

Western Interdisciplinary Student Symposium on Language Research

MARCH 2nd, 2024



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Overview of WISSLR 2024 Conference

Event Location & Time:

Conron Hall & Zoom 8:55 – 5:00 EST

Registration & Breakfast	08:30 – 08:55
Opening Remarks	08:55 – 09:00
Session 1	09:00 – 10:30
First Break	10:30 – 10:40
Session 2	10:40 – 11:40
Keynote Presentation	11:40 – 12:25
Lunch Break	12:25 – 13:25
Session 3	13:25 – 14:55
Second Break	14:55 – 15:05
Poster Session	15:05 – 15:45
Session 4	15:45 – 16:45
Closing Remarks	16:45 – 17:00

WISSLR 2024 Schedule

Saturday March 2 nd , 2024 Location: Conron Hall (UC3110) & Zoom	
8:30	Registration and Breakfast (UC3127)
8:55	Opening remarks
Session 1 Chair: Chuqiao Wu	
9:00	Alienability in Kinyarwanda External Possession Patrick Kinchsular University of Toronto
9:30	The syntax of the Korean -ese Construction (online) Ryan MacDonald University of Toronto
10:00	Verbal Negation in Chayma, Cumanagoto, and Paria Sakina Raza Western University
10:30	Break
Session 2 Chair: Jillian Maklin	
10:40	The phonology of Montreal Cantonese Braden Wye Western University
11:10	Spatial Frames of Reference in Signed Languages Dominic Le University of Toronto, Oksana Tkachman University of British Columbia
11:40	Keynote Presentation: Dr. Lex Konnelly
12:25	Lunch
Session 3 Chair: TBA	
1:25	Classification Vectors as a Tool for Modeling Human Speech Discrimination Paula Arkhangorodsky University of Toronto
1:55	Vowel length and the glottal stop in Teochew: A documentary phonetic study Griffin Cahill York University
2:25	Sound Symbolism and Iconic Prosody: Do speakers modulate their voice to express the shapes of objects? Katarina Jovanovic, Katelyn Matsumoto Huron University College
2:55	Break
3:05-3:45	Poster session Online or Offline Experience: The Effect of Online Learning Platforms on Negation for English-speaking L2 Learners of French Audrey Moore Western University A Linguistic and Etymological Exploration of "genuine" Maya Chawla Western University The Production of Third Person Subjective Singular Pronouns in English among Mandarin-L1-English-L2 Children Jinmei Zhang Western University

Session 4 Chair: TBA	
3:45	Gendered sound symbolism in Urdu names interacts with gender morphology Hassan Khan University of Toronto, Yoonjung Kang University of Toronto Scarborough
4:15	L1 transfer or default local readings for reflexives? Evidence from Turkish and English Burcu Boran, Liz Smeets York University
4:45-5:00	Closing remarks

Abstracts

Keynote Presentation

Linguistics and Tech Stewardship: A Sociolinguistic Perspective on Large Language Models

Dr. Lex Konnelly

The widespread release of Large Language Models (LLMs), probabilistic text generation algorithms that can produce remarkably fluent language, have spurred a phase of rapid development and integration across industries seeking to capitalize on the promises of big tech. LLM technology is already advancing faster than our understanding of its impacts on society, and as a fundamentally linguistic innovation, linguists are among the most capable to intervene. However, the value of linguistics has been directly challenged by many believers in its revolutionary potential, with some arguing that LLMs undermine virtually every claim proposed by generativist approach and cast a shadow on the future of the discipline (Piantadosi 2023).

In this talk, I address LLMs from a sociolinguistic perspective, considering some of the language myths that suffuse Conversational AI, how these myths contribute to obfuscation about the state of AI capabilities more generally, and the risks that AI hype poses for linguistic “ex-coding” (Buolamwini 2023) of already under-resourced language communities. I present three central challenges for linguistic justice in the industrial race for bigger and bigger LLMs: (1) the sharp increase in training data necessary to train deep neural networks and the resulting risks to both humans and the environment, (2) the new language gap facing communities whose languages are deprioritized in the face of such large data requirements, and (3) the potential downstream effects of ‘algorithmizing’ interactions formerly held between human interlocutors. Echoing prior calls from Bender & Koller (2020) and Bender et al. (2021), I highlight the ways that linguists can play an active role in deflating AI hype and demystifying conversational AI technologies, impacting AI literacy for present and future generations.

Session 1

Alienability in Kinyarwanda External Possession

Patrick Kinchsular / University of Toronto

Kimenyi (1978) describes two distinct patterns of external possession constructions in Kinyarwanda. The first type, termed nuclear EPCs (1b), features no overt morphology, while the second type, applied EPCs (2b), requires applicative morphology on the verb.

- (1) (Kimenyi, 1978, p. 105)
- a. umugóre y-a-shokoj-e umusatsi w'=ûmugabo
 woman SM₁-PST-comb-FV hair CON₃=man
- b. umugóre y-a-shokoj-e umugabo umusatsi
 woman SM₁-PST-comb-FV man hair
 'The woman combed the man's hair.'
 lit. 'The woman combed the man the hair.'
- (2) a. Ingurube z-a-ri-iye ibíryo by'=abaána
 pigs 10SM-PST-eat-ASP food CON₈=children
- b. Ingurube z-a-ri-ir-iye abaána ibíryo.
 pigs 10SM-PST-eat-**APPL**-ASP children food
 'The pigs ate the children's food'
 lit. 'The pigs ate children the food'

The applicative morphology alternation in EPCs involves different object properties of externally possessed nouns. When the applicative suffix is realized, the possessum resists passivization, relativization, and pronominal incorporation. External possessa in nuclear EPCs retain objecthood properties.

