



Bryan

20m ago



Are you ready para la presentacion?

BRYAN KORONKIEWICZ

The University of Alabama

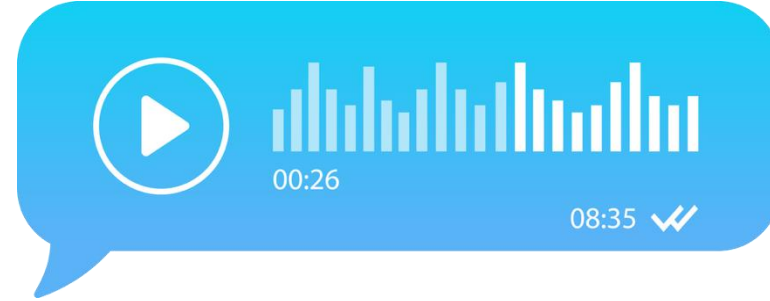
RODRIGO DELGADO

University of Illinois Urbana-Champaign

UIC Biligualism Forum

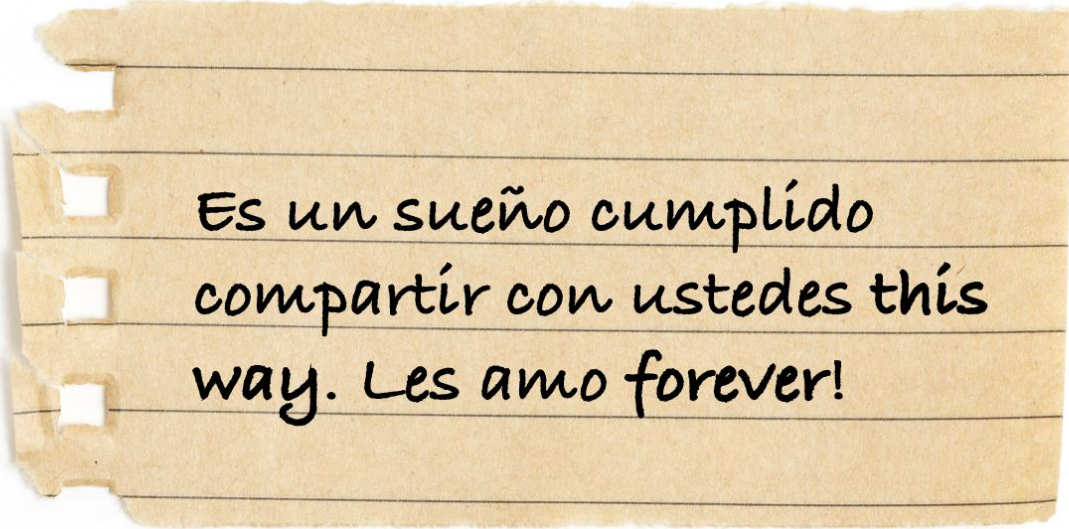
Chicago, Illinois

October 22, 2026



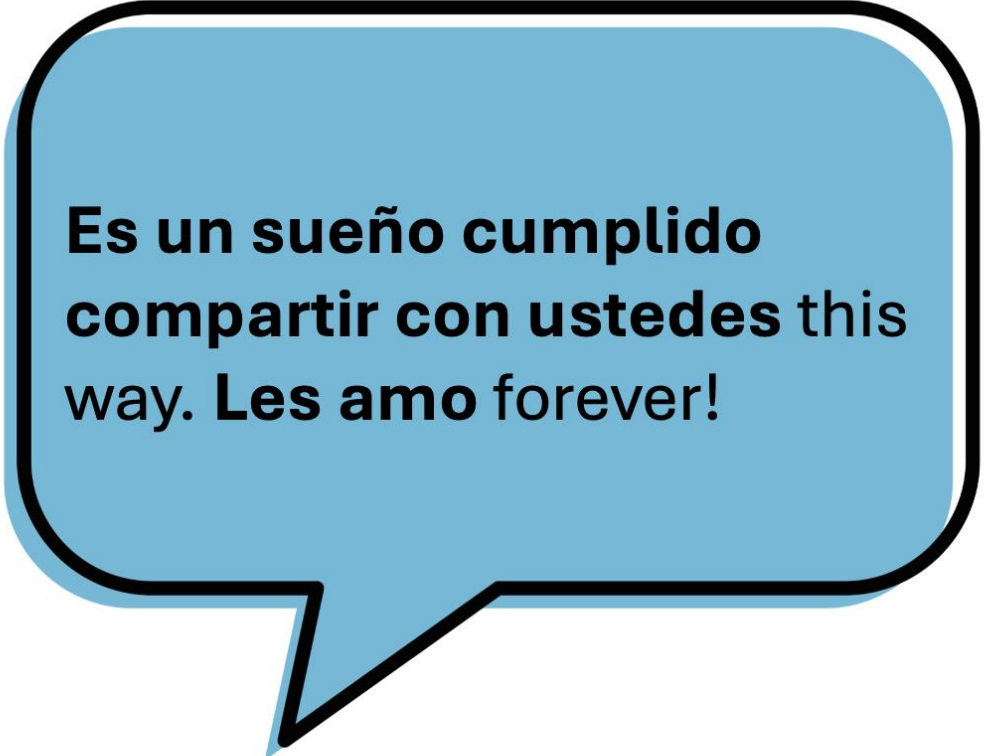
Does it matter how you present it?

