Does that sound round to you?
Generalized posteriorization of English alveolars before approximants

BrettC Nelson, University of Calgary, Phonology

English alveolar obstruents /t d s/ are wildly unstable in that their surface forms are rarely [t d s]. This paper focuses on the respective palatoalveolar set of surface forms [tʃ dʒ ʃ]. While many speakers produce these allophones in onsets before /ɹ/ (1) (Smith, et al., 2019), a smaller set of North American speakers, most notably near New York City and Montréal, also produce them before [w] (2) (Nelson & Flynn, 2021).

1)   a.   ***betray***   /bitɹeɪ/   →   [bɪ.ˈtʃɹeɪ]

       b.   ***dr***one   /dɹoʊn/   →   [dʒɹoʊn]

       c.   ***sri****   /ʃri/   →   [ʃri]   (*/sr/ is not permitted in English)

2)   a.   ***between***   /bitwin/   →   [bɪ.ˈtʃwin]

       b.   ***Dw***ayne   /dweɪn/   →   [dʒweɪn]

       c.   ***sw***ing   /swiŋ/   →   [ʃwiŋ]

This paper analyzes this phonological process as a case of reanalysis of *enhancement cues* and **phonological features** (Keyser & Stevens, 2006). In typical English pronunciation, lip *rounding* enhances **[-anterior]** consonants including /tʃ dʒ ʃ/. I therefore claim that these speakers have reinterpreted the phonetic *rounding* cue spread by rhotic and labio-velar approximants as indicating the phonological feature **[-anterior]** in preceding obstruents.

Thus, when these speakers produce a sequence of **[+anterior]** /t d s/ before *rounded* approximants /w ɹ/, they apply a phonological change (Bach & Harms, 1972) of **[+anterior]** to **[-anterior]**, so that the *rounding* enhancement cue matches the surface representation. In English, this additionally forces the features **[+strident]** and **[+distributed],** as all English posterior obstruents carry these features, resulting in surface allophones [tʃ dʒ ʃ].

Works Cited

Bach, E. & Harms, R. T. (1972). How do languages get crazy rules? In R. P. Stockwell, & R. K. S. Macaulay (Eds.), Linguistic Change and Generative Theory (pp. 1-21). Bloomington: Indiana University Press.

Keyser, S. E., & Stevens, K. N. (2006). Enhancement and overlap in the speech chain. Language 82(1), 33-63.

Nelson, B. C., & Flynn, D.F. (2021). *"Chrump's on Chwitter"? A first look at expanding affrication of English /t/* [Conference presentation]. 2021 Canadian Linguistic Association Annual Meeting, Virtual.

Smith, B. J., Mielke, J., Magloughlin, L., & Wilbanks, E. (2019). Sound change and coarticulatory variability involving English /ɹ/. *Glossa: a journal of general linguistics, 4*(1), 63:1-51. https://doi.org/10.5334/gjgl.650

"Who you are" decides "what the smile means": Emoji-based Ironic interpretation between younger and older adults

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Topic: verbal irony

Abstract The interpretation of verbal irony relies on many cues and constraints. In CMC, paralinguistic cues, like emoticons and emojis, play an important role in signaling ironic intention. Smiling emoji has been contended to be an indicator signaling ironic intention among Chinese. Other factors like *age* and *social distance* have been identified as common ground that would also affect irony interpretation. Seldom any research has been done to detect the two factors' effect on irony interpretation in diverse age groups. This study attempted to investigate the interactive effect of these factors. Two groups of participants, younger (18 to 30, $N = 191$) and older (40 to 73; $N = 153$), took part in the experiment, and they were instructed to make judgements about the ambiguous comments accompanied by smiling emoji. Results showed that the age of the participants affect the interpretation of emoji-based ambiguous statements. Younger participants contended *age* of the speakers as well as the *social distance* of the characters in the context affect the interpretation. By contrast, older participants suggested the *age* of the speaker has a null effect on emoji-based irony interpretation, but held similar view as the younger participants that characters with distant relationships were more likely to use irony.

Keywords: irony, smiling emoji, ambiguous statements, age, social distance

References:

Hirsch, G. 2011. Between irony and humor: A pragmatic model. *Pragmatics & Cognition* 19: 530 561.

Howman, H. E., & Filik, R. 2020. The role of emoticons in sarcasm comprehension in younger and older adults: evidence from an eye-tracking experiment. *Quarterly Journal of Experimental Psychology,* 73(11), 174702182092280. doi: 10.1177/1747021820922804.

Hsiao, K.A. & Hsieh, P.L.2014. Age Difference in Recognition of Emoticons. In: Yamamoto S.(eds) Human Interface and the Management of Information. *Information and Knowledge in Applications and Services*. HIMI 2014. Lecture Notes in Computer Science, vol 8522. *Springer*, Cham. https://doi.org/10.1007/978-3-319-07863-2_38

Miller, H. J., Thebault-Spieker, J., Chang, S., Johnson, I., Terveen, L., & Hecht, B. (2016, March). "Blissfully Happy" or "Ready toFight": Varying Interpretations of Emoji. In *Tenth international AAAI conference on Web and social media*.s

Woodland, J. & D. Voyer. 2011. Context and intonation in the perception of sarcasm. *Metaphor & Symbol,* 26(3): 227-239.

