SUBJUNCTIVE ACQUISITION AND USE IN ROMANIAN HERITAGE USERS IN THE UNITED STATES

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Abstract

This thesis examines the effects of subjunctive acquisition by heritage users of Romanian. Numerous studies across a range of languages have looked at the acquisition of the subjunctive in L1 users (Gallego and Alonso-Marks 2014, Gudmestad 2013, Collentine 2010) and L2 users (Gudmestad 2006, McManus and Mitchell 2015). Extensive research is also available on general heritage language acquisition (Benmamoun et al. 2013, Isakson 2016, Silva-Corvalán 2003, Montrul 2016). However, less commonly taught languages, including Romanian, are understudied in academic research and particularly in heritage language research in the United States.

This thesis examines subjunctive acquisition in heritage Romanian users through a review of the literature and analyses of a language survey and semi-directed, follow-up interviews. It addresses how Romanian heritage users employ the subjunctive compared to native Romanian users, how background variables influence subjunctive use, and which specific contexts of the subjunctive pose the most difficulties for heritage Romanian users. In particular, this research examines the third person construction of the subjunctive due to its complex formation. Overall, the results suggest

a mismatch in the third-person subjunctive formation in a subset of heritage Romanian users and a difference in ascribed uses between native and heritage users. This points towards additional variety in the Romanian of diaspora communities.

Contents

1   Introduction

The Romanian diaspora is one of the largest, non-war-driven diasporas in the world, with an estimated 10 million members outside of Romania and Moldova (Kondan 2020). Romanian immigrants raise families in communities where Romanian is not the dominant language. As a result, children who grow up in immigrant families usually do not have access to official schooling or full immersion in the Romanian language.

My thesis targets a subjunctive mismatch that occurs in the third person singular construction in heritage Romanian users. This introduction section will briefly introduce what heritage users are and what the subjunctive is. As defined by Valdés (2001), heritage language users in the United States are "raised in a home where a non-English language is spoken, who [speak] or at least [understand] the language, and who [are] to some degree bilingual in that language and in English." In other words, heritage language users typically have home languages which differ from the official, or dominant, language of the area in which they live. I adopt the term "users" in lieu of "speakers" throughout this paper in attempt to be inclusive of all varieties of heritage language users. For example, heritage language users may not be completely proficient in their verbal output or may have learned a non-verbal language, such as sign language.

Pertaining to grammar, the subjunctive is a complex mood that tends to be completely acquired near puberty for native users (Benmamoun et al. 2013, Blake 1983). My project seeks to shed light on how the subjunctive mood is acquired in an environment where the natural first language acquisition process is disrupted (as with immigrant children) or where there is a lack of language input due to the minority status of a heritage language.

The subjunctive mood appears frequently in Romanian and is used not only to express desires, wishes, requests, etc. but also to offer an alternative way of expressing the future. In addition, in cases where two verbs follow one another, the second verb tends to inflect according to the subjunctive; this results in the subjunctive construction appearing more often than in other languages which utilize the subjunctive (Cojocaru 2003, Dobrovie-Sorin 1993). In the third person of the Romanian subjunctive, ending morphemes follow distinct rules: while the first and second person subjunctive constructions have identical verb inflections as the indicative, the third person inflection differs from the indicative.

My project will investigate how heritage Romanian users in the United States use and interpret and produce these distinct rules in the third person subjunctive. I hypothesize that the third-person, singular construction in the subjunctive will pose issues for heritage Romanian users and result in a mismatch where the inflected verbs will follow indicative morphology. Specifically, my thesis will address the following questions:

1. Which background variables influence subjunctive use in heritage Romanian users?

2. How do heritage Romanian heritage users employ the subjunctive compared to native Romanian users?

3. Which specific contexts of the subjunctive use pose the most difficulties for heritage Romanian users?

My research offers an overview of heritage Romanian users between 18 and 25 in the United States and suggests the existence of a mismatch in the third person subjunctive in a subset of heritage users.

My thesis begins with a literature review on the subjunctive and heritage languages before explaining my experiment, results, and conclusions. Section 2 discusses the subjunctive in general and through cross-linguistic examples from semantic and morpho-syntactic perspectives. Section 3 discusses the semantics and morpho-syntax of the Romanian subjunctive. Section 4 introduces heritage users and describes who they are and why they are important. Section 5 outlines the methods used to conduct research for my thesis and describes my Qualtrics survey and semi-directed, follow-up interviews. Section 6 introduces the results, and Section 7 discusses them. Section 8 concludes.

2 General Discussion of the Subjunctive

2.1 What is the Subjunctive Mood – Semantics

The subjunctive is a verbal mood, a subcategory of mood which represents diverse cognitive states and mental acts, such as beliefs and desires, and helps us interpret such propositions in sentence (Portner 2018). In this thesis, the two verbal moods I will focus on are the indicative and the

subjunctive.[1] This section provides background on the ways in which the subjunctive is used compared to the indicative. In general, two theoretical approaches explain the distinctions between the subjunctive and the indicative in semantics: one based on comparison and the second based on truth in sets of worlds (Portner 2018). In the former, the subjunctive is used for comparisons; in the latter, the subjunctive is used when the goal, or the intended meaning of an utterance, does not refer to a true set of worlds (Portner 2018). The indicative, on the other hand, applies to contexts of truth and involve *realis* (intellectual or cognitive predicates). Generally, subjunctive clauses are used for statements which are not necessarily true, associated with non-veridicality, and as a type of "final resort" when the presuppositions of the indicative are not met (Portner 2018). The differences between the subjunctive and the indicative are summarized in Table 1.