Modality, formality, and
speaker type in Spanish-
English CS acceptability
judgments



Es un sueño cumplido
compartir con ustedes this
way. Les amo forever!

*It's a dream come true
to share this with you all this way.
I love you forever!*



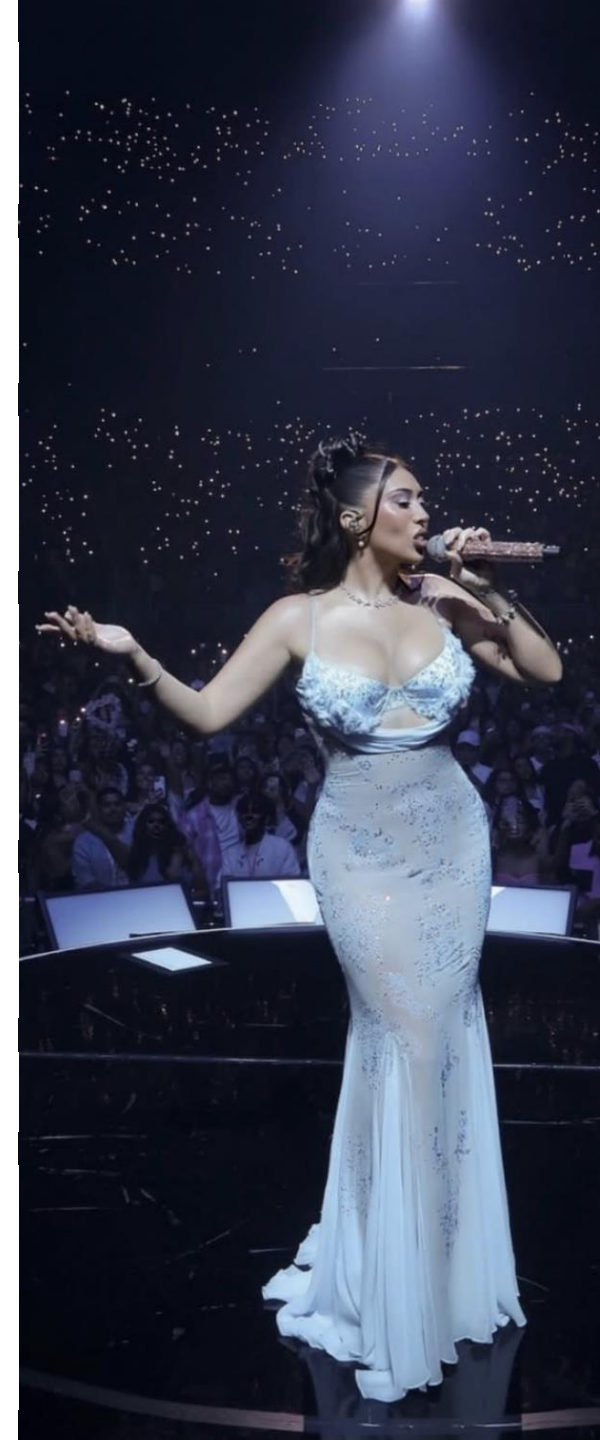
**Es un sueño cumplido
compartir con ustedes this
way. Les amo forever!**

Code-switching contexts

- Code-switching (CS) has long been described as an inherently spoken practice, emerging “throughout the flow of natural conversation” (Timm, 1975, p. 473)
- Decades of research have either echoed this description or have been silent about CS a written phenomenon (e.g., Bentahila & Davies, 1983; Broersma & de Bot, 2006; Muysken, 1997; Poplack, 1980; among many others)
- Is this still the case? In an era of digitally mediated bilingual communication, maybe not...



kaliuchis nunca me sentí aceptada en Latino America ni en los Estados Unidos , pero por la primera vez ustedes me hicieron sentir tan amada..y por eso les doy mil Gracias. yo desde niña been orgullosamente colombiana, y es un sueño cumplido poder compartir con ustedes this way. Les amo forever



Do our research methods reflect bilingual reality?

- Although CS is possible in any context, real-world CS is often associated with specific situations
 - Spoken, informal, and in specific contexts with certain people
- Methodologically, Acceptability Judgment Tasks (AJTs) are widely used in CS research that targets structural components
 - Experimental stimuli are often written, formal, and decontextualized
- **Problem:** grammatical knowledge vs. presentation effects

FOCUS

- **Do presentation variables influence judgments of CS?**
- In this study we focus on:
 - Modality (i.e., written vs. aural presentation)
- And within each of those modalities, we target specific differences in presentation style:
 - Written = formal vs. informal
 - Aural = heritage bilingual vs. late L2 speaker



BACKGROUND: *AJTs in bilingualism*

- AJTs are foundational to experimental syntax, and by extension structural approaches to CS
- Empirical work has shown that AJTs: (Schütze, 1996; Schütze & Sprouse, 2014)
 - Reliably reflect speakers' grammatical knowledge
 - Are robust to task-related noise when properly designed
- However, applying AJTs to bilingual grammars can bring about additional questions
 - Bilingualism researchers have long stressed that methodological choices shape which aspects of bilingual competence we observe (e.g., Grosjean, 2008)

