Welcome to the Linguistics Department’s Spring, 2020, Newsletter. This is an iconic image of the proverbial front door to the university, facing Kirkwood Ave. One of the great things about the linguistics and language community here at Indiana University is the amazing diversity of people who come through the front door, and back out to many places around the globe. The focus of the spring issue is to get you a chance to see some of the work that members of the department are doing in a more up-close and personal manner, especially here focusing on our graduate students who have been supported by the generosity of our donors. You will note the range of parts of the globe reflected in the articles. We have also included a selective bibliography of the faculty from the calendar year 2019, including especially long-term publications. We hope you have time to peruse the titles and names involved. Much of what you see here was not done without the help of many, including the support of alumni and friends of the department. We appreciate your support in all its forms, and hope you enjoy this volume.
Fieldwork with the Hadza: At Home and Abroad
Written by: Jeremy Coburn

Jeremy Coburn is a doctoral student in the African Linguistics program, and has had many years of work on the language of the Hadza, a language minority of Tanzania made famous for being one of very few languages outside of southern Africa with click sounds. Jeremy’s work has been supported through the Householder Best Paper Award, given for his work examining sounds found in Swahili, the major language of the region around the Hadza.

Since I was a linguistics undergraduate student at Brigham Young University, I have been interested in working on a highly endangered language isolate spoken in north-central Tanzania called Hadza. Now as a linguistics PhD student with a concentration on African languages and linguistics at Indiana University, I continue in that same line of inquiry but have been given the tools necessary to pursue it.

The Hadza people (or Hadzabe) represent a remnant of the autochthonous peoples of East Africa—predating the Bantu and Nilotic expansions to the region—and, despite being surrounded by numerous agricultural and pastoral ethnic groups, many continue to live primarily as hunter-gatherers. The Hadza language, called Hadzane ‘of the Hadza’ in their tongue, is one of only two extant languages outside southern Africa to natively make use of click consonants. Despite the interesting and anomalous nature of their language, the remoteness of the Hadza homeland and logistical constraints inherent in working with the Hadzabe have meant that the language remains largely undocumented and underdescribed. Currently, the Hadzabe are experiencing substantial linguistic and societal shifts which threaten the continuance of the Hadza language.

In order to mitigate the difficulties (and expense) of frequently traveling to northern Tanzania to work with the Hadzabe, I began in the spring of 2018 to develop a community-based remote fieldwork methodology in collaboration with colleagues and Hadza community members. As mobile technologies have become more widespread in Tanzania, and elsewhere in the world—such as smartphones, VoIP platforms (e.g., WhatsApp), and mobile banking—it is now possible to communicate with language consultants and language community members to collect linguistic data remotely in a way previously impossible.

With respect to the Hadzabe, this methodology includes several key components: [1] Being in the community! Remote fieldwork cannot replace traditional fieldwork; it enhances it. To establish a proper and ethical flow for remote fieldwork, the researcher should spend time in the community. This is essential for community buy-in, training, and the establishment of trusted relationships. [2] The researcher must equip selected and willing community collaborators with all necessary skills and equipment. This step is labor intensive but crucial to ascertain that the fieldwork is carried out ethically and transparently (e.g., includes adequate metadata for proper analysis) and mutual expectations are made clear. [3] Research protocols are followed on both ends and data is collected, stored, organized, and distributed in a timely manner.

Though undoubtedly a remote fieldwork methodology has its drawbacks and limitations (e.g., less researcher control, unable to collect certain kinds of data), it is also quite versatile and can be tailored to specific regional contexts. With proper training and preparation, data collection tasks that can be carried out remotely include: live elicitation sessions with col-
laborators using WhatsApp or Zoom (recorded live); audio-visual recordings; transcription/translation work of previously recorded and/or archived materials; text and oral history collection; etc.