I attribute objecthood asymmetries to different applicative types. Applied EPCs involve overt high applicatives while nuclear EPCs attach a covert applicative low. This approach is contrary to previous explanations of Kinyarwanda EPCs (Davies, 1997; Kimenyi, 1978). The alienability of the possession is determines where the applicative attaches. Inalienable possessa participate in EPCs similarly to affective constructions in Romance (Cuervo, 2003). Alienable possessa EPCs are derived via possessor raising. Both constructions have different motivations based on their distinct morphological distribution.

While external possession constructions frequently obscure the relation between syntax and semantics, the analysis presented returns to a theory where structure and meaning are interpreted together. Crucially, the possessive reading is only available as it is derived from an underlying possessive structural relation.

The syntax of the Korean -ese Construction (online)

Ryan MacDonald | University of Toronto

In Korean, two clauses may be linked using the verbal suffix -ese, as in (1). This morpheme establishes either a sequential or causal link between the embedded -ese marked constituent and the matrix clause indicating that the event of the -ese construction occurs prior to or causes the event of the matrix clause (H. Lee 1991; H. Kim 1992; Sohn 2009; Hong 2012; Kwon 2012; Gerd & Shin 2018; Y. Park et al. 2021; Yoo 2021).

- (1) *cihwun_i-i-nun* [Δ _i *tochakha-ese*] *palpyo-lul* *sicakha-ess-eyo*
 Jihun-*i*-TOP arrive-*ese* presentation-ACC start-PST-polite
 ‘Jihun_i arrived and then he_i started the presentation.’

My project focuses on determining the syntactic structure of the -ese constituent in (1). To do that, I investigated two main questions. First: what is the maximum projection of the constituent that -ese attaches to? Is it simply a vP/VP with no higher projections – as it appears in (1) with -ese directly affixed to the verb stem, is it a full CP with all lower projections, or something in between? The next question is concerned with the subject of the -ese construction. I assume that there is an implicit subject in the -ese construction in (1) in light of θ -theory which posits that each verb predicate requires a DP subject (Chomsky 1981). So, my second question is: what is the nature of the implicit subject (indicated by the theory-neutral symbol Δ)? Specifically, is the implicit subject a null PRO like in a control structure or a phonologically null pronoun (pro)? One reason to think that implicit subject might be PRO, is the fact that the -ese construction in (1) resembles a canonical control structure in that the null subject is coreferential with a higher argument and there is no tense-marking on the verb (Chomsky 1980; Landau 1994; Green 2019), as in (2) which shows an example of control in Korean (J. Park 2011).

- (2) *na_i-nun* [**PRO**_i *kyohoy-ey ka-lyeko*] *ilccik ilena-ass-ta*
 1SG-TOP church-to go-*lyeko* early get.up-PST-DECL
 ‘Intending to go to church, I got up early.’ (J. Park 2011: 143 [7a])

I demonstrate that -ese may co-occur with tense, aspect, or modal morphology. This contrasts with claim by Gerd & Shin (2018) that -ese cannot combine with tense/aspect morphology. I argue that the occurrence of this morphology indicates that the maximal projection within the -ese construction can be at least as large as ModP (a modal phrase) – i.e., larger than a TP but smaller than a CP. I also show that the null subject of the -ese construction does not behave like PRO. In contrast to the requirements of PRO, the antecedent of the null subject is not required to be in a local relationship with nor is it necessarily required to c-command Δ . Thus, I argue that the null subject Δ of the -ese construction is actually pro.

Verbal Negation in Chayma, Cumanagoto, and Paria

Sakina Raza / Western University

This paper examines the intricate process of verbal negation strategies in the Chayma, Cumanagoto, and Paria languages, which are closely related members of the Cariban language family, located along the coastal regions of Venezuela. With no fluent speakers, the 3 languages are considered dormant but are currently undergoing a community driven revitalisation process. In response to the indigenous groups’ request for linguistic resources to aid their revitalisation efforts, this study aims to contribute to the revitalization process as well as add to the growing body of literature on understudied Cariban languages. Through the qualitative secondary analysis of a manuscript from the 1600s written by Spanish missionaries documenting Chayma, Cumanagoto, and Paria, this study identifies 6 distinct negation elements. Composed of prefixes

(/t-/), suffixes (/nono/~ /tono/, /pra/, /manr/~ /pnar/, /puin/), and independent lexemes (/huachique/), negation markers in these languages have unique rules governing their usage and are used in very particular environments. By highlighting similarities and differences in the negation strategies employed by the 3 languages, this analysis reaffirms the status of Chayma, Cumanagoto, and Paria as very similar but distinct languages.

