

Negation and Negative Polarity Items in Tigrinya

Angela Cao and Madison Liotta*

1 Introduction

While negation has fostered a rich field of study among linguists, much of this work is constrained to the domains of well-represented languages. In the context of the understudied Semitic language Tigrinya, the present study aims to provide an analysis of its sentential negation, demonstrate that adverbial negative polarity items (NPIs) such as *never* are licensed via c-command while NPIs like *not one thing* and *no-* are licensed via the Spec-Head relation, and provide evidence that licensing can occur across relative clause boundaries. This finding aligns with previous studies of negative items in related languages, such as Berber (Ouali 2014). To further contextualize our study, we also draw similarities across patterns in other languages, including Berber and Jordanian Arabic (Overfelt 2009, Kogan 1997).

1.1 Methodology

We obtained data through elicitations with two male L1 speakers of the language who lived in Ethiopia and Eritrea before moving to the Atlanta area in the early 2000s. We modelled elicitations after a previous study of NPIs in Jordanian Arabic by Alsarayreh (2012). Elicitation sessions consisted of requests for translation of complete sentences, specific words and morphemes, and grammaticality checks of our own Tigrinya sentences. Because of pandemic restrictions, the majority of sessions were conducted remotely. Elicitations were conducted over the phone with Consultant A and over Zoom with Consultant B, based on their preferences.

2 Negation

Being a negative concord language, the main form of negation is usually expressed as a confix, which is supported by previous literature from Kogan (1997). We summarize this form as follows:

- A. prefix *a/aj-* + suffix *-in*
NEG + verb + NEG
a/aj + verb + *in*

2.1 Verbs and Predicate Adjectives

We first discuss the negation of verbs using the following examples:

- (1) *i-bellʕeʔ al-loho*
1SG-eat PROG-1SG
“I am eating.”
- (2) *aj-bellʕeʔ-in al-loho*
NEG-eat-NEG PROG-1SG
“I am not eating.”

Evidently, the confix surrounds the verb *bellʕ-eʔ* in order to negate it. However, as we will see in the following sections, they are not always both necessary.

This pattern is also the case for predicate adjectives, as in:

*Many thanks to our advisors Yun Kim and Marjorie Pak, our two consultants, and the Emory Linguistics Research Grant. Thanks also to Lelia Glass and Abbie Hantgan-Sonko for their feedback. This work would not have been possible without their support.

- (3) *higgus di-xa*
happy Q-2SG
“Are you happy?”
- (4) **aj-higgus-in** di-xa
NEG-happy-NEG Q-2SG
“Are you not happy?”

2.2 Imperatives and Jussives

With negation of verbs used in imperatives (and by extension, prohibitives), the suffix *-in* is not used. Instead, the *-a* indicates a prohibitive. Consider (6).

- (5) *εt-a tuffaḥ bellɿ-aja*
DET-SG.F apple eat-IMP
“Eat the apple.”
- (6) *tuffaḥ aj-bellɿ-a*
apple NEG-eat-PROH
“Do not eat the apple.”

Next, we consider negation of verbs used in jussives. In these cases, negation drops the suffix entirely, as demonstrated below in (7) which is given by Kogan (1997).

- (7) **aj-ji-mut**
NEG-3SG.M-die
“Let him not die!”

2.3 Relative Clauses

The negation prefix may interact with others. We first discuss relative clauses in which the subject is masculine. In the following examples, the relative clause marker denoted as the prefix *z-* combines with the negation prefix *aj-* to form the masculine negative relative clause marker *zej-*. The masculine subject marker is *-ji-*, which is generally combined or elided when other prefixes are involved, especially given that the negation prefix is phonetically similar. Also, the negation suffix is dropped.

- (8) *εt-i εdɛn zi-bellɿε zε-ll-a mɛgbi ab t'awla all-o*
DET-SG.M Eden REL-eat REL-PROG-SG.F meal on table be-3SG.M
“The meal that Eden is eating is on the table.”
- (9) *εt-i εdɛn zej-ti-bellɿε z-εll-a mɛgbi ab t'awla all-o*
DET-SG.M Eden REL.NEG-3SG.F-eat REL-PROG-F.SG meal on table be-3SG.M
“The meal that Eden is not eating is on the table.”
- (10) *εt-a g^wal εt-i dawit zε-nbibo z-εll-o mɛts'ḥaf ti-riji*
DET-SG.F girl DET-SG.M Dawit REL-read REL-PROG-SG.M book 3SG.F-see
“The girl sees the book that Dawit reads.”
- (11) *εt-i k'olɿa εt-i dawit zej-nbibo mɛts'ḥaf ji-riʔi*
DET-SG.M boy DET-SG.M Dawit REL.NEG-read book 3SG.M-read
“The boy sees the book that Dawit does not read.”
- (12) *εt-i zej-t'εmeje ambesa*
DET-SG.M REL.NEG-hungry lion
“The lion that isn't hungry”