Thanks to funds provided by the Householder Memorial research fund from the Department of Linguistics, I was able to implement my methodology and take a field trip to Tanzania in Summer 2018 to meet with Hadza community members and establish close relationships with them. Shortly thereafter, I began utilizing my remote fieldwork methodology to work with Mariamu Anyawire, a seasoned Hadza research consultant, to collect pre-dissertation data. Together we have worked on transcribing and translating archived Hadza recordings from decades ago, explored several linguistic phenomena more closely, and secured plans for my intended doctoral research trip to Tanzania during the next academic year. The Householder research funds and my remote methodology allow me to continue engaging with the Hadza community while out-of-country and provide support for them as they seek to create and disseminate linguistic materials and information about their language to secure it for future generations.

Documenting the Thangal Language of Northeast India
Written by: Tricia McDonough

My path to linguistics at IU began at the Pondicherry University international students’ hostel in southeast India in 2012. I had been living there for three months with two dozen other undergraduate study abroad students, and two brothers, Joey and Moses Thangal, had become close friends of ours while serving as “hostel wardens.”

“Hey, Tricia,” Moses said, as we swatted away mosquitos one evening on the hostel’s front porch, “you know, in the village Joey and I are from, our mother tongue doesn’t have a written script. You study linguistics — can you come write one for us?”

In an instant, a monumental task lay before me. I realized it even then as a 21-year-old linguistics undergrad — and that an unwritten dissertation — if not a full career — had just materialized out of thin air.

The Thangal tribe, as I learned over the next few years, comprises approximately 1,200 members spread throughout just under a dozen villages in the far northeast Indian state of Manipur — as the crow flies, a full 1,300 miles from our Pondicherry hostel. As is the case with many languages of this region,
Thangal is a severely under-documented and under-resourced Tibeto-Burman language; the few published sources for Thangal language data date back primarily to the 1800s. As English spreads, Thangal community members recognize the threat to their native language and are actively trying to document and preserve it.

With generous support from IU and the American Institute of Indian Studies, I’ve made multiple fieldwork trips to Manipur, the most recent being a seven-month stay from January to August of 2019. These trips have allowed me to celebrate marriages and births in the village; sample local fermented fish; and experience the effects of multiple road strikes, when the national highway that runs through the village becomes eerily deserted. Most importantly, my fieldwork has enabled me to interact with dozens of members of the community; gather a wealth of recordings of conversations, folk tales, and translations; and gain valuable insight into a language for which so little is published. So far, I have presented my findings at the 171st meeting of the Acoustical Society of America, the Endangered and Lesser Known Languages conference in India, and the Himalayan Languages Symposium in Sydney.

Eight years, three additional trips to India, and hundreds of pages of data later, I look back on that initial conversation on the hostel porch with awe and appreciation for the journey that was (and still is) to come. As I continue working toward my dissertation — a descriptive work on Thangal focusing on topics in phonetics and morphosyntax — I am eager to continue contributing to an ongoing academic discussion on the languages and cultures of under-represented tribal communities in Northeast India, and directly helping the Thangal community preserve its mother tongue.
Perception of Mandarin Full Tone Realization and Indexical Meaning
Written by: Feier Gao

Feier Gao is an advanced doctoral student working in an area of growing interest, that of variation and sociolinguistic meaning in Mandarin Chinese. Feier is a recipient of a summer fellowship through the Graduate Student Support Fund, a fund supported by a substantial contribution from I.U. faculty and alumni specifically targeting graduate fellowships. Her fellowship allowed her to engage in the 2019 Summer Linguistic Institute. She is also recipient of a departmental travel grant through alumni donations, which enabled her to present her work before the national conference of sociolinguists, NWAV.

Mandarin is a tonal language which uses pitch contours to distinguish lexical meanings. The tonal realizations in Mandarin, however, can be affected by the prosodic prominence of syllables. When occurring in a weakly stressed position, for instance, the second syllable of a disyllabic or trisyllabic sequences (e.g., ming-bai to understand, qi-bu-lai can’t get up), the tonal features carried by those weak syllables are often not fully realized – characterized by shortened duration and neutralized pitch contours. Tonal neutralization is one of the most common linguistic phenomena in Standard Mandarin, especially productive in connected speech. However, tone neutralization is not fully complete in some Mandarin dialects, such as the southern and oversea Mandarin varieties (e.g., Hong Kong and Taiwan Mandarin).