Session 2

The phonology of Montreal Cantonese

Braden Wye | Western University

Montreal Cantonese may be hypothesized to take on phonological features of French, based on previous research (Auer et al. 2018, Nagy 2023) that demonstrate that a dominant language of a society can interfere with heritage languages with which it comes into contact. For instance, a study on Cantonese in Toronto (Tse 2018) ascribed the near-merger of [y] and [u] (see data below), two separate phonemes in homeland (Hong Kong) Cantonese, to (a) the lack of phonemic [y] in English and (b) a vowel shift that involved the fronting of [u] in Torontonian English. I argue, based on the literature review in this paper that forms the basis of upcoming fieldwork, that the vowels of Cantonese spoken in Montreal show minimal deviation from the Hong Kong standard.

(1), a. Tse 2018 (190-200)

Sample data showing evidence of a near-merger (F2 values shown):

Individual 1 (22-y.o. Gen2 male): /fu˥/ ('trousers') ~1360 Hz vs /tʰyn˨/ ('entire') ~1250 Hz

Individual 2 (44-y.o. Gen1 male): /pʰun/ ('move house') ~1240 Hz vs /tʰy˥/ ('reside') ~1420 Hz

While there is no existing research on heritage Cantonese speakers in a francophone environment, two facets of data serve as the evidence for making my claim. Firstly, studies of Chinese learners of French allow us to compare the phonologies of the two languages. For instance, the retraction of [œ] by L1 Chinese, L2 French speakers (Demolin & Yin 2021) tell us that Montrealers with French as their dominant language would produce that vowel in a more fronted position than those in Hong Kong. Since [y] and [u] exist as phonemes in both languages, analysis based on the corresponding vowel inventories alone suggests that a merger is unlikely in Montreal Cantonese.

Secondly, variationist studies on Cantonese in Toronto dispute whether sociolinguistic effects of language contact - measured temporally through age, generation or immigration status or with an interview to position the subject's ethnocultural orientation - correlate with heritage language shift. Monahan & Soo (2023) showed that heritage Cantonese speakers had, to some extent, lower rates of discrimination between tones of like contours when compared to homeland speakers from Hong Kong. But others (Auer et al. 2018, Nagy 2023) found statistical insignificant differences in VOT and denasalisation between the two groups.

Existing Toronto data do, however, show a correlation between observed vowel shifts in

local Cantonese speakers and vowel shifts in Torontonians English - particularly regarding the aforementioned [u] fronting as well as an [i]~[ɪ] split in the younger generation (Tse 2018). Therefore, special attention would be warranted toward sound changes in Montreal Cantonese where correspondences can be found in Montreal French.

The data examined in this paper permit us to predict what we expect to see in our fieldwork. A variationist study modeled on research by Nagy (2023) will be conducted over Zoom in which participants will have their vowels elicited through a picture description task of [y] and [u] tokens and their ethnic orientation quantified from a survey about language use and attitudes. Their audio recordings will be transcribed and their vowel formants measured using PRAAT. The demographic and phonetic data will be used to test the hypothesis that Montreal Cantonese deviates strongly from Hong Kong Cantonese. This research can be used to further advance the study of heritage languages in Canada as a unique phenomenon of language contact.

Spatial Frames of Reference in Signed Languages

Dominic Le | University of Toronto

Oksana Tkachman | University of British Columbia

Introduction. Frames of reference (FoR) in language indicate the location of objects in space (Levinson 2003). Levinson (2002: 158) identified three basic cross-cultural FoR being intrinsic, relative, and absolute. In coding a couple of objects - a figure and a ground, the intrinsic FoR frames the figure from the ground's axis (e.g. to its side, back or front): the cheese is in front of the grater. The relative FoR frames the figure's relationship to the ground from the viewer's perspective: the cheese is to the left of the grater. The absolute FoR frames objects based on a globally set axis: the cheese is north of the grater. FoR have been identified as points of cultural variation in spoken languages (Bohnemeyer et al. 2014, 2015; Palmer 2015; Palmer et al. 2017).

Sign languages used by deaf communities have been well recorded to utilize the same phonological properties as spoken languages, and all three frames have been utilized in different sign languages (e.g., American Sign Language (ASL), Emmorey 2002). Previous research focused on sentential applications of FoR (e.g., Emmorey 1999), coding sentences like those previously exemplified. In our current project, we show that individual signs can utilize different FoR in their forms as well. Take for example the ASL sign for "far" (see figure 1) where one fist (closest to the signer's chest) is the ground, and the other fist (of the dominant hand) is the figure which starts near the ground but moves away while the signer's gaze follows the figure. This sign seems to utilize a relative reference frame with a ground, figure, and the signer as an anchor. Our project extends research on FoR to signed languages to investigate how space can be described with linguistic means such as FoR across various modalities (spoken vs. signed).

Methods. We used spreadthesign.com as our sign language corpus. In a pilot study, the primary investigator and research assistants annotated each word from a list of 76 spatial terms in American Sign Language (SL), British SL, Croatian SL, Turkish SL, Japanese SL, Japanese SL,

and Chinese SL for their reference frames. The present study extends the pilot by annotating for additional FoRs that were identified in previous research. These include direct and object-oriented FoR (respectively whether the signer or an object intrinsically frames a figure, Danziger 2010), deictic FoR (pointing reference, Diessel 2014), and unoriented (when neither figure/ground orient each other, Palmer 2003). Signs that did not fit these categories were excluded from coding. Moving beyond the pilot study, we are currently coding the same terms in all of the sign languages represented in the corpus.