Now we discuss relative clauses with a feminine subject. Consider the following examples.

- (13) εt -a d ε mمامu t-igg^waji t'el eje tifottu
 DET-SG.F cat.PL 3SG.F-chase goat be.1SG like
 "I like the goat that chases cats."
- (14) εt -a d ε mمامu **zej**-t-igg^waji t'el eje tifottu
 DET-SG.F cat.PL REL.NEG-3SG.F-chase goat be.1SG like
 "I like the goat that does not chase cats."

In the positive sentence, the relative prefix *z-* is deleted, in favor of the feminine subject agreement prefix *t-*. In the negative sentence, the relative marker *z-* combines with the negation prefix *aj-*, and also with the feminine subject marker *t-* to create *zejt-*. As with other relative clauses, the negation suffix is also dropped here.

Non-predicate adjectives are negated as relative clauses. Consider the following.

- (15) εt -i **zej**-t'emeje ambesa
 DET-SG.M REL.NEG-hungry lion
 "The not-hungry lion"

Notice that the elicited phrases are the same for (12) and (15).

- (16) εt -i **zej**-higgus harastaj εt -om k'ol ν u a-gg^waju-om
 DET-SG.M REL.NEG-happy farmer DET-PL.M child.PL PST-chase-3PL.M
 "The unhappy farmer chased the children."
- (17) εt -i ν abi **zej**-kone kelbi d ε k'isu all-o
 DET-SG.M big REL.NEG-be dog sleep PROG-3SG.M
 "The not-big dog is asleep."

We conclude that Tigrinya uses one main form of negation that slightly varies depending on the grammatical category of the item being negated.

3 Negative Polarity Items

We first discuss negative polarity items (NPIs) within English before returning to Tigrinya. NPIs are words or phrases that are ungrammatical in positive statements, but grammatical in their negated counterpart (Ladusaw 1979, Giannakidou 1979, Horn 2010). Contrast the following:

- (18) a. I don't have **any** cats.
 b. *I have **any** cats.

Across languages, it is theorized that NPIs are licensed by negation to exist within its scope (Giannakidou 2011).

- (19) a. ***Any** cats Dorothy doesn't have.
 b. Dorothy doesn't have **any** cats.

This explains why (19a) is ungrammatical because *any* to the left of negation in this construction entails *any* in a position not within the scope of negation. When eliciting for NPIs in Tigrinya, we asked our consultants whether the minimal pair using a non-negated context could be used. Consider the following examples of the Tigrinya NPI *fets'imu*, which means "never".

- (20) *nissu tuffah **fets'imu** ji-bell ν ε all-o
 he apple never 3SG.M-eat PROG-3SG.M
 "He never eats apples."

- (21) nissu tuffah **fets'imu aj-bellεεʔ-in** all-o
 he apple never NEG-eat-NEG PROG-3SG.M
 “He never eats apples.”

As seen in these examples, the NPI *fets'imu* requires the verb to be within the scope of negation for its use to be grammatical. The question then arises of how scope is syntactically defined, which we discuss in the following sections.

3.1 Nominal NPIs

Here, we discuss the nominal NPIs *walla hanti* and *walla hadda*, which correspond to *not one thing* and *no-*, respectively. As depicted in Figures 1 and 2, they both occur with the negation confix. We argue that these NPIs are licensed via the Specifier-Head relation. In our analysis, we assume the DP hypothesis which argues that every NP is the complement of a D head (Abner 2021). We also assume that Neg heads its own maximal projection, NegP. This assumption has been made for English, Berber, and Romance languages by Ouali (2003, 2014) and Chomsky (1989) among others. Ouali (2014) discusses a number of arguments for Neg as head of NegP, but most relevantly is our finding that Neg inflects with tense in both Standard Arabic (Fassi-Fehri 1993) and Tigrinya (see Figure 1).