Zhou, R., Hentschel, J., & Kumar, N. 2017. Goodbye Text, Hello Emoji: Mobile Communication on WeChat in China. *In Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems (CHI '17).* Association for Computing Machinery, New York, NY, USA, 748-759. Doi:10.1145/3025453.3025800

Compounding in Úwù

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Abstract: This paper examines compounding in Úwù, one the Benue-Congo languages spoken in a small community known as Àyèré in Ijùmú Local Government Area of the Kogi state in Nigeria.[1] Of the studies on Úwù and other neighbouring languages,[2-5] only a few exist on the morphology of the languages.[5-7] Compounding, the focus of this paper, is one of the prevalent morphological processes used productively to create new words from the existing ones in Úwù. Compound words produced in stories by three native speakers are examined. These were collected in 2017 as part of a larger documentation project. Many compound words in Úwù are endocentric (1). Some have a linking (bound) morpheme (2-3), which is not found in any of the neighbouring languages. No tonal alternations are observed, but vowel (and tonal) deletion is observed when the resulting compound has two adjacent vowels (1-3). Finally, the most common compound construction is that of noun + noun (2-3), where we typically observe a linking morpheme.

(1) E.g., /ʃe/ 'to eat'   +   /ɛnã/ 'meat'   = /ʃɛnã/ 'to eat meat'

(2) E.g., /àdʒá/ 'house'   + /-ni-/ +   /àdʒɔ̀/ 'work'   = /àdʒánàdʒɔ̀/ 'office'

(3) E.g., /oŋgu/ 'wood'   + /-ni-/ +   /úná/ 'fire'   = /oŋgunúná/ 'firewood'

Keywords: Úwù, associative morpheme, compounding

References

1. Blench, R. (2007). *Àyèré and Àhàn Languages of Central Nigeria and their Affinities. Wordlist Circulated for Comment*. Cambridge University Press.
2. Bamigboye, G.A. (1987). *Noun Phrase of Àyèré*. M.A Thesis. University of Ilorin.
3. Abiodun, M. A. (2007). *Àhàn and Àyèré: Two Endangered Nigerian Languages, in Festschrift in Honour of Ezikeojid*u, edited by J.I Okonkwo, pp. 40-51. Aba: Faculty of Arts, Imo State University.
4. Allison, I. O. (2017). Vowel Deletion and Insertion in Úwù. *Journal of Languages and Education, 3*(2), 19-29.
5. Boyede C.O. (2018). Affixation in Úwù Language. *Global Journal of Human-Social Science: Linguistics & Education*, 18(11).
6. Abiodun, M.A., Adeoye J.A & Allison I.O. (2018). Genitive Construction in Àhàn and Àyèré *World Scientific News 99 (2018) 235-243*
7. Ogunmodimu, M. D. (2015). *A Grammar of Àhàn*. PhD Thesis. Tulane University

Title: Perception and timing of acoustic distance
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Subdiscipline: Phonetics

Abstract

The notion of acoustic distance figures into many aspects of phonetics, including phonological neighborhoods. A measurement of word-level acoustic distance useful for cognitive modeling must account for two aspects of perception: listener sensitivity to acoustic differences and the duration discrepancies between words. The present paper suggests the use of dynamic time warping as a way to measure how acoustic distance accumulates between words over time. The results of a distance rating task with synthesized vowels were used as a basis for selecting a mathematical function that best matched listener sensitivities. Additionally, the results of a reminder task with synthesized vowels were used to determine a just noticeable difference threshold for vowel duration. The results suggested that a distance function based on the 4.5-norm using a 30 ms radius for dynamic time warping best matched human behavior. A third analysis used these dynamic time warping configurations to model reaction times in an auditory lexical decision task and found that Euclidean distance and no temporal constraints on dynamic time warping best matched human behavior. These results are discussed in relation to spoken word recognition models, including how to assess the acoustic match between the speech signal and a word in the lexicon.

An acoustic investigation of the markers *uh* [ə] and *um* [əm]

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What are the acoustic characteristics of *uh* [ə] and *um* [əm] in spontaneous speech? In the present study we explore this question using data from the CoSMIL corpus (Järvikivi & Tucker, 2015), a corpus of Western Canadian conversational spontaneous speech. Measures of duration, fundamental frequency, F1 and F2 were extracted from 1,048 instances of *um* and *uh*. We predict that: (a) *um* and *uh* will occur equally across speakers (Wieling et al., 2016), (b) *uh* will have a longer vowel duration (Hughes et al., 2016), (c) *uh* will have a lower f0 (Swerts, 1998), (d) *um* and *uh* will have similar formant values (Hughes et al., 2016). These results provide a preliminary understanding of *um* and *uh* as markers in spontaneous Canadian English. Canadian English shows a similar proportion of *um* over *uh* usage in comparison to American and British English. Results indicate that longer durations occurred when markers preceded silent pauses. Findings on vowel duration showed no significant difference between *um* and *uh*. *Um* had higher F1 and lower F2 than *uh*. F0 was lower for *um* in comparison to *uh*. We discuss these results in terms of their effects on cognitive preparation for speech production.

References:

Järvikivi, J. & Tucker, B.V. 2015. Corpus of Spontaneous Multimodal Interactive Language (CoSMIL).

Hughes, V., Wood, S., & Foulkes, P. 2016. Strength of forensic voice comparison evidence from the acoustics of filled pauses. *International Journal of Speech Language and the Law*, 23(1): 99–132. https://doi.org/10.1558/ijsll.v23i1.29874

Swerts, M. 1998. Filled pauses as markers of discourse structure. *Journal of Pragmatics*, 30(4): 485–496. https://doi.org/10.1016/S0378-2166(98)00014-9

Wieling, M., Grieve, J., Bouma, G., Fruehwald, J., Coleman, J., & Liberman, M. 2016. Variation and Change in the Use of Hesitation Markers in Germanic Languages. *Language Dynamics and Change*, 6(2): 199–234. https://doi.org/10.1163/22105832-00602001

You and *Me* in Blackfoot's Obviation System
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Syntax

Algonquian languages feature a typologically rare phenomenon known as OBVIATION, in which one DP is marked as PROXIMATE (with suffix *-wa*) and all other DPs are marked as OBVIATIVE (with suffix *-yi*). This contrast is frequently characterized as a means of tracking reference (e.g. Frantz, 2009; Goddard, 1984), empathy (e.g. Dahlstrom, 1991), point of view (e.g. Mühlbauer, 2008), and/or topicality (e.g. Genee, 2009). Since most languages only mark third person DPs for obviation, it has largely been described purely as a way of differentiating third persons. However, Blackfoot is unique in marking local (i.e. first and second person) pronouns for obviation, which raises the following question: if obviation truly tracks reference, should we not expect it to track an entity regardless of the person specification of the realizing DP?