Discussion. This is an ongoing project with the goal of understanding how frames of reference are used across both spoken modality and signed modality. We will report on the cross-linguistic tendencies we have identified in the sign languages under investigation.

Figure 1 (Far)



Session 3

Classification Vectors as a Tool for Modeling Human Speech Discrimination

Paula Arkhangorodsky | University of Toronto

Our native phonemic categories affect our perception of speech. Thus, these phonemic categories frame our intuitions when dealing with phonemes not present in our native language. This explains why Russian speakers have a hard time distinguishing between /v/ and /w/, since, as they would put it, /w/ does not exist in Russian but the two sounds feel similar. The implications native phonemic categories have on human speech perception fall under the domain of categorical perception, which states, in part, that we perceive sounds in distinct categories rather than on a continuum. Categorical perception is often seen as a crucial piece of human speech perception, yet, the current body of literature does not incorporate categorical perception in its efforts to model human speech perception. Thus, the focus of this paper is to compare two algorithms for predicting human discrimination; one using the standard approach (with no implementation of categorical perception), and another which incorporates an operationalization of categorical perception.

In this study, I simulate an ABX discrimination task using Dunbar and Millet's (2022) World Vowels corpus and compare these results with human responses using the same corpus.

However, while humans have an intuitive understanding of what sounds feel similar to others and can give judgements related to this, computers rely on internal representations of speech sounds—arrays of numbers, which can be viewed as points in space—to interpret sound. Thus, a standard approach when modeling human discrimination tasks is to extract representations of sound files using computational speech models, and compare the distance between these representations in geometric space in some way. Moreover, Dunbar and Millet (2022) have shown that these distances between computational speech model representations correlate well with whether human participants answered correctly in an ABX task using the same stimulus.

I will use three computational speech models: MFCC, wav2vec2.0, and DeepSpeech2. MFCC is a model that only uses elements of the acoustic signal to extract its representation, this will be my baseline model. Wav2vec2.0 is a self-supervised model. Since it has no pretrained structure, it aims to uncover the underlying structure and patterns of the stimuli. Finally, I will use DeepSpeech2 model representations. DeepSpeech2 is a supervised model with an inherent phoneme classification step.

I operationalize categorical perception as classification vectors, which are extracted using a k-Nearest Neighbours (kNN) approach to express each sound as a vector representing how similar that sound is to native phonemes in a given language, here, English vowels. Compared to the standard approach, rather than computing the distance between the stimuli directly from the model representations of specific sound files, I compute classification vectors from the model representation files, effectively warping the distance between stimuli to account for phonemic categories, then compute the distance between the classification vectors.

This paper concludes that incorporating an operationalization of categorical perception, here, classification vectors, improves our predictions of human speech perception. Consequently, this implies that categorical perception is a crucial piece of human speech perception.

Vowel length and the glottal stop in Teochew: A documentary phonetic study
Griffin Cahill | York University

This paper describes the relationship between the glottal stop /ʔ/ in coda position with a preceding nucleic vowel in Teochew, a variety of Southern Min. In phonological descriptions of several dialects, the consonantal inventory includes 18 consonants of which /ʔ/ is the only one restricted to coda occurrences (Lee 1998; Peng 2013; Pho 2020; Thamrin 2020; Yeo 2011). Cross-linguistically, /ʔ/ has been observed to be a dynamic phoneme, and highly acoustically and articulatorily variable (Garellek 2013; Ladefoged & Mathieson 1995 among others). In word final phonemic realizations of /ʔ/, the glottal stop does not often represent a full closure and has been noted as acoustically distinct from (also phonemic) initial glottal stops in languages such as Thai (Harris 2001).

In addition to a review of the relevant work on Teochew in conversation with earlier phonetic

work on glottal stops, this paper also includes the results of a phonetic study on the realization of /ʔ/ in Teochew. A documentary elicitation session was conducted with a native Teochew speaker and serves the dual purpose of addressing the relevant research question: is /ʔ/ a full consonant in the inventory of Teochew and does [ʔ] act like other finals?

The elicitation session focused on the production of [ʔ] in coda position, with the intent of examining its acoustic properties, particularly its relationship with preceding vowels. Given that glottal stops have been shown to be inconsistently realized as with full closure, it was hypothesized that in cases with underlying /ʔ/, the duration of the preceding vowel would resemble the duration of a vowel preceding another final consonant. Such vestigial effects of underlying glottal stops been noted in Western Muskogean languages, for example (Ulrich, 1993). Based on elicitations from a short wordlist, the average duration of the vowels preceding glottal stops in the tokens was 123 milliseconds (ms). This trended very closely with the average duration of vowels preceding other coda consonants (158 ms). These two results contrasted strongly with the average duration of vowels without a coda consonant, glottal stop or otherwise, which were all greater than 350 ms.

It appears from these results that there is acoustic evidence that the glottal stop /ʔ/ is indeed a full phoneme in Teochew and effects preceding vowel duration even where no acoustic or perceptual evidence of a full stop exists.