The phrasal movement depicted in Figure 1 is optional.¹ In this way, nominal Tigrinya NPIs act differently than English NPIs, which are not allowed to undergo topicalization (Hoeksema 2000). It can be observed that in the Deep Structure (DS), negation exists at Neg, and the specifier of this head is NegP, which contains the NPI *walla hanti*. So, *walla hanti* is licensed prior to being topicalized.

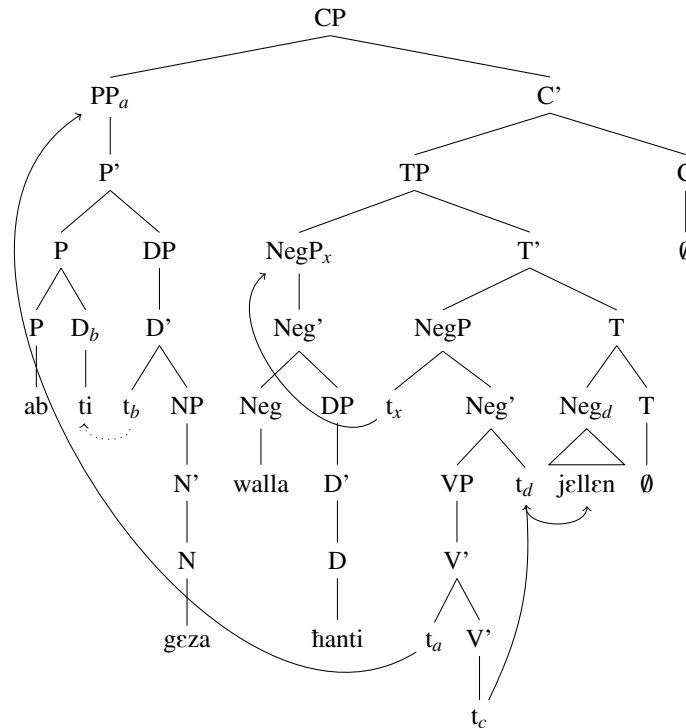


Figure 1: Tree for (22).

¹The dotted line denotes cliticisation (Henry 1995).

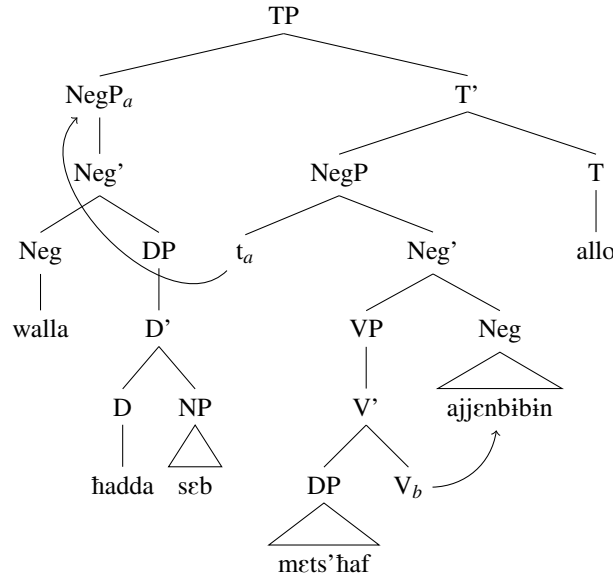


Figure 2: Tree for (23).

- (22) ab-ti gɛza **walla hanti** j-ɛll-ɛn
 in-DET.3SG.M house NEG one.NOM NEG-PROG-NEG
 “There is nothing in the house.”

We extend this observation to apply to the nominal NPI *walla hadda* as well. This NPI is semantically similar to *walla hanti* but must connect with a noun, unless it is dropped, in which case *seb* is implied. An example would be *walla hadda ambesa*, meaning *no lions*. As depicted in Figure 2, *aj-* + *-in* exist at Neg. The specifier of this head in the DS is once again the maximal projection NegP, containing the nominal NPI *walla hadda*.

- (23) **walla hadda** seb mɛts'haf aj-jɛ-nbib-in all-o
 NEG one.ADJ person book NEG-3SG.M-read-NEG PROG-3SG.M
 “No one is reading a book.”

As a counterexample, we include (24). Consider that here, *walla hadda* is not the specifier of negation. The utterance was deemed ungrammatical by both of our consultants.