Employing both fieldwork and a corpus study, the present study found that local pronouns in Blackfoot denoting SUBJECTS received PROXIMATE morphology while those denoting NON-SUBJECTS received OBVIATIVE morphology. Crucially, in cases of narrative direct speech where a speaker referred to themselves or their addressee (1), local pronouns often displayed different obviation markings than their co-referring third person DPs. This suggests that obviation marking on local pronouns tracks subjecthood rather than reference.

(1) *"Aapí'siwa 'taakstonatokimmok **niistóyi**!" aanii na ááattsistaa.*
  aapí'si-wa nit-yáak-sstonnat-okimm-ok **niistó-yi** waanii ann-wa ááattsistaa
  coyote-PROX 1-FUT-extremely-scold(VTA)-INV **1-OBV** say(VAI) DEM-PROX rabbit
  ' "Coyote_PROX will be mad at **me_OBV**!" said Rabbit_PROX.'

Cited Works

Dahlstrom, A. (1991). *Plains Cree Morphosyntax*. New York: Garland Pub.

Frantz, D. (2009). *Blackfoot Grammar* (2nd ed.). Toronto: University of Toronto Press.

Genee, I. (2009). What's in a morpheme? Obviation morphology in Blackfoot. *Linguistics, 47*(4), 913-944. Retrieved from doi:10.1515/LING.2009.032

Goddard, I. (1984). The Obviative in Fox Narrative Discourse. In William Cowan (ed) *Papers of the Fifteenth Algonquian Conference.* (pp. 273-286). Ottawa: Carleton University.

Mühlbauer, J. (2008). *kâ-yôskâtahk ôma nêhiyawêwin: The representation of intentionality in Plains Cree* (unpublished Doctoral dissertation). University of British Columbia: Vancouver.

**Effects of subjecthood and focus marking in German L1 and L2**
Regina Hert, Juhani Järvikivi, & Anja Arnhold (University of Alberta)
Topic: prosody, pronoun resolution

Studies investigating the referential properties of personal pronouns and demonstrative or d-pronouns found that these referential forms prefer different antecedents (e.g., Kaiser & Trueswell, 2008; Ellert, Roberts, & Järvikivi, 2011; Bader & Portele, 2019). In L1, subject referents are preferred for the personal pronoun, while the d-pronoun is affected by information structure. L2 speakers generally show more sensitivity to information structure for both pronominal forms (Ellert, 2013; Patterson, Esaulova, & Felser, 2017). Our study explored the effects of prosody on referent selection in the context of dialogues.

L1 (N=107) and L2 speakers (currently N=11, data collection ongoing) of German listened to 40 dialogues containing either the personal pronoun *er* or the d-pronoun *der* and answered questions about the pronoun's referent. We manipulated prosodic focus marking on either the subject or the object referent of the context preceding the pronoun.

In line with previous findings, for L1, subjecthood was the determining factor for the personal pronoun, while the d-pronoun was more sensitive to focus marking (see Fig. 1a). In contrast, preliminary data suggests that for L2, both pronouns might be affected by focus marking (see Fig. 1b.) This could suggest that for L2 speakers grammatical role is not (yet) a reliable factor for pronoun resolution and they depend more on focus, a factor that requires less detailed knowledge of grammar.

(a) L1 speakers

(b) L2 speakers
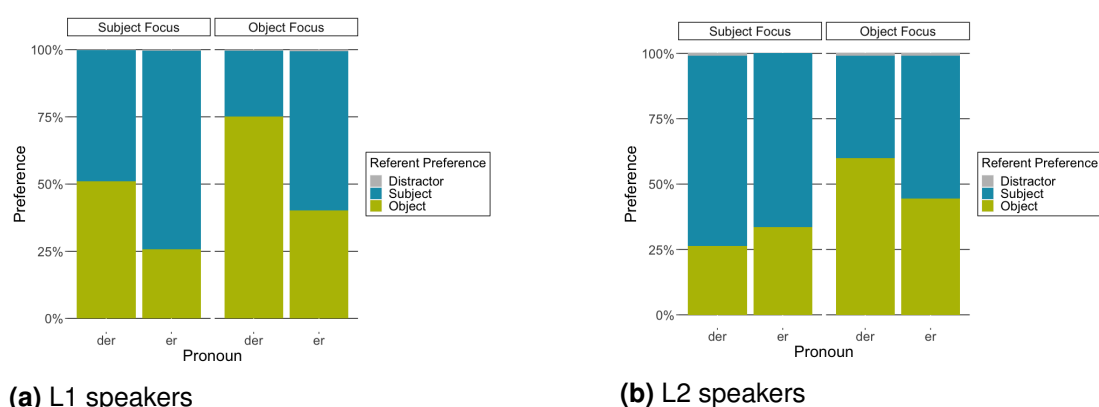
Fig. 1. Referent preference for *er* and *der*

Bader, M., & Portele, Y. (2019). The interpretation of German personal pronouns and d-pronouns. *Zeitschrift fur Sprachwissenschaft*, *38*(2), 155–190. doi: 10.1515/zfs-2019-2002

Ellert, M. (2013). Information Structure Affects the Resolution of the Subject Pronouns Er and Der in Spoken German Discourse. *Discours*(12). doi: 10.4000/discours.8756

Ellert, M., Roberts, L., & Järvikivi, J. (2011). Verarbeitung und Disambiguierung pronominaler Referenz in der Fremdsprache Deutsch: Eine psycholinguistische Studie. In C. Spiegel & A. Krafft (Eds.), *Sprachliche förderung und weiterbildung-transdisziplinär* (pp. 51–68).

