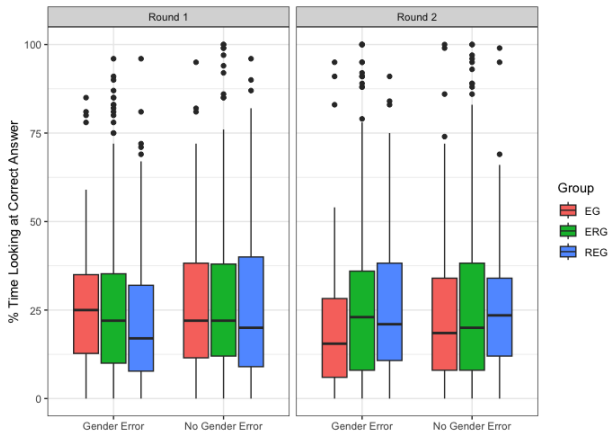
Results

Key Findings

Experiment
2:

Listening Task

Results: Noun Learning



Is More
Always
Better?
Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

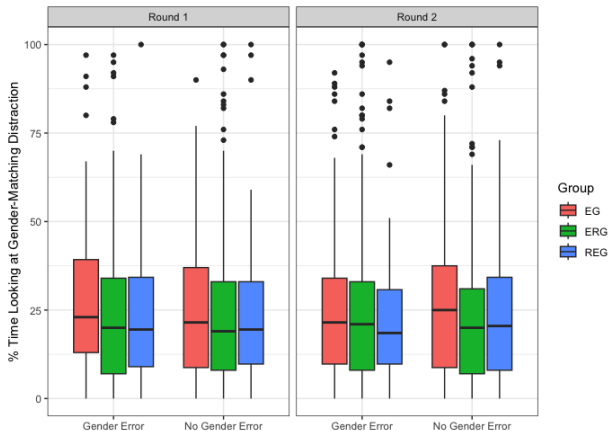
Results

Key Findings

Experiment
2:

Listening Task

Results: Gender Distractions



Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Reading Task

- Self-paced reading task

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Reading Task

- Self-paced reading task
- Same nouns as in the listening task

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Reading Task



(F)

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures
Results
Key Findings

Experiment
2:

Reading Task



(F)

**Hier
(Here)**

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Reading Task



(F)

ist
(is)

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures
Results
Key Findings

Experiment
2:

Reading Task



(F)

die/der
(the, F/M)

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures
Results
Key Findings

Experiment
2:

Reading Task



(F)

**Tür
door**

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3

Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Reading Task



(F)

gros
big

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Reading Task



(F)

(Hier ist die/der Tür groß)

(Here the(F/M) door is large)



Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Reading Task

- Are learners at each time point able to process gender cues, and are they deterred by gender errors, when processing in real time?
- Are these results different between the reading and the listening task?

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

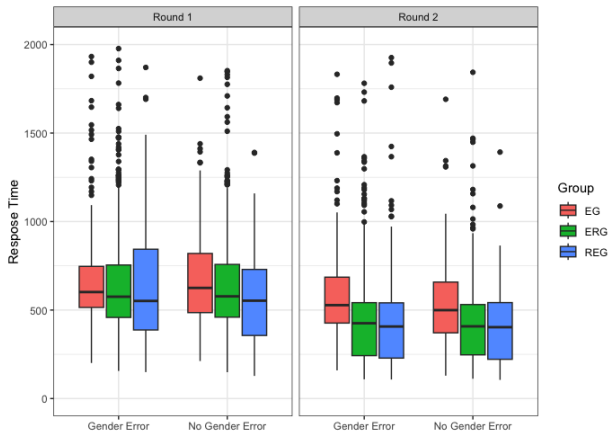
Procedures

Results

Key Findings

Experiment
2:

Reading Task Results



Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

**Megan M.
Brown**

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Discussion and Takeaways

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Discussion and Takeaways

- L3 acquisition is a unique field of linguistic inquiry distinct from L2 acquisition

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Discussion and Takeaways

- L3 acquisition is a unique field of linguistic inquiry distinct from L2 acquisition
- While “beginner” learners might show evidence of CLI from L3 in their processing of written gender, this was not found in “ab initio” learners.