- (24) *ɛt-a g^wal **walla hadda** ambesa t-iri?iɟo all-a
 DET-SG.F girl NEG one.ADJ lion 3SG.F-see PROG-3SG.F
 “The girl sees no lion.”

Furthermore, that *walla hanti* and *walla hadda* derive from the numeral ‘one’ aligns with Haspelmath (1997)’s finding that many languages from his survey of indefinite pronouns in 100 languages include negative sensitive items that are derived from ‘one’.

Finally, nominal NPIs in Tigrinya are able to appear in the subject position, as demonstrated in Figure 2. This characteristic differentiates Tigrinya NPIs from those in English (i.e. **Anyone* from not meet Mary), but is a shared trait with NPIs in Korean (e.g., 25) and Japanese (e.g., 26) (Nakao and Obata 2007).

- (25) **amuto** Mary-lul ani mennessta
 anybody Mary-ACC not meet
 ‘Anyone did not meet Mary.’

- (26) **dare-mo** Mary-o mi-nakat-ta
 anybody Mary-ACC see-not-PST
 ‘Anyone did not see Mary.’

3.2 Adverbial NPIs

Here, we discuss the adverbial NPIs *fets’imu* and *fets’ima*, which are the masculine and feminine forms of *never*, respectively. We argue that these NPIs are licensed when they are c-commanded by the negation confix, which is a standard licensing configuration (Frank and Vijay-Shanker 2000). This is girded by earlier work in Tigrinya from Overfelt (2009), who has stated that when negation and the NPI are within the relative clause, then the NPI will exist within the c-command of the negation.

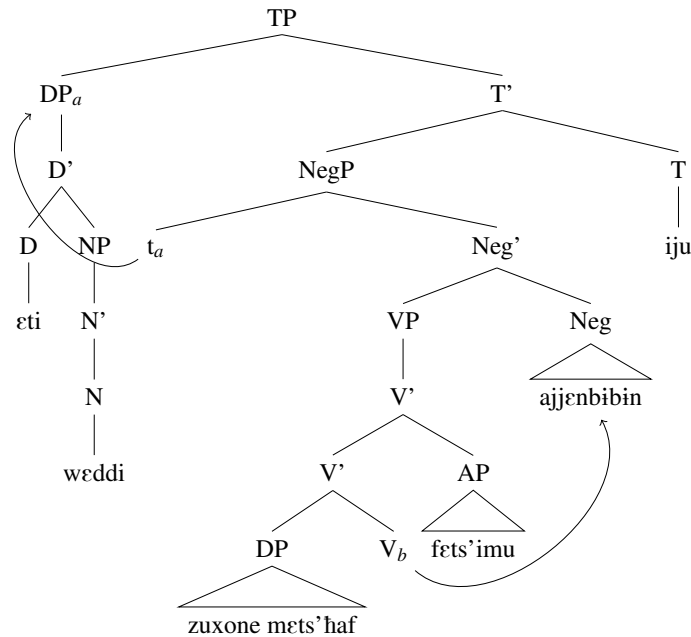


Figure 3: Tree for (27).

- (27) *eti* *wæddi* *zuxone* *mets'haf* **fets'imu** *aj-jɛ-nbib-in* *ij-u*
 DET-M.SG boy any book never NEG-M.3SG-read-NEG HAB-M.SG
 ‘The boy never reads any books.’

First we discuss *fets’imu*, as in Figure 3 and (27). It is evident that the first branching node of Neg, Neg’, also dominates the AP containing *fets’imu*. Thus, negation c-commands *fets’imu* and thus licenses it.

Note that in Figure 4 below, while *ajtfeletin* is taken to have the same meaning of *never* as *fets’ima* does, the direct translation of the root *felet* is actually a conjugated form of *to know*. This forms a double-verb construction. *felet* is not an NPI, as demonstrated in (28), where there is no negation.

- (28) *helɛn* *ambesa* *riʔ-a* **t-felet** all-a
 Helen lion see-F 3SG.F-know PROG-SG.F
 ‘Helen sees a lion.’