Sound Symbolism and Iconic Prosody: Do speakers modulate their voice to express the shapes of objects?

Katarina Jovanovic, Katelyn Matsumoto | Huron University College

Language is considered to be largely arbitrary, with no consistent mappings between the sounds of words and their meanings. However, some exceptions challenge this notion, notably demonstrated by the 'kiki/bouba effect,' also known as the 'maluma/takete effect.' In this phenomenon, participants are presented with two abstract shapes—one rounded and the other pointy—and are asked to associate the pseudowords 'bouba' and 'kiki' with these shapes. Remarkably, participants consistently link 'bouba' (or, in earlier trials, 'maluma') with a round shape and 'kiki' (or 'takete') with a pointy shape. This finding was replicated across diverse cultures, languages, and orthographic systems, suggesting some limited but universal sound-to-meaning mappings.

The present study aims to build upon these findings in two ways: (1) by exploring whether speakers adjust their voice to reflect the shapes of objects and (2) by investigating whether newly generated, computer-based pseudowords align with speakers' mappings onto the round-pointy spectrum. All pseudowords used were extracted from Matsuhira et al. (2023), whose computerized model generated 20 pseudowords to represent either the pointy or round extremes of the sound symbolic spectrum. To examine iconic prosody—whether speakers modulate their voice to represent object shapes—we will record participants pronouncing each pseudoword. Subsequently, the mean pitch for pointy and round word

groups will be calculated and compared. Based on findings in the field about similar sound symbolic correspondences, such as that with object size, we predict observing a higher mean pronunciation pitch for pointy words (e.g., 'kiki,' 'takete') and a lower mean pronunciation pitch for round words (e.g., 'bouba,' 'maluma').

Finally, to explore whether computer-generated pseudowords align with speakers' round-pointy spectrum mappings, participants will associate previously pronounced words with either a round or pointy abstract outline. This aspect of the study is exploratory, and there are no specific predictions. However, a congruent match would occur if both the speaker and the computer placed a pseudoword (e.g., 'koikei') on the same end of the spectrum.

A better understanding of the concepts of sound symbolism and iconic prosody is fundamental for linguistic understanding of non-arbitrary sound-to-meaning mappings. To increase the ecological validity of the association between sound symbolism and iconic prosody, it is essential to extend research beyond basic words and transition to settings where sound-to-meaning mapping associations occur naturally. Future research could also investigate whether the modulation of voice is influenced by categorization or individuation—specifically, whether words are easily grouped into categories rather than identified based on the unique meanings of each presented word.

Session 4

Gendered sound symbolism in Urdu names interacts with gender morphology

Hassan Khan | University of Toronto

Yoonjung Kang | University of Toronto Scarborough

Introduction A recent turn in sound symbolism research suggests that names exhibit gendered sound symbolism, finding certain sounds, like sonorants, are associated with feminine names, and others with masculine names in English (Slater & Feinman 1985; Barry & Harper 1995; Pitcher et al. 2013) and cross-linguistically (Kang 2021; Ackermann & Zimmer 2021). While some argue this is evidence for universal, synesthetic sound symbolism (e.g. Cutler et al. 1990; Oelkers 2003), others maintain that these sound-meaning associations are conventionalized and language-specific (e.g. Hough 2000; see discussion in Nubling 2009). "

Previous research found feminine names in Urdu not to have significantly more sonorants, while finding significantly fewer and heavier syllables in masculine names (Mohsin & Kang 2018).

To account for the confounding effects of feminine suffixes, previous studies have removed gendered suffixes (as in Kang 2021) or treated all final segments separately (as in Ackermann &

Zimmer 2021), implicitly assuming that phonological cues for gender behave uniformly across all names. For example, if sonorants are feminine, feminine names both with and without feminine suffixes should have more sonorants than masculine names.

However, while phonological qualities may serve as cues for gender, a feminine suffix is decidedly a stronger one. Morphological gender markers could conceivably eliminate the communicative function of gendered sound symbolism (see Oelkers 2003). This study examines how gendered sound symbolism behaves in Urdu names with and without feminine suffixes.

Methods The 102 most popular boys' names and 101 most popular girls' names were collected from matriculation results in Gujranwala, Pakistan. They were coded for length in SYLLABLES; proportions of LIGHT SYLLABLES, SONORANTS, HIGH VOWELS, FRONT VOWELS, and PALATAL CONSONANTS; GENDER (F or M); and APPARENT MORPHOLOGY, which marks whether a name's ending resembles one of several feminine morphemes present in Urdu names.

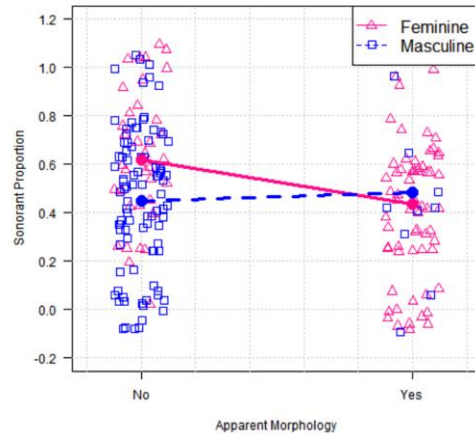
A binary logistic regression model was created in R, predicting GENDER from APPARENT MORPHOLOGY, all phonological variables, and their interactions. Insignificant predictors were procedurally eliminated using the Akaike Information Criterion.