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Discussion and Takeaways

- L3 acquisition is a unique field of linguistic inquiry distinct from L2 acquisition
- While “beginner” learners might show evidence of CLI from L3 in their processing of written gender, this was not found in “ab initio” learners.
- Grammatical gender acquisition in L3 is a complex process that maybe be influenced both positively and negatively by previous gender knowledge, particularly from the L2.

Discussion and Takeaways

- L3 acquisition is a unique field of linguistic inquiry distinct from L2 acquisition
- While “beginner” learners might show evidence of CLI from L3 in their processing of written gender, this was not found in “ab initio” learners.
- Grammatical gender acquisition in L3 is a complex process that maybe be influenced both positively and negatively by previous gender knowledge, particularly from the L2.
- Grammatical gender processing results differed between listening and speaking tasks

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

**Megan M.
Brown**

Next Steps and Future Questions

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Next Steps and Future Questions

- Continued analysis of dissertation data

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Next Steps and Future Questions

- Continued analysis of dissertation data
- Examination of more diverse language triads

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Next Steps and Future Questions

- Continued analysis of dissertation data
- Examination of more diverse language triads
- Longer-term development examinations

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammaticality
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown



Special Thanks



Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings



Experiment
2:

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Thank You!

Third
Language
(L3)
Acquisition

Theories and
Models in L3
Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

These slides can be found at <https://www.meganmbrown.com>

Is More
Always
Better?

Grammatical
Gender
Acquisition
in a
Trilingual
Context.

Megan M.
Brown

Third
Language
(L3)
Acquisition

Theories and
Models in L3

Grammatical
Gender

Experiment
1: Cross-
Sectional
Grammatical-
ity
Judgement
Task

Experiment 1:
Cross-Sectional
Grammaticality
Judgement Task

Procedures

Results

Key Findings

Experiment
2:

Questions?

References

- Bardel, C. and Falk, Y. (2007). The role of the second language in third language acquisition: The case of Germanic syntax. *Second Language Acquisition*, 23:459–484.
- Brown, M. M. (2020). Grammatical gender acquisition in sequential trilinguals: Influence of a gendered L1 vs. L2. In Patrick Farrell (ed.), *Proceedings of the Linguistic Society of America*, vol. 5 1, 331-344.
- Brown, M. M. (*Forthcoming*). CLI and Transfer in a Trilingual Context: Acquisition, Development, and Maintenance of L3 German Grammatical Gender. Doctoral Dissertation. Boston University, Boston, MA.
- L3 Acquisition of Grammatical Gender in an Artificial Language Environment. Qualifying Paper 1, Boston University, Boston, MA.
- Fallah, N., Jabbari, A. A., and Fazilatfar, A. M. (2016). Source(s) of syntactic cross-linguistic influence (CLI): The case of L3 acquisition of English possessives by Mazandarani-Persian bilinguals. *Second Language Research*, 32(2):225–245.
- Flynn, S., Foley, C., and Vinnitskaya, I. (2004). The Cumulative-Enhancement Model for language acquisition: Comparing adults' and children's patterns of development in first, second and third language acquisition of relative clauses. *International Journal of Multilingualism*, 1:3–16.
- Hermas, A. (2010). Language acquisition as computational resetting: verb movement in L3 initial state. *International Journal of Multilingualism*, 7(4):343–362.
- Rothman, J. (2010). On the typological economy of syntactic transfer: Word order and relative clause high/ low attachment preference in L3 Brazilian Portuguese. *International Review of Applied Linguistics in Language Teaching (IRAL)*, 48:245–273.
- Sabourin, L. (2001). L1 Effects on the Processing of Grammatical Gender in L2. *EUROSLA Yearbook*, 1, 159-169.
- Slabakova, R. (2017). The scalpel model of third language acquisition. *International Journal of Bilingualism*, 21(6), 651–665.
- Westergaard, M., Mitrofanova, N., Mykhaylyk, R., & Rodina, Y. (2017). Crosslinguistic influence in the acquisition of a third language: The Linguistic Proximity Model. *International Journal of Bilingualism*, 21(6):666–682.
- White, L., Valenzuela, E., Kozłowska-Macgregor, M., & Leung, Y. (2004). Gender and number agreement in nonnative Spanish. *Applied Psycholinguistics*, 25(1), 105-133.