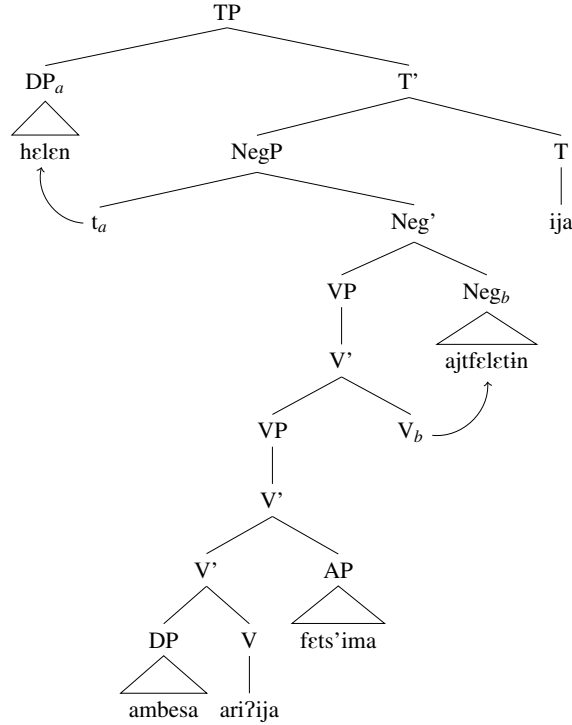


Figure 4: Tree for (29).

- (29) helen ambesa a-ri?i-ja **fets'im-a** aj-t-felət-in ij-a
 Helen lion PST-see-F never-F NEG.3SG.F-know-NEG HAB-SG.F
 “Helen has not ever seen a lion.”

Figure 4 depicts a similar relation to Figure 3 in that Neg also c-commands *fets'ima*.

3.3 Licensing Across CP boundaries

Whether or not NPIs can be licensed across CP boundaries, which is also referred to as “long distance licensing,” varies cross-linguistically. Consider that this is possible in English (i.e. “Mary did not believe that she did *anything* wrong”), whereas it is not in Hungarian (e.g., as glossed by Vu (2018) in (30)) and Korean (e.g., (31) as glossed by Nakao and Obata (2007)).

- (30) *Mari nem kezdett olvasni **semmit**
 Mari NEG start.PST read.ING NPI.ACC
 “Mari didn’t start to read anything.”
- (31) *Mary-ka [John-i **amukesto** saessta-ko] mit-ci ani hayessta
 Mary-NOM John-NOM anything bought-C believe not did
 “Mary did not believe that John bought anything.”

We depict a usage of the idiomatic NPI *k'ejjah santim* in Figure 5, which literally translates to *red cent*, meaning *penny*. The phrase is used to describe someone who doesn’t have any money or who is poor, similar to the English idiom “he doesn’t have a *penny* (or *cent*) to his name.” This NPI also exists in Jordanian Arabic as *fihs aHmar* (Alsarayreh 2012). The Tigrinya elicitation of “Jafet doesn’t have a red cent,” surprisingly yields a relative clause, and the English equivalent is better thought of as “Jafet doesn’t have a thing called a red cent.” We know that this example includes a relative clause

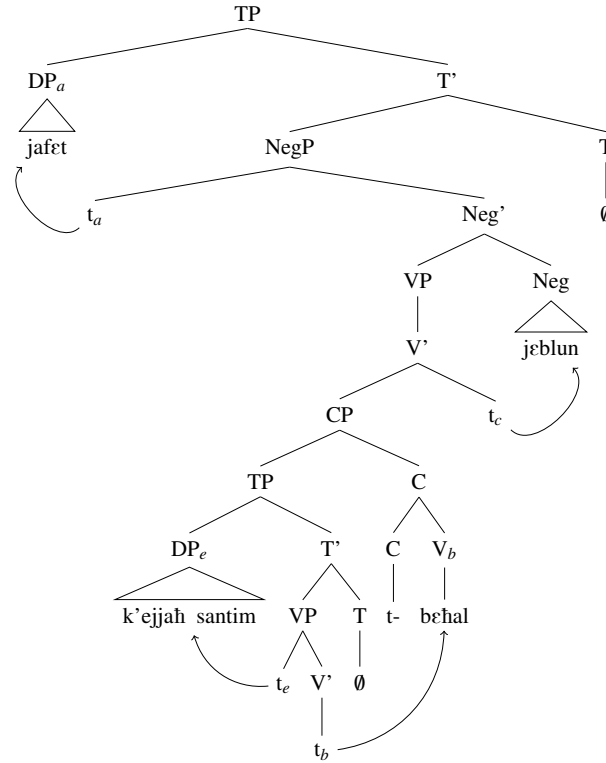


Figure 5: Tree for (32).

despite the absence of a marker because as discussed in Section 2.3, a feminine subject marker can replace a relative clause marker in a non-negated context. While the matrix clause is negated in Figure 5, the embedded clause is not. In Figure 5, we can see that *k'ejjah santim* is licensed through the CP boundary by the negation confix. Thus, we conclude that Tigrinya NPIs can be licensed across clause boundaries.