Results & Discussion As Figure 1 shows, for names without APPARENT MORPHOLOGY, sonorant proportions are higher for feminine names than masculine names, as predicted. This is not true, however, of names with APPARENT MORPHOLOGY. The binary logistic regression model demonstrated that this is a significant difference ($p < 0.05$).

For names without feminine morphological markers, more sonorants makes a name more likely to be feminine ($p < 0.01$), which significantly differs from names with morphology ($p < 0.05$). A post-hoc chi-squared test shows no significant effect of SONORANTS in names with feminine morphology ($p = 0.664$), matching our prediction that morphology achieves the communicative function of gendered sound symbolism.

Our finding in Urdu names demonstrate that in the debate around universal, synesthetic sound symbolism, meaningful morphological markers present a challenging confound that can obscure active phonological cues, which future research must account for. This opens the door for cross-linguistic and empirical research methods to test the synchronicity and robustness of such results.

Figure 1: Relative average sonorant proportions by presence of morphology and gender.



L1 transfer or default local readings for reflexives? Evidence from Turkish and English *Burcu Boran, Liz Smeets | York University*

The interpretation of reflexives has received considerable attention in L2 acquisition research. Earlier studies find evidence for both L1 transfer and for a universal preference of local antecedents. L1 transfer was found in Yuan (1998) where Japanese learners of Mandarin (whose L1 allows long distance (LD) antecedents of *zibun*) correctly allowed LD antecedents for the Chinese reflexive *ziji*, while English learners of Mandarin did not (see also Kim, Montrul and Yoon 2009 for L2 Korean). Against L1 transfer, neither Korean nor English learners of Mandarin in Chen and Ionin (2022) allowed the LD reading for *ziji*, despite Korean reflexives *caki* and *casin* allowing LD antecedents. On studies where the L2 allows a subset of the interpretations available in the L2, Hirakawa (1990) found that Japanese learners of English incorrectly transferred LD interpretations onto English. Similarly, Turkish intermediate learners of English (Turkish *kendisi* and *kendi* allow both local and LD interpretations (Özbek and Kahraman, 2016)) failed to reject non-local antecedents for English reflexives when this was the pragmatically preferred reading, suggesting L1 transfer (Demirci, 2000). However, no advanced learners were included, making it unclear whether unlearning transferred LD interpretations for himself/herself is possible.

The current study focuses on L2 Turkish and L2 English. We elaborate on Chen and Ionin (2022) who propose that the low acceptability of LD readings for *ziji* by L2 learners can either be due to a universal preference for local readings of reflexives or due to input properties specific to *ziji* (*ziji* being used infrequently in the input and according to some studies barely acceptable with LD readings by native Mandarin speakers (Chen, 1995)). Like Mandarin, Turkish reflexives allow a superset of the binding interpretations available in English (Compare 1a and 1b). Unlike Mandarin, which also has the locally bound reflexive *taziji*, all Turkish reflexives allow LD

interpretations. This, as well as the widely accepted use of *kendi(si)* with LD readings (Özbek and Kahraman, 2016), may facilitate acquisition. Note that no previous study looked at production, making it unclear how often *kendi* or *kendisi* is used instead of pronouns for LD interpretations.

We administered a Picture Description Task (PD) and a picture-based Truth Value Judgment task (TVJ) (see Figure 1). Participants included 8 English and 17 Turkish native speakers, intermediate and advanced L2 Turkish speakers (n=20) and intermediate and advanced L2 English speakers (n=12). Results show that while intermediate L2 English learners occasionally use *himself/herself* in sentences with LD readings, advanced participants are fully target-like. L2 Turkish participants have difficulty accepting and using *kendi* and *kendisi* with LD antecedents, even at advanced levels of proficiency.

The findings provide evidence in favour of a universal preference for local antecedents in the acquisition of reflexives, as L2 English speakers performed target-like despite the fact that subset grammars are arguably more difficult to acquire. Similarly, despite the available evidence in the input for *kendi* and *kendisi* with LD interpretations, L2 Turkish speakers failed to accept reflexives with LD readings. Our L2 Turkish results are furthermore interesting for comparison with earlier studies on Turkish heritage speakers who did show target-like interpretations of Turkish reflexives (e.g., Gračanin-Yukseket al. 2020). Future work will examine whether L2 Turkish learners can overcome the default local reading after increased exposure to reflexives with LD readings (e.g. using contexts where *kendi/kendisi* favours a LD interpretation, overriding a default local interpretation).