Kaiser, E., & Trueswell, J. (2008). Interpreting pronouns and demonstratives in Finnish: Evidence for a form-specific approach to reference resolution. *Language and Cognitive Processes*, *23*(5), 709–748. doi: 10.1080/01690960701771220

Patterson, C., Esaulova, Y., & Felser, C. (2017). The impact of focus on pronoun resolution in native and non-native sentence comprehension. *Second Language Research*, *33*(4), 403–429. doi: 10.1177/0267658317697786

Yeísmo and conservation of the ʎ/ʝ distinction in Peru

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Sociolinguistics, historical linguistics, phonology

Yeísmo is the merger of the sounds /ʎ/ (as in Italian "*aglio*", less closely English "*will you*", spelt <ll> in Spanish) and /ʝ/ (similar to "*yell*", spelt <y>) in the Spanish language. *Yeísmo* and the distinction between the two sounds have been considered important regional markers by dialectologists when dividing Spanish into geographical variants. While *yeísmo* is now dominant in Spanish worldwide, there are regions of the Spanish-speaking world which conserve the distinction between /ʎ/ and /ʝ/. In Peru, the distinction between /ʎ/ and /ʝ/ is now fluctuating toward *yeísmo*.

This research consists of two components: A literature search that serves as background, and a corpus study focused on the department of Arequipa in southern Peru. The goal of the corpus study is to discover the current state of the ʎ/ʝ distinction in the region of Arequipa from a geographical perspective by sampling speech from speakers on videos found on the Internet that are associated to each province of the region, counting how many times speakers produce [ʎ], and producing average measurements of *yeísmo* by province.

Selected References

Cano Aguilar, Rafael. 2004. Cambios en la fonología del español durante los siglos XVI y XVII. In Cano Aguilar, Rafael (coord.) *Historia de la lengua española,* 825-857. Barcelona: Editorial Ariel, S.A.

Caravedo, Rocío. 2013. Yeísmo y distinción en el contexto social peruano. Reexamen de la cuestión. In Gómez, Rosario and Isabel Molina Martos (Eds.) *Variación yeísta en el mundo hispánico,* 257-294. Madrid: Iberoamericana

De la Puente-Schubeck, Elsa. 1989. Debilitamiento del lleísmo en la región andina del Perú. *Lexis,* 13(2), 251-262.

Escobar, Alberto. 1978. *Variaciones sociolingüísticas del castellano en el Perú*. Lima: IEP ediciones

Lipski, John. 1996. *El Español de América.* Fuenlabrada (Madrid): Cátedra

Moreno Fernández, Francisco. 2004. Cambios vivos en el plano fónico del español: variación dialectal y sociolingüística. In Cano, Rafael (coord.) *Historia de la lengua española,* 973-1009. Barcelona: Editorial Ariel, S.A.

Navarro Tomás, Tomás. 1968. *Manual de Pronunciación Española.* Madrid: Gráficas Monteverde

Wölck, Wolfang. 1972. Las lenguas mayores del Perú y sus hablantes. In Escobar, Alberto (compiler) *El reto del multilingüismo en el Perú*, 189-216. Lima: IEP ediciones

The roles of language dominance and input: Article and classifier acquisition patterns in Cantonese-English bilingual children

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The present study compares the longitudinal, cross-sectional corpus data of Cantonese-English bilinguals children's [1] acquisition of English articles and Cantonese classifiers with that of age-matched monolinguals'.

Previous studies suggest that bilinguals omit articles at significantly higher rates than monolinguals, due to a lack of definite-marking morphology in their article-less heritage language [2,3]. With the majority of prior research focusing on article omission, no studies to date have reported on longitudinal determiner acquisition patterns across an article and article-less language pair.

First article emergence for Cantonese-English bilinguals is slightly delayed, with bilinguals exhibiting a qualitatively different pattern than monolinguals. Bilingual classifier emergence, by contrast, shows acceleration. English-dominant bilinguals acquire English indefinites earlier than in Cantonese.

Over the course of development, bilinguals use the definite article over the indefinite article significantly more than monolinguals. Meanwhile, classifier growth is significantly slower in bilinguals, although language dominance may explain over-reliance on the general classifier.

Cantonese-English bilinguals do not differ significantly in article omission compared to English monolinguals. However, compared to Cantonese monolinguals, bilinguals use significantly more overt determiners to mark nouns in argument positions. This difference may be attributable to bilingual interlocuters, who also produce significantly more overt determiners than their monolingual counterparts do.

Sub-discipline: bilingual first language acquisition

Keywords: bilingual first language acquisition, cross-linguistic influence, language dominance, input, corpus study

References:

1. Yip, V., & Matthews, S. (2007). *The bilingual child: Early development and language contact*. Cambridge, UK: Cambridge University Press.
2. Meir, N., Walters, J., & Armon-Lotem, S. (2017). Bi-directional cross-linguistic influence in bilingual Russian-Hebrew children. *Linguistic Approaches to Bilingualism*, *7*(5), 514-553.
3. Zdorenko, T., & Paradis, J. (2012). Articles in child L2 English: When L1 and L2 acquisition meet at the interface. *First Language*, *32*(1-2), 38-62.