- (32) jafet **k'ejjah santim** t-behal j-εblu-n
 Jafet red cent REL.F-call NEG-have-NEG
 “Jafet doesn’t have a red cent.”

4 Conclusion

This paper has offered four results. It first demonstrated how negation manifests in Tigrinya. Second, it provided evidence that nominal NPIs are licensed via the Spec-Head relation with negation in their surface structures. Third, it argued that adverbial NPIs are licensed when c-commanded by negation. These two arguments are inversely similar to previous studies of NPIs in Berber, in which NPI adverbs like *never* are licensed via Spec-Head, while NPIs like *no one* and *nothing* are licensed via c-command (Ouali 2014). Finally, it demonstrated that negation can license Tigrinya NPIs over clause boundaries.

References

- Abner, Natasha. 2021. *The Routledge Handbook of Theoretical and Experimental Sign Language Research*, chapter Determiner Phrases: Theoretical Perspectives. Routledge.
- Alsarayreh, Atef Atallah. 2012. *The Licensing of Negative Sensitive Items in Jordanian Arabic*. Doctoral dissertation, University of Kansas.

- Chomsky, Noam. 1989. Some notes on economy of derivation and representation. *Functional Heads and Clause Structure. MIT Working Papers in Linguistics* 10:43–74.
- Fassi-Fehri, Abdelkader. 1993. Issues in the structure of Arabic clauses and words. Dordrecht: Kluwer.
- Frank, Robert, and K. Vijay-Shanker. 2000. Primitive c-command. *Syntax* 4:1–52.
- Giannakidou, Anastasia. 1979. The Landscape of Polarity Items. Doctoral dissertation, Rijksuniversiteit Groningen.
- Giannakidou, Anastasia. 2011. Positive polarity items and negative polarity items: variation, licensing, and compositionality. *Semantics: An International Handbook of Natural Language Meaning (Second edition; ed. by C. Maienborn, K. von Stechow, and P. Portner)* 1660–1712.
- Haspelmath, Martin. 1997. *Indefinite Pronouns*. Oxford: Oxford University Press.
- Henry, Alison. 1995. *Belfast English and Standard English: Dialect Variation and Parameter Setting*. Oxford University Press, 1st edition.
- Hoeksema, Jack. 2000. Negative polarity items: Triggering, scope, and c-command. *Negation and Polarity* 115–146.
- Horn, Laurence R. 2010. *The Expression of Negation*. De Gruyter, Inc.
- Kogan, Leonid E. 1997. *The Semitic Languages*. Routledge. Pages 424–445.
- Ladusaw, William A. 1979. Polarity Sensitivity as Inherent Scope Relations. Doctoral dissertation, University of Texas.
- Nakao, Chizuru, and Miki Obata. 2007. Parametric variations in NPI-licensing and the role of LF X^0 -Movement. *Proceedings of the 9th Seoul International Conference on Generative Grammar* 135–152.
- Ouali, Hamid. 2003. Sentential negation in Berber: A comparative study. *Trends in African Languages* 8.
- Ouali, Hamid. 2014. Negation and negative polarity items in Berber. *Annual Meeting of the Berkeley Linguistics Society* 30:330–340.
- Overfelt, Jason. 2009. The syntax of relative clause constructions in Tigrinya. *ETD Collection for Purdue University*.
- Vu, Mai Ha. 2018. Towards a formal description of NPI-licensing patterns. In *Proceedings of the Society for Computation in Linguistics (SCiL) 2018*, 154–163.

Angela Cao
 Program in Linguistics
 Emory University
 532 Kilgo Circle, Suite 202C
 Atlanta, GA 30322
angelacao@alumni.emory.edu

Madison Liotta
 Department of Linguistics
 University of Hawai'i at Mānoa
 1890 East-West Road, Moore 569
 Honolulu, HI 96822
mliotta@hawaii.edu