Example items sampling Turkish and English reflexives

- (1) a. Brad_i [Henry'nin_k kendi-ni_{i/k/*m}/kendi-si-ni_{i/k/m} o-nu_{i/*k/m} yak-tig-i]-ni söyle-di.
 Brad Henry-GEN self-ACC self-3SG-ACC s/he-ACC burn-NOM-3SG-ACC say-PAST
 'Brad_i said that Henry_k burnt herself-himself_{i/k/*m} / herself-himself_{i/k/m} / her-him_{i/*k/m}'
 b. Brad_i said that Henry_k burnt himself_{i/k/*m} / him_{i/*k/m} (Adapted from Chen and Ionin, 2022)

Example item from Picture Description Task (left) and Truth Value Judgment Task (right)

Lütfen yanda verilen fotoğrafı aşağıdaki sıralamaya göre tanımlayınız.
 "Please define the given photo starting with the following order:"

Ann, Betty'nin söyledi.
 "Ann said that Betty"

	Picture A (LD readings)	Picture B (Local readings)
Brad Henry'nin onu yakığını söyledi. "Brad said that Henry burnt him."	TRUE	FALSE
Brad Henry'nin kendini yakığını söyledi. "Brad said that Henry burnt self"	FALSE	TRUE
Brad Henry'nin kendisini yakığını söyledi. "Brad said that Henry burnt himself"	TRUE (With some variability)	TRUE (With some variability)

Figure 1. Trials adapted from Chen & Ionin (2022). Showing predicted responses for Turkish native speakers

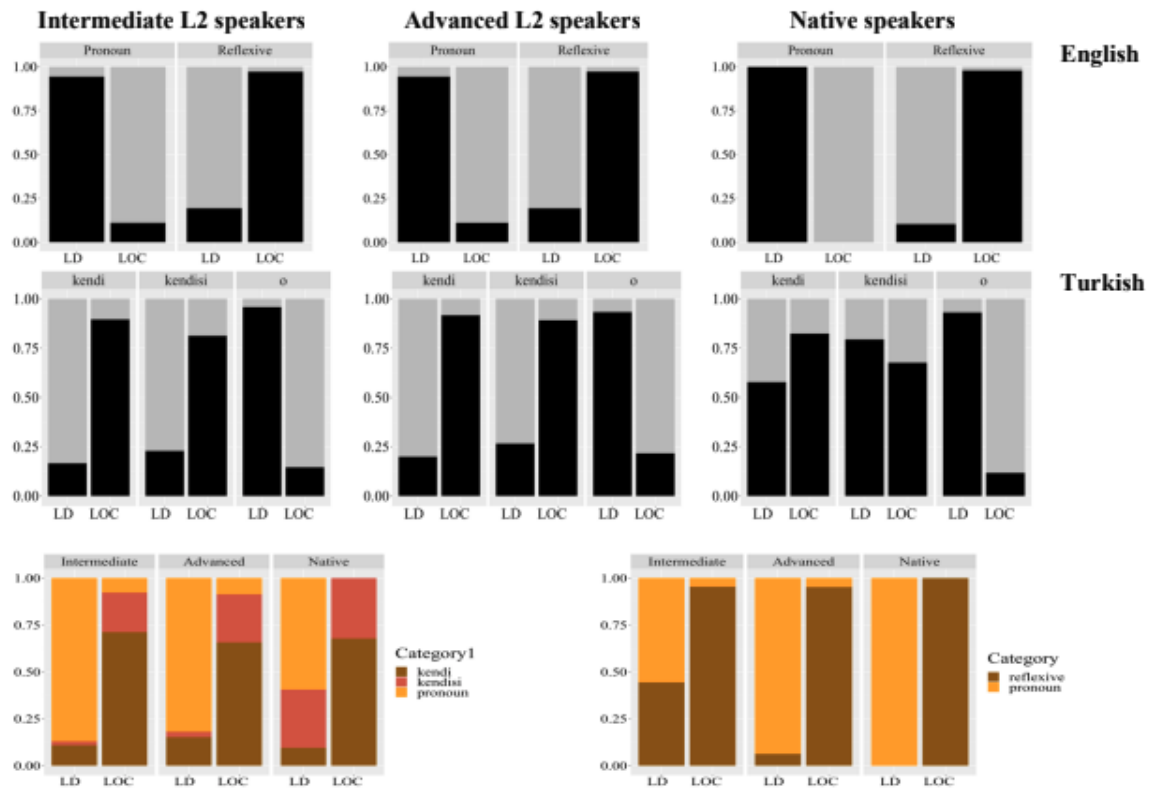


Figure 2. Results from the Truth Value Judgment task (top) showing acceptance rate in black and Picture Description task (bottom) showing proportion of use of reflexives vs. pronouns with LD and local interpretation

Poster Abstracts

Online or Offline Experience: The Effect of Online Learning Platforms on Negation for English-speaking L2 Learners of French

Audrey Moore | University of Western Ontario

This hypothetical study aimed to investigate the effects of learning methods on the acquisition of simple negation in French. The study was not conducted with participants, and it outlines a potential theory and method. Research on the specific comparison between learning by having conversations and learning using online platforms, such as Duolingo, in French is an underexplored area. With rapidly evolving technology and growing popularity, learning with these websites as opposed to learning socially, could impact the acquisition of certain language structures. In French, there are differences between the spoken and written forms of negation. The formal written negation syntax includes the element “ne” (a negative word used alongside “pas”, which means “not”) between the subject and the verb, while spoken French mostly excludes “ne”. The planned participants consisted of three beginner adult groups in Canada: a control group of monolingual French speakers, an experimental group of English-speaking foreign language learners of French using online platforms, and an experimental group of English-speaking second language learners in a French-speaking area. To test the negation preferences of the three groups, a production task and a judgement task were created in French. The production task would be used to test whether the target element would be omitted in

speech, by asking a question and prompting a negative response sentence. The judgement task would also target this preference by showing sentences side-by-side with the two opposing uses of French negation in written form, prompting participants to select the best sentence. It was predicted that the online learners would prefer to include “ne”, while the group of learners receiving input from conversations would prefer to exclude it. It was also hypothesized that the results would have indicated differences in preference between the two tasks, given that one is spoken, and one is written. The effects of linguistic transfer between French and English were also considered.

