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Code-switching in Heritage Taiwanese-Spanish Bilinguals

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Introduction/Background

Research comparing heritage (H) speakers, native (N) speakers, and, in some cases, second language (L2) learners has examined numerous linguistic properties, including:

- tense/aspect (Silva-Corvalán 1994, Montrul 2002)
- gender agreement (Montrul et al. 2008a, Polinsky 2008, Bowden et al. 2010, Bowden et al. 2012)
- focus marking (Hoot 2012)
- null pronouns (Polinsky 1997, Choi 2003, de Groot 2005, Mahajan 2009).

Current study looks at two understudied constructions in adult Taiwanese-Spanish bilinguals:

Classifiers (Taiwanese):

(1) a. tsit tai cchia
this Cl$_{\text{big objects}}$ car
'this car'

b. tsit chia kau-a
this Cl$_{\text{animals}}$ dog
'this dog'

Position of wh-phrases (Taiwanese = wh-in situ; Spanish = wh-fronting)

(2) Mirta tsu sa-mi?
Mirta cook what
'What did Mirta cook?'

(3) ¿Qué cocinó Mirta?
What cooked Mirta
'What did Mirta cook?'

Previous research on classifiers (Cl), focused on children:

HS have smaller semantic range of Cls than age-matched monolingual groups in other studies, syntactic errors rare for both (Wei & Lee 2001)

Previous research on wh-questions, focused on adults:

HS of Spanish largely demonstrated knowledge of obligatory subject-verb inversion in Spanish matrix questions but accepted embedded questions without inversion, as in English (Cuza 2012)

No difference between HS and L2 learners with respect to a variety of properties of wh-questions, including inversion, extraction, and adjunct islands (Montrul et al. 2008b)

Little work has been done comparing code-switching (CS) of heritage speakers and L2 learners (Potowski 2009, Potowski & Bolyanatz 2011)

Why CS?

Additional perspective on the featural content of the linguistic systems of bilinguals

Minimalist framework (e.g., MacSwan 2000, González-Vilbazo & López 2011) - CS, like monolingual language, derived from feature interaction

Any differences in the ways that these lexical items can combine between HS and L2 leaners point to differences in the underlying features of their linguistic systems

Research Questions

How does the monolingual grammar of classifiers and wh-questions differ among native speakers, heritage speakers and L2 learners?

What additional evidence can CS provide for these differences?

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Experiment 1 - Classifiers

Methodology

Participants
- 5 H-Tw (age = 22-30)
  - Born in Argentina or moved by age 5
- 4 L2-Sp (age = 31-36)
  - Born in Taiwan, moved after age 10
- 2 N-Tw (51, 61 years old)
  - Born and raised in Taiwan

Stimuli
- 251 code-switched phrases involving Taiwanese Cl
- 174 monolingual Taiwanese phrases
- Test syntax, morphosyntax, semantics

Monolingual examples:

Syntax:
(5) tsit tai cchia
this Cl car
(6) tsit go tai cchia
this five Cl car
(7) a. tsit chia tua chia kau-a
this Cl big Cl dog
b. tsit tua chia kau-a
this big Cl dog

Semantics:
(8) a. bin kia^{n}
Cl$_{\text{mirror}}$ mirror
b. tiu^{n} kia^{n}
Cl$_{\text{furniture}}$ mirror

Morphosyntax:
(9) a. tsit riab tua riab ti^{n} kam-a
this Cl big Cl sweet orange
b. tsit riab tua riab ta kam-a
this Cl big Cl sour orange

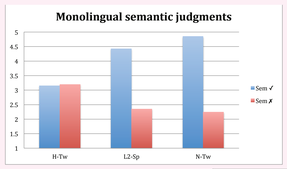
CS examples:

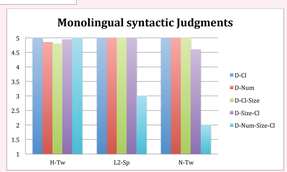
Syntax:
(10) *este* tai cchia
this Cl car
(11) *estos* go tai cchia
these five Cl car
(12) a. *este* chia tua chia kau-a
this Cl big Cl dog
b. *este* tua chia kau-a
this big Cl dog

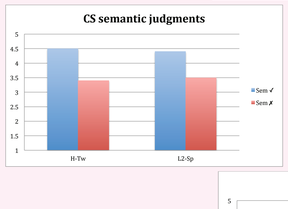
Semantics:
(13) a. bin *espejo*
Cl$_{\text{mirror}}$ mirror
b. tiu^{n} *espejo*
Cl$_{\text{furniture}}$ mirror

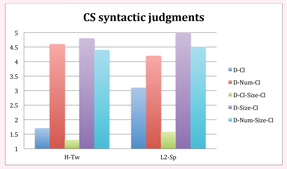
Morphosyntax:
(14) *el/la* yun -a
the$_{\text{m/f}}$ sheep

Rate phrase on a 1-5 Likert scale + forced gender choice for D-N CS combinations









Results

Monolingual Results

Syntax:
- No differences between groups for examples (5)-(6)
- Double-Cl Constructions (example (7))
  - N-Tw require doubling of Cl when using Size words
  - H-Tw & L2-Sp don't always require upper Cl

Semantics (example (8)):
- N-Tw & L2-Sp don't differ on accepted Cl-N pairs
- H-Tw more accepting of Cls that are somewhat semantically related to N but not grammatical in monolingual speech; overall do not distinguish acceptable and unacceptable Cl-N combinations in a monolingual native-like fashion

Morphosyntax:
- Compound A-N Pairs (example (9)) varied across individuals

CS Results

Syntax:
- H-Tw reject Spanish elements before Taiwanese Cl
- L2-Sp more accepting of Spanish elements before Taiwanese Cl