BACKGROUND: *CS methods*

- CS methodology work situates CS-specific challenges within broader methodological issues (González-Vilbazo et al., 2013; Gullberg et al., 2009)
- **Shared by all experimental language research**
 - Ecological validity vs. experimental control
 - Decontextualized stimuli may not reflect language use in context
- **Amplified in bilingual populations**
 - Wide variation in language experience, dominance, and proficiency
- **Specific to CS**
 - CS is a naturally occurring, community-based practice that experimental tasks may constrain in particular ways
 - Production methods often rely on externally induced switches
 - CS stigma can shape participants' responses
 - Presentational choices (e.g., how switches are displayed) can shape data

BACKGROUND: *Modality and CS*

- AJT research on CS syntax mostly uses written stimuli
 - Only a handful of studies use aural stimuli (e.g., Giancaspro, 2015; Parafita Couto et al., 2024)
- Does this matter? Two possibilities:
 - If CS is primarily a spoken practice, written stimuli may distort judgments
 - If bilinguals regularly encounter CS in both modalities, judgments should be stable across them
- Koronkiewicz and Ebert (2018) tested modality directly
 - No global difference, just some structure-specific aural boosts
 - However, because of the between-subjects design, we do not have evidence that the same bilinguals judge consistently across modalities

BACKGROUND: *Written CS and register*

- Those findings are supported by the fact that written CS is a well-attested bilingual reality, especially in digitally mediated communication (Androutsopoulos, 2013; Sebba, 2013)
- For example, Montes-Alcalá (2024) has shown that CS in texts can serve the same socio-pragmatic functions attested in speech
 - Also shows medium-specific patterns, such as the use of English abbreviations (*LOL*, *idk*) within Spanish messages
- Importantly, though, this is informal, interpersonal writing:

Babe mi telef esta en 2%. Lo voy a poner a cargar ttyls

‘Babe my cell is at 2%. I am going to charge it ttyl (talk to you later)’

Asiendo brownies hbu

‘Making brownies hbu (how about you?)’

(Montes-Alcalá, 2024, p. 7)

BACKGROUND: *Other presentational variables?*

- CS is associated with **informal registers** more broadly
 - In formal contexts, bilinguals often avoid CS and follow monolingual norms (Gardner-Chloros, 2009)
 - Could written AJTs that look overly formal lead participants to rate switches lower, independent of grammaticality?
- CS is used to construct and negotiate **group membership** (Cashman, 2005)
 - Some argue that what licenses CS is membership in the community of practice (De Fina, 2007)
 - In the US, Spanish-English CS is closely tied to heritage bilinguals, while L2 switches are often attributed to lexical gaps (Poplack, 1980), even though late L2 bilinguals can acquire CS constraints too (Giancaspro, 2015; Koronkiewicz, 2018)
 - Aural stimuli unavoidably convey some aspects of speaker identity (e.g., accent, prosody, fluency), and standard practice is a single heritage-speaker consultant
 - Could switches sound more acceptable from a heritage speaker than from an L2 speaker?
- To our knowledge, no AJT study has manipulated the formality of written stimuli or the speaker profile of aural stimuli

RESEARCH QUESTIONS

1. Does **modality** affect CS acceptability judgments?
2. In a written AJT, does **formality of writing style** affect judgments?
3. In an aural AJT, does the **bilingual background of the speaker** affect judgments?

H1: No effect of modality

(Koronkiewicz & Ebert, 2018)

H2: Informal stimuli will be rated higher

(Androutsopoulos, 2013; Gardner-Chloros, 2009; Montes-Alcalá, 2024; Sebba, 2013)

H3: Heritage speaker stimuli will be rated higher

(Cashman, 2005; De Fina, 2007; Poplack, 1980; Yoon, 1996)



METHODS: *Procedure*

*Administered online via
Qualtrics in a single session
(about 45-60 minutes)
Participants received a \$15
Amazon eGift Card*

Bilingual Code-Switching Profile (BCSP): 20-item CS experience survey
(Olson, 2022)

Training: Presented in bilingual mode; practice with both modalities

AJT: Two blocks by modality (counterbalanced)

LexTALE & LexTALE-Esp: Proficiency measures (counterbalanced)
(Lemhöfer & Broersma, 2012; Izura et al., 2014)

Bilingual Language Profile (BLP): 38-item language dominance survey
(Birdsong et al., 2012)



METHODS: *Stimuli*

- 80 items total in AJT; 48 target items (16 per structure)
 - 3 different types of switch structures with paired grammatical and ungrammatical stimuli; half Spanish-to-English and half vice versa