A Linguistic and Etymological Exploration of "genuine"

Maya Chawla | University of Western Ontario

Language has great power to connect individuals and develop shared understanding. Anatomical terminology is a shining example of this, and understanding the history and etymology of scientific vocabulary also provides insight into the advancement of science itself. The existence of eloquent, precise descriptors in science derived often from common origins in Latin and Greek allows scientists and health professionals of all disciplines and many languages/cultures to communicate and understand each other when it comes to the human body; mutual understanding allows injuries and illnesses can be treated, groundbreaking research advancements can be made and lives to be saved through collaboration, propelling the care of human health forward. Propelling the human body forward via locomotion is the knee joint, or genu in Latin. Often, scientific and anatomical adjectives from Latin roots contain the suffix “-ine” derived from the Latin adjectival suffix -inus, which has multiple phonetic realizations in English; there exists [ɪn] as in sanguine, [am] as in supine, and [ɪn] more often found in biochemistry, as in methionine. Throughout various bodies of lexicography the etymology of the main constituent is either attributed to genu meaning knee, or the Latin verb gignere meaning “to beget”; an ancient Roman custom in which legitimate paternity was acknowledged by placing a child on the father’s knee, heralding the child as “genuine” sees the convergence of these two possible etymologies. Many words derived from genu still retain a compositional meaning and are thus used in anatomy and science (i.e. genu valgum describing a condition in which the knees deviate inwards, and geniculate describes an anatomical or botanical structure with a knob-like/nodal appearance similar to a knee). However, despite its morphological resemblance to many anatomy and physiology terms such as sanguine, supine and uterine, the word genuine has become entirely semantically distinct from the knee and is not used in scientific contexts or listed in medical dictionaries; genuine is defined by the majority of English dictionaries in terms of being true to the origin of something. A morphologically similar derivative of genu with a different suffix (genua) was once considered the anatomical adjective for the knee joint, but genua is not used as often or listed in medical dictionaries and current anatomy/physiology corpora. Genicular, also derived from genu is defined in terms of pertaining to the knee joint and still appears in scientific spaces and anatomical literature to date, but is usually applied to neurovasculature of the knee region rather than the skeletal and articular structures of the true anatomical knee joint. It is possible that there is no longer a singular adjective to describe the anatomical knee joint because the knee is not a singular joint despite its surface anatomy. Instead

of a word derived from genu, the knee is referred to with the more precise adjectives patellofemoral and tibiofemoral referring to the two joints (patellofemoral and tibiofemoral) that comprise it, reflecting a remarkable progression in scientific understanding from surface anatomy to intrinsic skeletal structure throughout history.

The Production of Third Person Subjective Singular Pronouns in English among Mandarin-L1-English-L2 Children

Jinmei Zhang / University of Western Ontario

A few studies investigated how cross-linguistic influence hypothesis involved in English acquisition of 3rd person pronouns for Mandarin L1 speakers. In Mandarin, 3rd person singular pronouns, he, she and it are homophones as shown in Table 1, which is different from English.

3 rd person singular subject pronouns in English	3 rd person subjective singular pronouns in Mandarin	
	Written	Spoken
he	他	/tā/
she	她	/tā/
it	它	/tā/

Table 1: The written and spoken form of 3rd person singular subjective pronouns in Mandarin.

In this research, I investigated how these differences will affect children's English production in using 3rd person singular subjective pronouns by comparing Mandarin-L1-English-L2 with English-L1-Mandarin-L2 children. How their performance varies in 2 years of L2 environment exposure is an important factor in this research as well. Totally, 60 participants involve in the study. Half of them move to Canada from China at the age of 5 and the other half move from Canada to China. Each group has equal number of males and females. They only have initial stage of knowledge about their second language before they go to the new environment. To track the performance of the study, a longitude study is used to the test the results. The first task is taken at the age of 5.5 and they are tested every half year for 5 times in total, lasting 2 years. Each time, they are given the same tasks to complete. For each time, their parent of the children completes a questionnaire about their children's level of using the two languages and how they learn and use these languages. The children complete production tasks in the form of storytelling in English. Looking the picture of a girl and a boy with brief description, the children tell story of the pictures by using 3rd person singular pronouns, he and she. I proposed that Mandarin-L1 children perform less accurately at the beginning of the test. Therefore, negative transfer is shown to exist from their L1 to L2. After the 2-year exposure, the performance of Mandarin L1 children improves but do not achieve the native-like level. On the other hand, the accuracy of the English-L1 children decreases due to the influence of their L2. These hypothesis supports cross-linguistic influence hypothesis that L1 have an influence on the performance of L2 and L2 influences L1 as well.

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