Labels speak volumes: the role of intergroup membership in accent perception

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Topic: accent perception, sociolinguistics, foreign-accented speech, group membership

The present study investigates the role of group membership status in the perception of foreign and native accented English speech. Non-standard accents have been associated with negative stereotypes (Fuertes et al. 2012) which may result in speakers of non-standard varieties facing discrimination (Lev-Ari & Keysar, 2010). The present study used a within-subjects design to investigate the accent strength perceptions of a speaker when presented as either Canadian, a New-Canadian, an Immigrant or without an introduction (control). Speech samples were collected from *The Speech Accent Archive* (Weinberger, 2015) and were selected based on a preliminary rating task. Participants rated speakers on a scale of 1-7 according to how native-like a speaker's accent is and completed an exit questionnaire. A significant main effect of speaker introduction emerged (Fig 1). Participants were more likely to rate speakers as sounding more foreign when the speaker was introduced as either an immigrant ($p < 0.001$), or as a New-Canadian ($p = 0.008$) compared to the control condition. These results suggest that information about the speaker's group membership can influence the perception of accented speech to sounds more foreign.
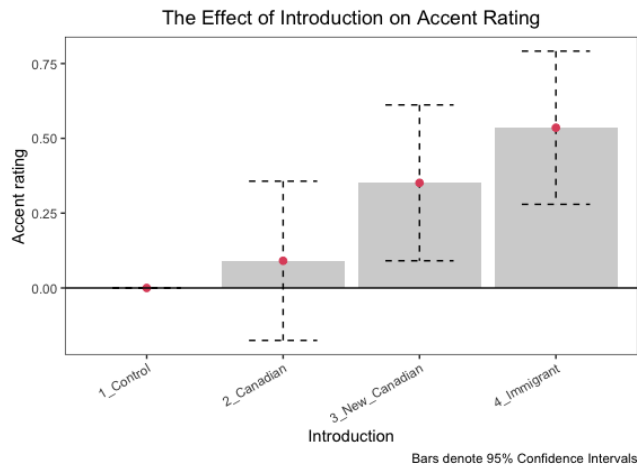

Fig 1. The effect of Introduction condition on accent ratings

Fuertes, J. N., Gottdiener, W. H., Martin, H., Gilbert, T. C., & Giles, H. (2012). *European Journal of Social Psychology*, *42*(1), 120–133. https://doi.org/10.1002/ejsp.862

Lev-Ari, S., & Keysar, B. (2010). *Journal of Experimental Social Psychology*, *46*(6), 1093–1096. https://doi.org/10.1016/j.jesp.2010.05.025

Divjak, D., & Baayen, H. (2017). Ordinal GAMMs: *In Each Venture a New Beginning: Studies in Honor of Laura A. Janda.* (pp. 39-56). Slavica Publishers. https://muse.jhu.edu/book/57545

R Core team. (2020). *R: The R Project for Statistical Computing.* https://www.r-project.org/

Rubin, D. L. (1992). Nonlanguage factors affecting undergraduates' judgments of nonnative English-speaking teaching assistants. *Research in Higher Education*, *33*(4), 511–531. https://doi.org/10.1007/BF00973770

Weinberger, S. (2015). *Speech Accent Archive*. Speech Accent Archive. http://accent.gmu.edu/

Mass-count and experimental evidence in Dënesųłiné
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This paper reports experimental evidence on the count or mass nature of nouns in Dënesųłiné. I have previously argued (Wilhelm 2008) that in Dënesųłiné there is a robust count-mass distinction based on co-occurrence with numerals and classificatory verbs, and that the semantic basis for the distinction is atomicity (cf. Landman 1989:561). Further support for this conclusion comes from an experiment conducted with three native speakers. Using the method pioneered in Barner & Snedeker (2005), I presented speakers with images as in Figures 1–2 and asked, 'Who has more X?', X being the noun denoting the item(s). Barner & Snedeker argue that if speakers point to the left, the quantity is judged on numerosity, indicating the noun is count and has atomic reference. If speakers point to the right, the quantity is judged on volume, indicating the noun is mass and does not have atomic reference. In Dënesųłiné, the nouns whose quantity was consistently judged on numerosity were precisely those established as count in my previous work, and those judged on volume those previously established as mass. The experiment also sheds interesting light on a small class of nouns which act mass with numerals and count with classificatory verbs. Finally, I will argue that the Dënesųłiné results have implications for what the experiment does and does not test.

Figure 1: X = *tthe* 'rock(s), stone(s)'

Figure 2: X = *bër̃* 'meat'

References:
Barner, David, and Jesse Snedeker. 2005. Quantity judgments and individuation: evidence that mass nouns count. *Cognition* 97:41–66.
Landman, Fred. 1989. Groups (I–II). *Linguistics and Philosophy* 12:559–605, 723–744.
Wilhelm, Andrea. 2008. Bare nouns and number in Dëne Sųłiné. *Natural Language Semantics* 16:39–68.

The processing of consonants and vowels by L2 English L1 Mandarin listeners

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University of Alberta

It has been claimed that consonants are more closely related to lexical representations than vowels are for a number of languages (for a summary, see Nazzi & Cutler, 2019). It has been suggested that this trend would not hold for languages with lexical tone (New et al., 2008), but differences in experimental design have left support for this claim mixed (Wiener & Turnbull, 2016; Nazzi & Cutler, 2019).

Many studies investigating this phenomenon employed metalinguistic tasks. One prominent paradigm is word reconstruction, where participants are asked to change a nonce word into a real word by changing one sound. The present study looks at how the makeup of words in terms of the proportion of vowels contained in the acoustic signal influences a task that has not yet been employed to address this research question.