Interestingly, it is observed that in the recent years, this supraregional full tone feature has been adopted by young speakers of Standard Mandarin as a trendy speech style. Young speakers in the urbanized regions in mainland China performatively realize destressed syllables, e.g., ming2-bai0 to ming-bai2, to index a “cute” and youthful characteristic. The full tone variable has been anecdotally referred as “Taiwan Mandarin accent”. In my research I aim to investigate the indexical association between the Mandarin full tone realization and the “cute” social persona.

A production study was done a year ago, in which I analyzed the tokens of 16 YouTube vloggers (Standard Mandarin speakers) by coding their usage of full tone vs. neutralized tones. Interesting differences were found between the female talkers with distinct personae – the talkers with “cute” characteristics tended to use the full tone feature much more often than the talkers who self-represented as “professional” and “independent”. Motivated by the promising results found in the production study, I aim to expand the current research question by constructing a perception study, hoping to address whether listeners also perceive a social connection between full tone realization and the “cute” social personae. In the perception study, I collaborate with Professor Jon Forrest (University of Georgia) using social evaluation rating task to analyze whether listeners’ judgement on the speaker’s social persona could be affected by the full tone and neutralized tone usage in the speech. The indexical link between linguistic feature and social personae is a higher-level association, resulting in rather complicated perception results. Mismatch between the production and the perception results are arising, as observed in the pilot test, that the speech feature (full tone realization) which was intended to sound “cute” according to the vloggers turn out to be “unpleasant” or even “gross” in terms of perception.
The loanword tonology of North Kyungsang Korean
Written by: Young Hwang

Young Hwang is completing her doctoral thesis work this spring, investigating a range of different phonological and phonetic phenomena in Korean. She is currently on a dissertation fellowship, provided by generosity of support to the department through the college of arts and sciences, and also is recipient of a departmental travel grant through funds from faculty and alumni to support her presentation of the work last fall for the MidContinental Workshop in Phonology, a remarkable assemblage of scholars who have had a long history of working together around the upper Midwest.

There are a number of different dialects of Korean spoken on the Korean Peninsula. Since Korea is a divided country, dialects spoken in North and South Korea exhibit differences. In addition, even within South Korea, more than six regional dialects exist, though the Seoul dialect, which is spoken around the capital city of South Korea, is thought of as Standard Korean. Although most of the Korean dialects are mutually intelligible, each dialect contains their own unique characteristics. Among them, the North Kyungsang dialect, a dialect spoken in the southeast region of Korea, is one of the most salient dialects since it maintains a tone system from Middle Korean (15th-16th century).

North Kyungsang Korean uses (H)igh and (L)ow tones to distinguish words. That is, words with the same segmental content can have different meanings due to distinct tone patterns as shown in the following minimal triplet: [ká.ci] HL ‘type,’ [ka.ci] LH ‘eggplant,’ and [ká.ci] HH ‘branch’ (accented syllables are associated with high tone). In North Kyungsang native words, accent is specific to each word, and the position of high tone is generally unpredictable. However, when it comes to loanwords, the combination of consonants and vowels in sequences plays an important role in the accent assignment.

My research focuses on how English loanwords are assigned accent when they are borrowed into North Kyungsang Korean. When English words are adapted into North Kyungsang Korean as loanwords, the stress pattern of the English words has no effect on the loanword accent assignment. For example, the English word ‘lemon’ has a stress on the first syllable in English, but when it is borrowed into North Kyungsang Korean it has high tone (accent) on the second syllable as in [le.món] (LH). This is not an issue of what some people call ‘stress deafness,’ since Korean speakers are very good at hearing where the English stress is. When Korean speakers pronounce the English word ‘lemon’ they will certainly get the stress correct. This raises an interesting question: if Korean speakers are very good at perceiving the English stress, then how do the English words come into North Kyungsang Korean and have different accent patterns? This reflects the fact that there is a pattern of accent assignment that is specific to English loanwords, and this pattern has nothing to do with English.