Semantics:
- H-Tw accepting of Cl-N pairs that they also accept in the translational equivalent counterparts
- L2-Sp accept Cl-N pairs that they do not accept in the translational equivalent counterparts

Morphosyntax:
- H-Tw require masculine articles before all Taiwanese N
- L2-Sp accept masculine articles but in a forced choice task prefer feminine articles before Ns whose translational equivalents in Spanish are feminine

Discussion/Conclusions

Monolingual data:

H-Tw speakers:
- Have acquired Cl syntax with the exception of double Cl constructions
  - May be a change in progress because the age-matched L2-Sp counterparts also accept single Cl
- Show variation with Cl semantics, accepting a broader range of Cl-N pairs than N-Tw and L2-Sp
  - In line with child acquisition studies (i.e., Lee 1996, Wei & Lee 2001)

CS data:

H-Tw and L2-Sp speakers:
- Have acquired full range of Taiwanese syntactic and morphosyntactic features

L2-Sp speakers:
- Have not acquired full range of features of Spanish; Spanish Ds can select for Taiwanese ClP
  - (H-Tw Ds lack select ClP, in line with Bartlett & González-Vilbazo (forthcoming))
- Do not have knowledge of a default gender feature in Spanish, must use translational equivalents in CS,
  - (H-Tw use masculine agreement as default, in line with González-Vilbazo (2005))
- Use broader range of Cl-N pairs in CS than in monolingual speech
  - (H-Tw have similar semantic concepts across translational equivalents)

CS gives us additional information about the competence of our bilingual speakers

Experiment 2 - Wh-Questions

Experimental design and methodology

Preliminary informant: H-Tw Spanish-Taiwanese female code-switcher from Buenos Aires

Participant groups to match Experiment 1

Stimuli

Factors:
- Word orders (SVO, SOV, OSV, OVS, VSO, VOS)
- Simple vs. complex wh-object
- Language of wh-phrase and verb (*Spanish*/Taiwanese, Taiwanese/*Spanish*)

24 Spanish-Taiwanese code-switched questions, presented in context (to avoid echo questions)

Rate on 1-5 Likert scale

Type of Wh-object	Lang. of Wh	Lang. of Verb	Question	Order
Simple	Spanish	Taiwanese	*Mirta *qué* khua-tio? Mirta what saw 'What did Mirta see?'	SVO
	Taiwanese	Spanish	*I *á* Mirta sa-mi? Saw Mirta what 'What did Mirta see?'	VSO
Complex	Spanish	Taiwanese	Mirta khe-tio *cuál de esos guardapolvos*? Mirta saw which of those school uniforms 'Which of those school uniforms did Mirta see?	SVO
	Spanish	Taiwanese	*Khe-tio Mirta *cuál de esos guardapolvos*? Saw Mirta which of those school uniforms 'Which of those school uniforms did Mirta see?	VSO
	Taiwanese	Spanish	*Hia-e tue-tsit riab bah-tzang Mirta *compró*? These which Cl rice dumplings Mirta bought 'Which of those rice dumplings did Mirta buy?	OSV
	Taiwanese	Spanish	Hia-e tue-tsit riab bah-tzang *compró* Mirta? These which Cl rice dumplings bought Mirta 'Which of those rice dumplings did Mirta buy?	OSV

Predictions

H-Tw

Monolingual stimuli:
- Full acquisition of Taiwanese in situ/no inversion (Yip & Mathews 2007)
- Full acquisition of Spanish fronting/inversion (Félix-Brasdefer 2006)

CS stimuli:
- Accept only complex wh-switches (Woolford 1983, Ebert 2011)
- With Spanish verb: inversion, wh-fronting
- With Taiwanese verb: no inversion, wh-in situ

L2-Sp

Monolingual stimuli:
- Full acquisition of Taiwanese in situ/no inversion (Yip & Mathews 2007)
- Full(?) acquisition of Spanish fronting/inversion (Montrul et al. 2008b) -word order without full feature acquisition?

CS stimuli:
- Accept both simple and complex wh-switches
- With Spanish verb - inversion & no inversion, wh-fronting & in situ
- With Taiwanese verb - no inversion, wh-in situ

H-Tw Predictions

	In Situ		Fronted	
	No Inversion	Inversion	No Inversion	Inversion
Complex				
Wh_{sp} V_{TW}	✓	*	*	*
Wh_{TW} V_{sp}	*	*	*	✓
Simple				
Wh_{sp} V_{TW}	*	*	*	*
Wh_{TW} V_{sp}	*	*	*	*

L2 Predictions

	In Situ		Fronted	
	No Inversion	Inversion	No Inversion	Inversion
Complex				
Wh_{sp} V_{TW}	✓	*	*	*
Wh_{TW} V_{sp}	✓	*	*	✓
Simple				
Wh_{sp} V_{TW}	✓	*	*	*
Wh_{TW} V_{sp}	✓	*	*	✓

Preliminary Results

Simple wh-phrases are always ungrammatical → meets predictions

Complex wh-phrases:
- Fronted + no inversion grammmatical w/ Taiwanese V → unexpected fronting
- Fronted + inversion grammmatical w/ Spanish V → predicted
- In situ + no inversion grammatical w/ Taiwanese V → predicted
- In situ + no inversion grammatical w/ Spanish V →unexpected in situ

General Conclusions

We found additional evidence that age of acquisition and learning environment affect each area of the linguistic system differently.

CS can provide additional evidence for the underlying features that make up the linguistic systems of different types of speakers.

Acknowledgments/Further Information

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http://hispanic.las.uic.edu/spanish/bilinguallab.shtml