We examine how the proportion of vowels in a word influences reaction times in an auditory lexical decision. of both native English speakers and L2 English speakers with Mandarin as a native language. This data is publicly available and comes from the Massive Auditory Lexical Decision project (MALD; Tucker et al., 2019). Results are discussed in the context of previous claims of the status of consonants and vowels on lexical representations.

References

Nazzi, T., & Cutler, A. (2019). How consonants and vowels shape spoken-language recognition. *Annual Review of Linguistics*, *5*, 25-47.

New, B., Araújo, V., & Nazzi, T. (2008). Differential processing of consonants and vowels in lexical access through reading. *Psychological Science*, *19*(12), 1223-1227.

Tucker, B. V., Brenner, D., Danielson, D. K., Kelley, M. C., Nenadić, F., & Sims, M. (2019). The massive auditory lexical decision (MALD) database. *Behavior research methods*, *51*(3), 1187-1204.

Lip Rounding and the Enhancement of Fricative Distinctions in Canadian English.

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Sub-discipline: Phonetics

Stevens and Keyser's Enhancement Theory (1989) holds that phonemic contrasts are communicated through primary features that may be enhanced through additional gestures. A classic example is that of [s] and [ʃ] in English, which are distinguished by the feature [anterior]. However, the [ʃ] in English is also typically produced with lip-rounding, which Stevens and Keyser (2006) argue makes the two sounds more acoustically distinct. Stevens and Keyser cite consonant confusion data from Miller and Nicely (1955), which shows that [s] and [ʃ] are unlikely to be confused; however, it is unknown how distinct they are without the secondary lip-rounding gesture on [ʃ]. It is also unknown how much lip-rounding could further enhance other fricative distinctions, such as between [f] and [θ], which are consistently one of the most difficult English consonant pairs to differentiate.

We will present initial plans for an audio-visual perception experiment to test the confusion of rounded and unrounded [f], [θ], [s], and [ʃ], and to quantify how much the addition of lip-rounding to these consonants may aid in disambiguation. The data should provide a clearer test of Enhancement Theory, and a novel examination of how it applies to other fricative contrasts in English.

References

Keyser, S. J., & Stevens, K. N. (2006). Enhancement and overlap in the speech chain. *Language*, 33-63.

Miller, G. A., & Nicely, P. E. (1955). An analysis of perceptual confusions among some English consonants. *The Journal of the Acoustical Society of America*, *27*(2), 338-352.

Keyser, S. J., & Stevens, K. N. (2006). Enhancement and overlap in the speech chain. *Language*, 33-63.

An unresolved puzzle in Persian: The inconclusive data of *'-esh'*

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Syntax / Language Change

Persian has a distinctive subject-verb agreement system. The only slot which no agreement attaches to is PAST 3SG verbs. In the Tehrani dialect of Persian, though, a new marker *'-esh'* homophonous to 3SG object clitic is optionally added to the end of PAST 3SG verbs as in (1).

(1)   *ye mard-i   umad-(esh)*

      one man-NONSPEC came-(esh)

      'A man came.'

Some claim that it is a new agreement marker borrowed from the Persian object clitic paradigm to fill the empty slot in the agreement paradigm (Rasekh 2011, 2017). However, it still demonstrates some clitic-like properties like being optional on the verb and blocking other Persian clitics to follow unlike other agreement markers (Mahootian & Gebhardt 2019). I collected the judgement of 42 native speakers on items including *'-esh'*. The results reveal that although *'-esh'* is still an object clitic and unable to select non-specific objects, it is in the stage of being reanalyzed as an agreement marker to fill the empty slot in the Persian agreement paradigm in that it can select subject arguments regardless of their specificity as in (1).

Selected References:

- Mahootian, S., & Gebhardt, L. (2019). Revisiting the status of-eš in Persian. *Trends in Iranian and Persian linguistics*, 263-276.

- Rasekh, M. M. (2011). The rise of agreement; The case of Persian enclitics. In *2011 International Conference on Languages, Literature, and Linguistics* (pp. 530-534).

- Rasekh, M. M. (2017). Persian clitics: Doubling and agreement. *Journal of Modern Languages*, *24*(1), 16-33.

- Samvelian, P., & Tseng, J. (2010, July). Persian object clitics and the syntax-morphology interface. In 17th International Conference on Head-Driven Phrase Structure Grammar (pp. 212-232).

The effect of word frequency on Spanish tap reduction in spontaneous speech

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The Probabilistic Reduction Hypothesis has claimed that more predictable parts of speech are more likely to be reduced (Jurafsky et al., 2001). For stop consonants, reduction often means being produced as a fricative, approximant, or being elided entirely. Previous work on stop-consonants from a number of languages has indicated that reduction of these segments might in fact be more common than unreduced productions (Barry & Andreeva, 2001; Warner & Tucker, 2011; Mukai, 2020).

While the Probabilistic Reduction Hypothesis makes claims about predictability, a number of different measures are used in statistical analysis. As these measures are related, it is not always clear how to model the effect of these predictors jointly. This ongoing project looks at the effects of word frequency on the production of the Spanish alveolar tap, showing that making causal inferences about the effect of word frequency is more complicated than it may first appear and that more attention is needed to better understand the effects of these predictability measures.

References

Barry, W., & Andreeva, B. (2001). Cross-language similarities and differences in spontaneous speech patterns. Journal of the International Phonetic Association, 31(1), 51-66.

Jurafsky, D., Bell, A., Gregory, M., & Raymond, W. D. (2001). Probabilistic relations between words: Evidence from reduction in lexical production. Typological studies in language, 45, 229-254.