SWITCH TYPE	EXAMPLE
Pronoun	<p>This morning they cleaned <i>la cocina y el comedor</i>.</p> <hr/> <p>* This morning they <i>limpiaron</i> <i>la cocina y el comedor</i>. 'This morning they cleaned the kitchen and the dining room.'</p>
Perfect Auxiliary	<p>Her friends han visitado <i>muchos países durante el verano</i>.</p> <hr/> <p>* Her friends have visitado <i>muchos países durante el verano</i>. 'Her friends visited many countries over the summer.'</p>
Negation	<p>The library doesn't open <i>los domingos por la mañana</i>.</p> <hr/> <p>* The library doesn't abre <i>los domingos por la mañana</i>. 'The library doesn't open on Sunday mornings.'</p>

METHODS: *Stimuli*

- 4 presentation formats
 - **Written + Formal:** standard capitalization, diacritics, punctuation, and apostrophes
 - **Written + Informal:** all lowercase, with no diacritics, apostrophes, or final punctuation
 - **Aural + Heritage:** Bilingual speaker born in Mexico, raised in the US
 - **Aural + Late L2:** Bilingual speaker born and raised in the US, with Peninsular-influenced accent (e.g., *distinción*)
 - Both speakers male, and participants were given no information about either
- Latin-square design across 4 survey versions
 - Each participant judged all 80 items, 20 in each format
 - Each item appeared in every format across versions

WRITTEN + FORMAL

Her friends have visitado muchos países durante el verano.

1 2 3 4 5 6 7

Completamente Inaceptable

☐ ☐ ☐ ☐ ☐ ☐ ☐

Completely Acceptable

AURAL + HERITAGE



1 2 3 4 5 6 7

Completamente Inaceptable

☐ ☐ ☐ ☐ ☐ ☐ ☐

Completely Acceptable

WRITTEN + INFORMAL

her friends have visitado muchos paises durante el verano

1 2 3 4 5 6 7

Completamente Inaceptable

☐ ☐ ☐ ☐ ☐ ☐ ☐

Completely Acceptable

AURAL + LATE L2



1 2 3 4 5 6 7

Completamente Inaceptable

☐ ☐ ☐ ☐ ☐ ☐ ☐

Completely Acceptable

METHODS: *Participants*

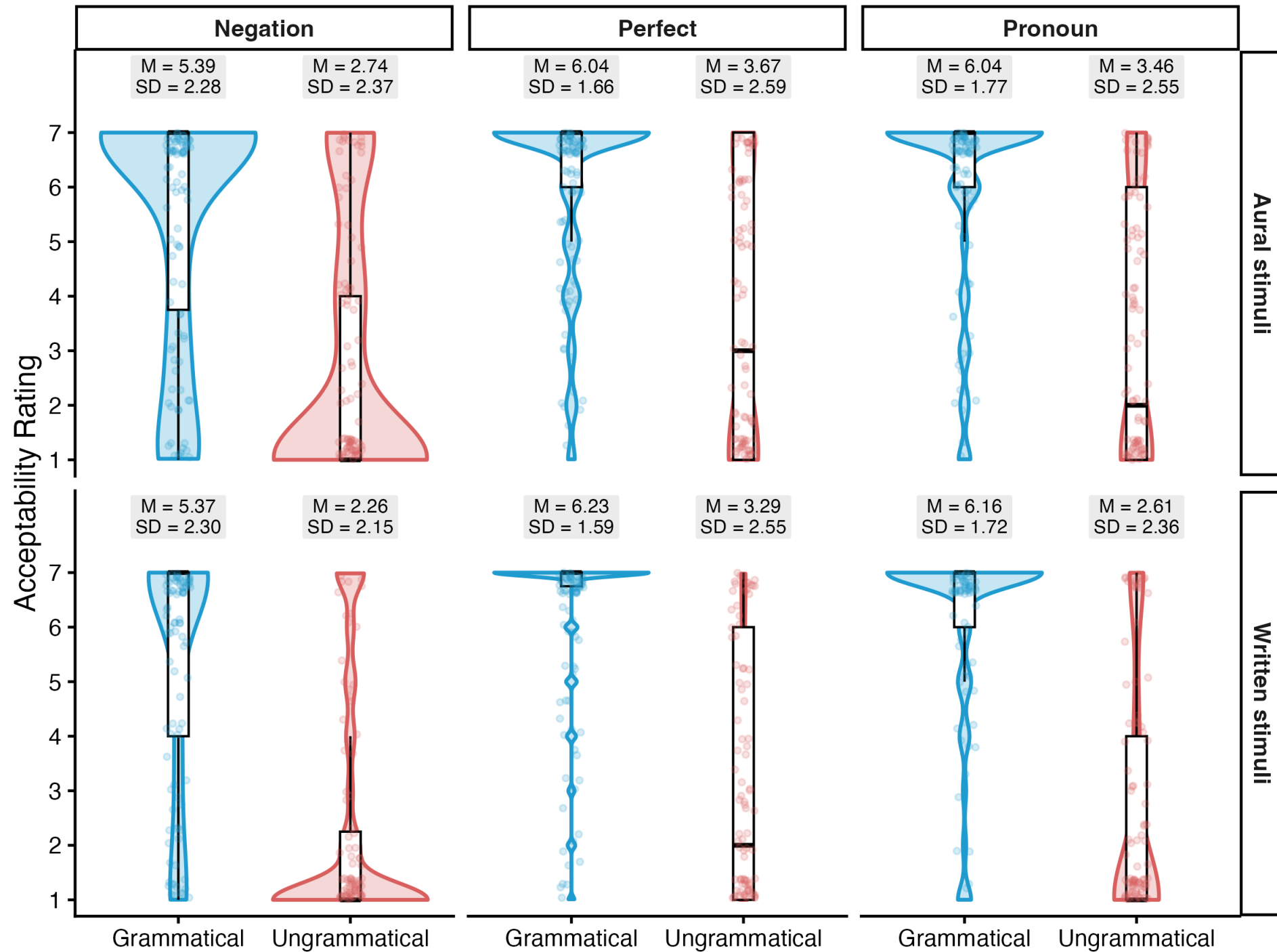
- Early Spanish-English bilinguals (*n* = 35)
- Residing in either the New York metro area, Chicago, or Urbana-Champaign
- Range of Latin American heritage backgrounds
 - Most commonly Mexican/Mexican American (*n* = 10)
 - Also, Ecuadorian, Colombian, Puerto Rican, and Salvadoran
 - Others gave pan-ethnic labels (e.g., Hispanic/Latino, *n* = 11)