After looking at thousands of loanwords from English, here is a brief summary of my findings: In North Kyungsang English loanwords, high tone is generally attracted by heavy syllables (syllables with a lot of material in them) and among heavy syllables the ones toward the beginning of a word have priority to get assigned high tone. Moreover, if the initial syllable is heavy, high tone is generally assigned on the first two syllables of the loanword (e.g. [pín.tʰi.tɕi] HHL ‘vintage’); otherwise, if the penultimate syllable is heavy and the initial syllable is light, high tone is assigned on the penultimate syllable (e.g. [o.ɾén.tɕi] LHL ‘orange’); otherwise, if the final syllable is heavy and all the other syllables are light, high tone is assigned on the final syllable (e.g. [ci.na.món] LLH ‘cinnamon’); and finally, if there is no heavy syllable in a loanword, high tone is assigned on the penultimate syllable as a default pattern (e.g. [mo.ní.tʰʌ] LHL ‘monitor’). Recently, there have been certain changes going on in this loanword tone assignment pattern among younger speakers, so part of my dissertation is also documenting this change in progress and trying to explain why the change is happening.
Kenneth Steimel is an advanced student in the computational doctoral program, who has worked extensively in areas applying advanced computation to technological applications related to African languages. He has been staff at LinguistList, here on I.C.’s campus, and is a recipient of the 2019 Householder Best Paper Award, an award based on faculty and alumni support, for his paper on labeling word classes in Bantu languages.

My primary research area is syntactic parsing and part of speech tagging of under-resourced Bantu languages. This is important because these languages are very under studied by Computational Linguists and are typologically very different from mainstream languages in Computational Linguistics. Working with Bantu languages gives us a better picture of the advantages and disadvantages of different systems.

One of the first things I wrote in this area was a paper on low-resource part of speech tagging for the Luyia language, Wanga, using cross-language tagging. For this, a collection of texts collected by Dr. Michael Marlo of the University of Missouri – Columbia, were used. A standard approach for part-of-speech tagging in English uses Hidden Markov Models (HMM). These models keep track of the likelihood of one part-of-speech tag following another (transition probabilities) as well as the likelihood of a given word having a particular part-of-speech (emission probabilities). These HMMs work okay for English if they have enough data to extract those probabilities from. However, for Wanga, they did very poorly (~40% accuracy). If you try to mix Swahili data in with Wanga data when obtaining these probabilities, it results in an even worse tagger. However, using an unconventional tagger does the trick.

A support vector machine (SVM) model that was less focused on the sequence of tags and instead used the characters present in the words themselves to determine part-of-speech did much better (~90% accuracy). The taggers character inputs were picking up on morphemes that were associated with particular parts-of-speech. On new words, the tagger still did very well. When working with very very small amounts of data, for example training a tagger on 60 sentences, using data from Swahili, a higher resource Bantu language, was beneficial. But as you use more data in the target language, the addition of data from Swahili has almost no effect on tagging accuracy.

So models that can leverage information about characters are important when working with Bantu languages and adding in data from other Bantu languages can be beneficial when working with very small datasets. However, how does language relatedness play into this? The high resource language used, Swahili, is a Bantu language but is still quite distant from Wanga. Another paper examined using the SVM model but augmenting it with several different languages including Swahili, Tiriki and Bukusu. Tiriki and Bukusu are both Luyia languages like Wanga, however, Wanga is more closely related to Bukusu. While both Tiriki and Bukusu augment the Wanga tagger better than Swahili, the more distantly related Tiriki was more useful. This was pretty surprising. The Tiriki data did notably better on loan words from Swahili which may have provided just enough boost.

When we as computational linguists include more languages, we get a more realistic view of what models work better in certain linguistic situations.
The following are references selected from a much larger list of faculty research dissemination from the 2019 calendar year:

**Books**


• Kuebler, S. C. (2019). In E. Hinrichs, M. Hinrichs, & T. Trippel (Eds.), *Special Issue on Language Technology for Digital Humanities*.


**Journal Articles**


**Book Chapters and Working Papers**


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Other

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