Mukai, Y. (2020). Production and perception of reduced speech and the role of phonological-orthographic consistency.

Warner, N., & Tucker, B. V. (2011). Phonetic variability of stops and flaps in spontaneous and careful speech. The Journal of the Acoustical Society of America, 130(3), 1606-1617.

Title: **Prosody of anaphora and cataphora in casual speech**
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Topic/sub-discipline: prosody, anaphora and cataphora, pronouns

While there has been research done on anaphora and cataphora in written discourse (Giskes & Kush, 2021; Kazanina et al., 2007; Kennison et al., 2009; Trnavac & Taboada, 2016; van Gompel & Liversedge, 2003), few studies looked at both anaphora and cataphora in casual spoken speech (Thomsen, 1996). Anaphora can be understood as the use of a pronoun to refer back to previously mentioned content in the discourse, whereas cataphora is when the pronoun precedes the concept it is referring to. Here we will be looking at the prosodic properties of anaphora and cataphora in casual speech and how they differ. Since prior research has shown that newer elements in an utterance are more prosodically prominent (Baumann & Riester, 2012), the hypothesis for this paper is that cataphoric pronouns will be more prosodically prominent than their anaphoric counterparts. The data for this project will be gathered from a corpus of previously recorded discourse (CoSMIL). Then using Praat scripts the measurements of f0, intensity, and duration will be extracted. Currently, the analysis is underway.

References
Arnhold, Anja, Holger Mitterer, Teahogn Cho, and Crosswhite Catherine. MeasureIntensityDurationF0minF0maxF0contourpoints-SeveralWords. Praat, 2018.

Baumann, S., & Riester, A. (2012). Referential and Lexical Givenness: Semantic, prosodic and cognitive aspects. In *Prosody and Meaning* (Vol. 25, pp. 119–162). https://doi.org/10.1515/9783110261790.119

Boersma, Paul & Weenink, David (2021). Praat: doing phonetics by computer [Computer program]. Version 6.1.54, retrieved 9 October 2021 from http://www.praat.org/

Giskes, A., & Kush, D. (2021). Processing cataphors: Active antecedent search is persistent. *Memory & Cognition*, *49*(7), 1370–1386. https://doi.org/10.3758/s13421-021-01176-z

Järvikivi, J., Tucker, B. V., et al. (2013-2015). Corpus of Spontaneous Multimodal Interactive Language (CoSMIL). University of Alberta.

Kazanina, N., Lau, E. F., Lieberman, M., Yoshida, M., & Phillips, C. (2007). The effect of syntactic constraints on the processing of backwards anaphora. *Journal of Memory and Language*, *56*(3), 384–409. https://doi.org/10.1016/j.jml.2006.09.003

Kennison, S. M., Fernandez, E. C., & Bowers, J. M. (2009). Processing Differences for Anaphoric and Cataphoric Pronouns: Implications for Theories of Discourse Processing. *Discourse Processes*, *46*(1), 25–45. https://doi.org/10.1080/01638530802359145

Thomsen, O. N. (1996). Pronouns, word order, and prosody. *Acta Linguistica Hafniensia*, *28*(1), 131–138. https://doi.org/10.1080/03740463.1996.10416067

Trnavac, R., & Taboada, M. (2016). Cataphora, backgrounding and accessibility in discourse. *Journal of Pragmatics*, *93*, 68–84. https://doi.org/10.1016/j.pragma.2015.12.008

van Gompel, R. P. G., & Liversedge, S. P. (2003). The influence of morphological information on cataphoric pronoun assignment. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *29*(1), 128–139. https://doi.org/10.1037/0278-7393.29.1.128

Do mothers speak differently when a word is new?
Investigating prosodic features of infant-directed speech across English dialects

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Abstract

When caregivers communicate with their young children, they unconsciously create a different speech register, "baby talk" or "motherese", more formally known as infant-directed speech (IDS). IDS is mainly characterized by exaggerated prosody compared to adult-directed speech (ADS). There have been many studies focusing on IDS across languages (Fernald et al., 1989; Golinkoff et al., 2015). However, a few studies have examined IDS in dialects of the same language. Our research focuses on mothers' British- and Canadian-English dialects of IDS. Canadian (n=5) and British (n=5) mothers read 6 stories with different target creatures to their children. We compared the prosodic features (meanF0, duration, and pitch range) of familiar and novel words across these two English dialects at different sentence positions. We found a wider pitch range across dialects when the target word (e.g., chicken) is in the initial position ($p<.05$) but not final (*n.s.*). Further, the pitch range of familiar and novel words in Canadian and British English indicates that British mothers have a wider pitch range for familiar words than their Canadian counterparts ($p<.001$). However, there is little difference in the pitch range of novel words between Canadian and British English.

Keywords: infancy, mother-infant interaction, infant-directed speech

Reference:

Fernald, A., Taeschner, T., Dunn, J., Papousek, M., De Boysson-Bardies, B., & Fukui, I. (1989). A cross-language study of prosodic modifications in mothers' and fathers' speech to preverbal infants. *Journal of Child Language, 16*(3), 477-501.

Golinkoff, R. M., Can, D. D., Soderstrom, M., & Hirsh-Pasek, K. (2015). (Baby)Talk to Me: The Social Context of Infant-Directed Speech and Its Effects on Early Language Acquisition. Current Directions in Psychological Science, 24(5), 339–344.

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Syntax

Co-occurring Sentence-Final Particles in Mandarin Chinese

In Mandarin Chinese, the term 'sentence-final particle' has been used to describe a group of particles which always locate in the sentence-final positions and whose categorial status is unclear (e.g. their function depend on the specific extralinguistic context). Three examples containing sentence-final particles are given in (1a-c).