		<i>M</i>	<i>SD</i>
Age		28.2	7.8
Age of acquisition	English	4.0	3.6
	Spanish	0.4	0.9
Self-rating: Speak (0 to 6)	English	5.7	0.7
	Spanish	4.9	1.2
Self-rating: Understand (0 to 6)	English	5.9	0.4
	Spanish	5.4	0.9
Self-rating: Reading (0 to 6)	English	5.7	0.6
	Spanish	4.7	1.3
Self-rating: Writing (0 to 6)	English	5.8	0.6
	Spanish	4.2	1.4
LexTALE score (% correct)	English	87.4	8.7
	Spanish	67.9	8.4
BLP score (-218 to +218)		30.7	36.3
BCSP score (0 to 100)		75.2	14.3

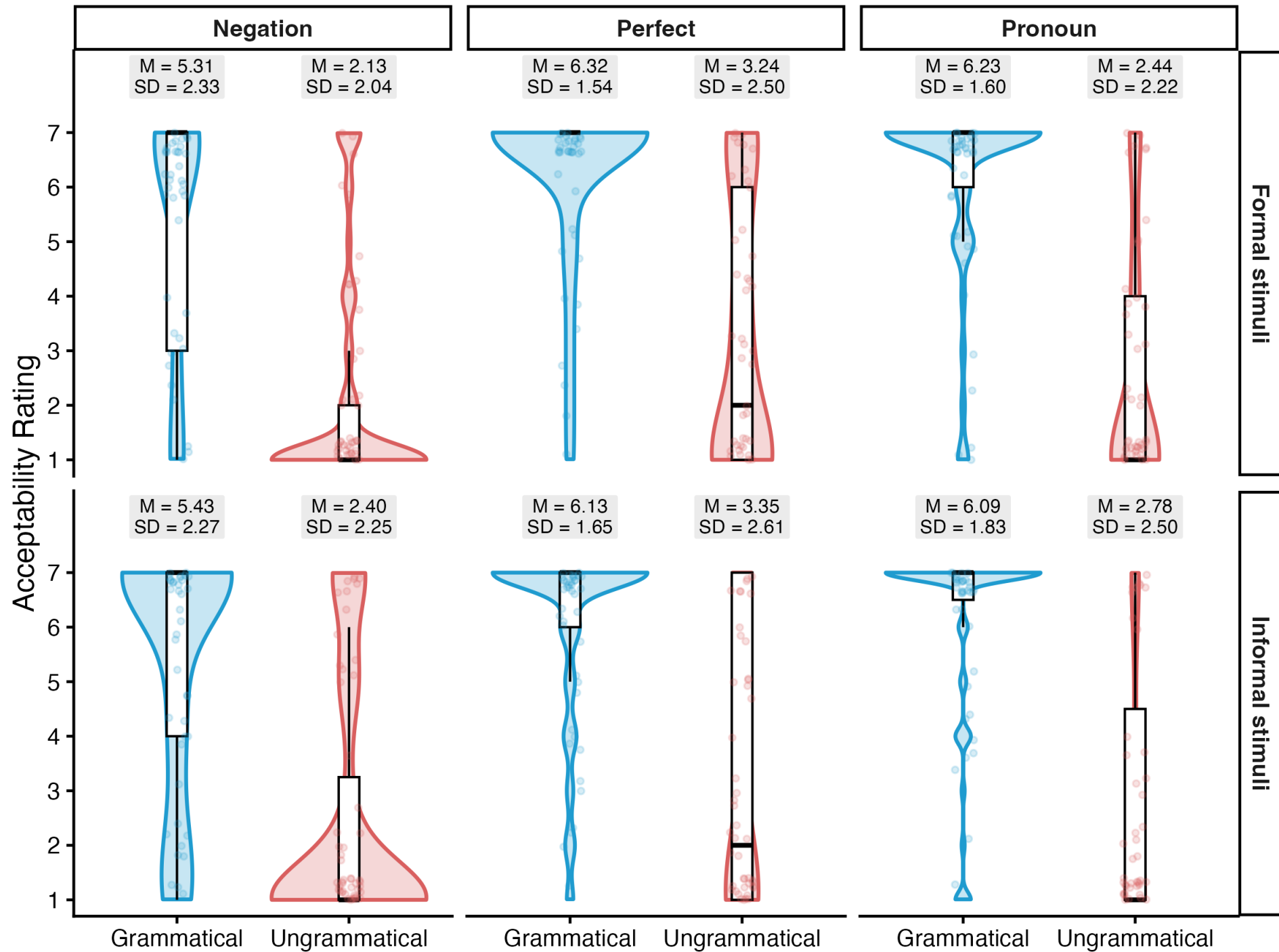
OVERALL RESULTS:

Aural vs. Written

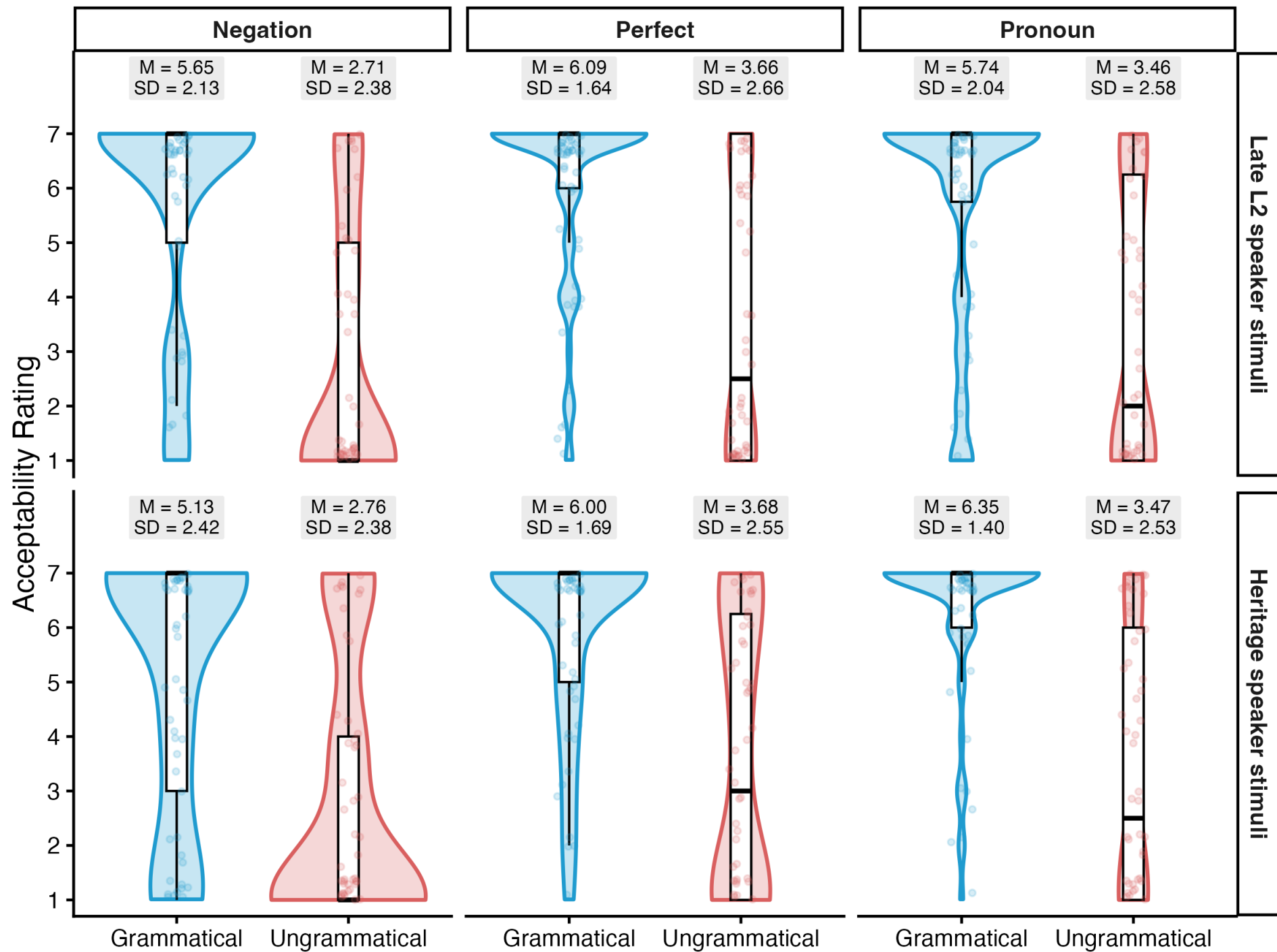


WRITTEN RESULTS:

Formal vs. Informal



AURAL RESULTS: *Heritage vs. Late L2*



Statistical analysis summary

- Cumulative link mixed models (CLMMs) on raw ratings (1-7)
 - Fixed effects: presentation variable $\times$ structure $\times$ grammaticality
 - Random intercepts for participant and item
- **Robust main effect for grammaticality** in all three models (p values $< .001$)
- Written vs. aural
 - **No effect of modality:** $\beta = -0.10$, $SE = 0.24$, $z = -0.40$, $p = .692$
 - No interactions with modality (p values $> .185$)
- Written AJT only: Formal vs. informal
 - **No effect of formality:** $\beta = 0.16$, $SE = 0.34$, $z = 0.47$, $p = .642$
 - No interactions with formality (p values $> .306$)
- Aural AJT only: Heritage vs. late L2 speaker
 - No main effect of speaker type: $\beta = -0.46$, $SE = 0.35$, $z = -1.31$, $p = .189$
 - Speaker type $\times$ structure interaction: $\beta = 1.21$, $SE = 0.52$, $z = 2.35$, $p = .019$
 - Speaker effects on grammatical items differed between pronoun and negation

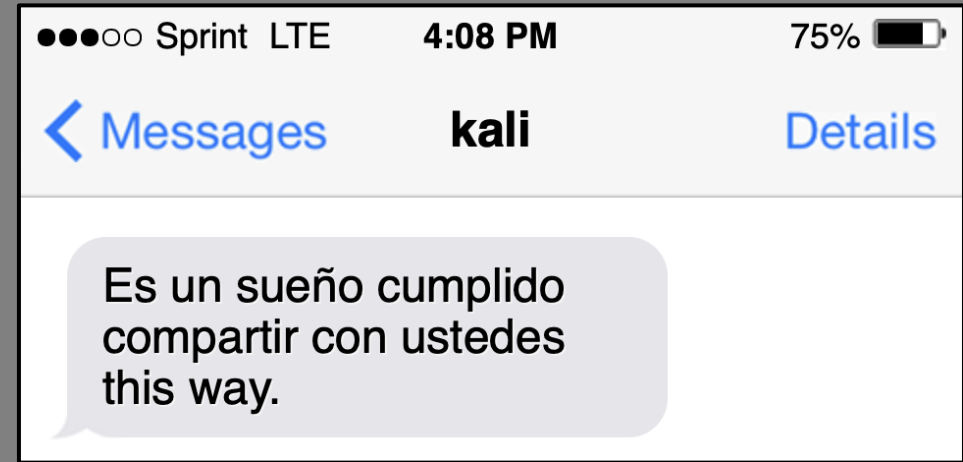
RESEARCH QUESTIONS

1. Does **modality** affect CS acceptability judgments?
 - **NO; H1 supported**
2. In a written AJT, does **formality of writing style** affect judgments?
 - **NO; H2 not supported**
3. In an aural AJT, does the **bilingual background of the speaker** affect judgments?
 - **Mostly NO; H3 partially supported**



Limitations and future directions

- Only tested early Spanish-English bilinguals in NYC and Illinois
 - Future work should do cross-community and cross-generational comparisons
- Subtle manipulations of formality and speaker type
 - Formality was limited to formatting (not lexical or syntactic register)
 - Future work could:
 - Use more ecologically rich formats, such as emoji, varied layout and typography, memes, visual context, etc.
 - Make speaker differences more salient, such as other Spanish varieties, L2 speakers at varying proficiency, telling participants the speaker's background, etc.
- Only well-established switch sites tested
 - More gradient or variable structures may not show the same stability
- Results apply to AJTs targeting structural competence
 - Processing and production tasks may still be sensitive to these variables



kaliuchis es un sueño cumplido compartir con ustedes this way
❤️🙏🌟

es un sueño cumplido compartir con ustedes this way

Es un sueño cumplido compartir con ustedes this way.

Es un sueño cumplido compartir con ustedes this way.

Conclusions

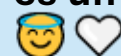
- **Null effects here are a positive, informative result**
 - Bilinguals reliably distinguished grammatical from ungrammatical CS across modality, formality, and speaker type
 - No reliable effects of these presentation variables on CS AJT judgments, at least for the manipulations tested here
- **One exception: Speaker type × structure interaction**
 - Speaker effects on grammatical items varied by structure, with no consistent advantage for either speaker
 - Ungrammatical items were unaffected by speaker type
 - Worth a targeted follow-up, but the overall picture holds

Conclusions

- **Why so stable?** Two accounts, not mutually exclusive:
 - Everyday exposure to CS across formats (e.g., social media, texting)
 - Bilinguals abstract away from presentation in a metalinguistic task
- **Ecological validity still matters**
 - These findings apply to AJTs targeting structural competence, not necessarily to other methods and/or research questions
- **Practical takeaway:** Researchers have considerable flexibility in choosing presentation format for CS AJTs

BRYAN KORONKIEWICZ – bjkoronkiewicz@ua.edu
RODRIGO DELGADO – rdelga21@illinois.edu

es un sueño cumplido compartir con ustedes this way! ? 🍪



- Kali Uchis

REFERENCES

Androutsopoulos, J. (2013). Code-switching in computer-mediated communication. In S. Herring, D. Stein, & T. Virtanen (Eds.), *Pragmatics of computer-mediated communication* (pp. 667-694). De Gruyter Mouton. <https://doi.org/10.1515/9783110214468.667>

Bentahila, A., & Davies, E. E. (1983). The syntax of Arabic-French code-switching. *Lingua*, 59(4), 301-330. [https://doi.org/10.1016/0024-3841\(83\)90007-4](https://doi.org/10.1016/0024-3841(83)90007-4)

Birdsong, D., Gertken, L. M., & Amengual, M. (2012). Bilingual Language Profile: An easy-to-use instrument to assess bilingualism. COERLL, University of Texas at Austin. <https://sites.la.utexas.edu/bilingual/>

Broersma, M., & de Bot, K. (2006). Triggered codeswitching: A corpus-based evaluation of the original triggering hypothesis and a new alternative. *Bilingualism: Language and Cognition*, 9(1), 1-13. <https://doi.org/10.1017/S1366728905002348>

Cashman, H. R. (2005). Identities at play: Language preference and group membership in bilingual talk in interaction. *Journal of Pragmatics*, 37(3), 301-315. <https://doi.org/10.1016/j.pragma.2004.10.004>

De Fina, A. (2007). Code-switching and the construction of ethnic identity in a community of practice. *Language in Society*, 36(3). <https://doi.org/10.1017/s0047404507070182>

Gardner-Chloros, P. (2009). *Code-switching*. Cambridge University Press. <https://doi.org/10.1017/cbo9780511609787>

Giancaspro, D. (2015). Code-switching at the auxiliary-VP boundary: A comparison of heritage speakers and L2 learners. *Linguistic Approaches to Bilingualism*, 5(3), 379-407. <https://doi.org/10.1075/lab.5.3.04gia>

González-Vilbazo, K., Bartlett, L., Downey, S., Ebert, S., Heil, J., Hoot, B., Koronkiewicz, B., & Ramos, S. E. (2013). Methodological considerations in code-switching research. *Studies in Hispanic and Lusophone Linguistics*, 6(1), 119-138. <https://doi.org/10.1515/shll-2013-1143>

Grosjean, F. (2008). *Studying bilinguals*. Oxford University Press. <https://doi.org/10.1093/oso/9780199281282.001.0001>

Gullberg, M., Indefrey, P., & Muysken, P. (2009). Research techniques for the study of code-switching. In B. E. Bullock & A. J. Toribio (Eds.), *The Cambridge handbook of linguistic code-switching* (pp. 21-39). Cambridge University Press. <https://doi.org/10.1017/CBO9780511576331.003>

Izura, C., Cuetos, F., & Brysbaert, M. (2014). Lextale-Esp: A test to rapidly and efficiently assess the Spanish vocabulary size. *Psicológica*, 35(1), 49-66.

Koronkiewicz, B. (2018). Acquiring L1-English L2-Spanish code-switching: The role of exposure to language mixing. *Languages*, 3(3), 26. <https://doi.org/10.3390/languages3030026>

Koronkiewicz, B., & Ebert, S. (2018). Modality in experimental code-switching research. In L. López (Ed.), *Code-switching – Experimental answers to theoretical questions: In honor of Kay González-Vilbazo* (pp. 147-175). John Benjamins. <https://doi.org/10.1075/ihll.19.06kor>

Lemhöfer, K., & Broersma, M. (2012). Introducing LexTALE: A quick and valid lexical test for advanced learners of English. *Behavior Research Methods*, 44(2), 325-343. <https://doi.org/10.3758/s13428-011-0146-0>

Montes-Alcalá, C. (2024). Bilingual texting in the age of emoji: Spanish-English code-switching in SMS. *Languages*, 9(4), 144. <https://doi.org/10.3390/languages9040144>

Muysken, P. (1997). Code-switching processes: Alternation, insertion, congruent lexicalization. In M. Pütz (Ed.), *Language choices: Conditions, constraints, and consequences* (pp. 361-380). John Benjamins. <https://doi.org/10.1075/impact.1>

Olson, D. J. (2022). The Bilingual Code-Switching Profile (BCSP): Assessing the reliability and validity of the BCSP questionnaire. *Linguistic Approaches to Bilingualism*, 14(3), 400-433. <https://doi.org/10.1075/lab.21039.ols>

Parafita Couto, M. C., Pouw, C., Laanen, R., & López, L. (2024). The role of INFL in code-switching: A study of a Papiamentu heritage community in the Netherlands. *Frontiers in Language Sciences*, 2. <https://doi.org/10.3389/flang.2023.1288198>

Poplack, S. (1980). Sometimes I'll start a sentence in Spanish y termino en español: Toward a typology of code-switching. *Linguistics*, 18(7-8), 581-618. <https://doi.org/10.1515/ling.1980.18.7-8.581>

Schütze, C. T. (1996). *The empirical base of linguistics: Grammaticality judgments and linguistic methodology*. Language Science Press. https://doi.org/10.26530/OAPEN_603356

Schütze, C. T., & Sprouse, J. (2014). Judgment data. In R. J. Podesva & D. Sharma (Eds.), *Research methods in linguistics* (pp. 27-50). Cambridge University Press. <https://doi.org/10.1017/CBO9781139013734.016>

Sebba, M. (2013). Multilingualism in written discourse: An approach to the analysis of multilingual texts. *International Journal of Bilingualism*, 17(1), 97-118. <https://doi.org/10.1177/1367006912438301>

Timm, L. A. (1975). Spanish-English code-switching: El porque y how-not-to. *Romance Philology*, 28(4), 473-482.