(1) a. zhè dōngxi sānbaǐ yuán maǐ bù laí **ne**
     this stuff three-hundred CL buy NEG come particle
     "This stuff cannot be bought with three hundred Yuan (**believe me**)."

                                                        (Lu 1990, p.264)

   b. Tā zìjǐ bù yào **me**.
     he self NEG need particle
     "He does not need (one) (**you should know this**)."

                                                         (Lu 1990, p.270)

   c. Nǐ juéde zhème gàn duì **ha**?
     you think like.this do right particle
     "You think it is right to do this, **eh**?"

                                                         (Yin 1999, p.99)

.

Mandarin sentence-final particles have been analyzed uniformly as sentence-final complementizers by a group of researchers (Paul and Pan 2017; Pan 2019). However, in the present paper, I draw evidence from co-occurring sentence-final particles to demonstrate that in Mandarin, sentence-final particles must co-occur in a fixed order. This observation casts doubts on the assumption that these particles are complementizers because treating particles as complementisers does not explain why particles must appear in a fixed order.

References

Lu, S. X. (1990). Zhongguo wenfa yaolue [An outline of Chinese grammar]. Beijing: Shangwu Yinshuguan [The Commercial Press].

Pan, J. N. (2019). Architecture of the periphery in Chinese: cartography and minimalism. London: Routledge.

Paul, W. & Pan, J. N. (2017). 'What you see is what you get: Chinese sentence-final particles as head-final complementisers', in J. Bayer & V. Struckmeier (eds.) Discourse Particles-Formal Approaches to their Syntax and Semantics, [Linguistiche Arbeiten], Berlin: Mouton De Gruyter, p.49-77.

Yin, S. C. (1999). On mood particle ha and ha sentences. *Dialects*, *2*, pp.95-103.

Title: Culture-Specific Conceptualizations of Corruption: A Semantic Analysis of English Spoken in Ghana

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Topic / Sub Discipline: Semantics / Cognitive Linguistics

The definition of corruption has been over simplified. This research aims at problematizing how corruption has been conceptualized in the past by bringing a cultural perspective to the lens through which corruption should be viewed and defined. Recent studies (Sarfo-Kantankah, 2018; Sarfo-Kantankah & Arko, 2019) show that corruption is pervasive and that there is a discursive construction of its conceptualization in political discourse as well as *othering*. The linguistic study of corruption (Ogunmuyiwa & Antia, 2020; Polzenhagen & Wolf, 2007, 2021) corroborates similar findings in countries such as Liberia, Cameroon, and Nigeria respectively. However, there is a dearth of knowledge on regarding the linguistic context and the cultural implications of these conceptualizations of corruption as far as Ghana is concerned. This study explores how the parliament of Ghana—as well as the general political discourse in the country—conceptualizes and also navigates contexts of corruption using the English spoken in Ghana. In particular, I investigate how practices such as cultural construction, misrecognition, negotiation, and metaphors are deployed in the linguistic expressions used to talk about corruption in Ghana. The in-progress study has implications for our understanding of the role of language and culture in conceptualizing corruption.

References

Ogunmuyiwa, H. O., & Antia, B. E. (2020). Corruption in a diachronic corpus of Nigerian presidential speeches. *Southern African Linguistics and Applied Language Studies*, *38*(2), 95–108. https://doi.org/10.2989/16073614.2020.1763813

Polzenhagen, F., & Wolf, H.-G. (2007). Culture-Specific Conceptualisations of Corruption in African English: Linguistic Analyses and Pragmatic Applications. In F. Sharifian & G. B. Palmer (Eds.), *130156* (Vol. 1–xiii, 170, pp. 125–168). John Benjamins Publishing Company. https://doi.org/10.1075/celcr.7.09pol

Polzenhagen, F., & Wolf, H.-G. (2021). Culture-Specific Conceptualisations of Corruption in African English: Linguistic Analyses and Pragmatic Applications. In M. Sadeghpour & F. Sharifian (Eds.), *Cultural Linguistics and World Englishes* (pp. 361–399). Springer. https://doi.org/10.1007/978-981-15-4696-9_17

Sarfo-Kantankah, K. S. (2018). Corruption is a big issue: A corpus-assisted study of the discursive construction of corruption in Ghanaian parliamentary discourse. *Legon Journal of the Humanities*, *29*(1), 226–258. https://doi.org/10.4314/ljh.v29i1.9

Sarfo-Kantankah, K. S., & Arko, J. (2019). Compared to them, we are angels: Parliament, othering and the fight against corruption in Ghana. *Legon Journal of the Humanities*, *30*(2), 43–69. https://doi.org/10.4314/ljh.v30i2.3

Remote Collection of a Malagasy Speech Corpus

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Topic/Sub-Discipline: Speech Technology, Phonetics

Researchers face many challenges in collecting large amounts of speech data to be assembled into corpora. However, large datasets are increasingly becoming the standard for phonetic analysis and speech technology. This is in part due to the fact that development of deep learning models also requires a large amount of data for training and validation. While the controlled environment and recording quality of traditional, in-person speech data collection make it desirable, there are many factors which may make it difficult or impossible. A researcher may not have proper equipment, may be geographically isolated from speakers of the language being studied, or may not have the resources to oversee the manual collection of data. The circumstances surrounding the Covid-19 pandemic have further complicated the collection of data. Modern advances in internet and embedded technologies have made the remote collection of speech data a viable alternative to traditional methods in some cases. This study outlines the creation of a web application which facilitates the collection of speech data online. A pilot corpus of Malagasy speech is collected using the application. Preliminary analyses of the data are also conducted to determine its potential for use in various forms of research.