Uses	Subjunctive	Indicative
Comparisons	*	
Contexts of Truth		*
Final Resort	*	
Intellectual/Knowledge Predicates		*
Wishes, Desires, Beliefs	*	

Table 1: Uses of the subjunctive and indicative moods

Subjunctive	Indicative
to wonder	to know
to want	to say
to order	to see
to require	to hear
to cause	to promise

Table 2: Examples of subjunctive and indicative predicates

Indicative mood governors, or elements which prompt use of the indicative, include predicates of knowledge. Subjunctive mood governors, or syntactic elements which prompt the use of the subjunctive, include predicates of inquisitiveness, preference, negation of knowledge or beliefs, and modals (among others) (Portner (2018)). Under the comparative meaning approach, the subjunctive governors can be either preference predicates (or verbs in which alternative possibilities base themselves on preference) or directive predicates (or verbs in which comparisons base themselves on rules) (Portner 2018). Examples of common predicates used for each are shown in Table 2.

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[1]The five types of verbal moods are the imperative, indicative, interrogative, subjunctive, and conditional moods.

For a more complete idea of the differences between the indicative and the subjunctive, sample sentences incorporating verbs discussed above are shown in (1) and (2).

Indicative

(1)   a. I know that the doctor will treat her wound.

         b. They see that the sun sets at dusk.

         c. Ana promised to bring candy to the children.

Subjunctive

(2)   a. I wonder if the doctor will treat her wound.

         b. I require that they film while the sun sets at dusk.

         c. Mother wanted Ana to bring candy to the children.

Examples (1a)–(1c) all display knowledge or real world scenarios which have truth to them, as characterized by the indicative mood. When we look at examples (2a)–(2c), we see a shift. Rather than express truth, the sentences express uncertainty, preference, or desires and offer alternative situations or comparisons to what happens in the real world.

To determine choice of verbal mood, either indicative or subjunctive, one must consider the parameters involved in the interpretation of the matrix predicate, or the predicate which triggers either the subjunctive or indicative, and the conversation context (Portner 2018). In other words, one must determine whether the meaning they intend to get across to their audience is based on comparisons (or an alternative world) or gives us straightforward knowledge of the real world.

2.2   What does the Subjunctive Mood look like – Morpho-Syntax

The morpho-syntactic realization of the subjunctive is language-dependent. This section briefly explores the morphology and syntax of the subjunctive in Romance languages. While the appearance of the subjunctive differs from language to language, one general way of incorporating the subjunctive mood in sentences is through "trigger" predicates in the matrix clause. "Trigger" predicates (previously referred to as "governors" in Section 2) generally trigger the subjunctive mood in the complement predicate of the subordinate clause (Manzini 2000, Giorgi 2009, Bybee and Thompson 1997, Bybee 2002). This is particularly true of Romance languages, on which I focus given that

Romanian, the target language of this thesis, belongs to the Romance language family. Examples of matrix predicates which prompt predicates to be inflected according to the subjunctive mood are shown in (3).[2]

(3)   a. Gianni credeva (che) avesse   telefonato Maria.
           Gianni believed (that) have.3SG.SJV.PAST called   Maria

           'Gianni believed that Maria had called.'   Italian (Giorgi 2009: 6)

      b. Quiero   que te vayas.
          want.1SG that you leave.2SG.SJV

          'I want that you leave.'   Spanish (Collentine 2010: 43)

      c. Je suis   content que Jean soit   là.
          I   be.1SG happy   that Jean be..sjv there

          'I am happy that Jean is there.'   French (Connors 1978: 45)

The examples in (3) show the common construction of the subjunctive mood in different Romance languages as triggered by a predicate in the matrix clause (*credeva* 'believed' in (3a), *quiero* 'I wish' in (3b), and *suis content* 'am happy' in (3c)). In addition, the examples in (3) each show how the predicate inflected according to the subjunctive mood (*avesse* 'had' in (3a), *vayas* 'leave' in (3b), and *soit* 'is' in (3c)) is found in the subordinate clause, which is dependent on the matrix predicate. In the above examples, the subordinate clause is headed by a word corresponding to English "that", which is a complementizer. In other words, the clause begins with "that". In the examples in (3), the subject of the matrix clause is different form the the subject of the embedded clause. In Italian, Spanish and French, an embedded clause in the subjunctive must have a different subject from the matrix clause. Interestingly, this is not required in Romanian, where the clause in the subjunctive may have the same subject as the matrix clause.

In addition to appearing in embedded clauses, the subjunctive may also be found in certain matrix clauses, such as in cases of interrogatives (Dobrovie-Sorin 1993). Examples are shown in (4).

(4)   a. Să mergem   la   biserică?
           să go.3PL.SJV to-the church

          'Should we go to church?'   Romanian

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[2]The following abbreviations are used: SJV (subjunctive mood), IND (indicative mood), SG (singular), PL (plural), PAST (past tense), DEF (definite), INF (infinitive), 3 (third person), 2 (second person), 1 (first person), *să* (subjunctive complementizer), *că* (indicative conjunction), AUX (auxiliary)

    b. Vive   la France.
       live.3SG.SJV the France

       'Long live France.'   French (Dobrovie-Sorin 1993: 97)

3   The Romanian Subjunctive

3.1   How does one form the Romanian subjunctive? – Morpho-Syntax

To form the subjunctive in Romanian, one must combine the invariable mood complementizer *să*
with a verb inflected according to the subjunctive that agrees with the subject in person and number
(Cojocaru 2003, Dobrovie-Sorin 1993)). This section explores the formation of the Romanian
subjunctive in more detail. For the first and second person of the present indicative, the verb
inflects identically in the present indicative and the present subjunctive. To tell the subjunctive
apart, one must look at the meaning behind the sentence and acknowledge the complementizer *să*.
An example of this is the first person, singular example of *a merge* 'to walk' in (5).

(5)   merg   / să merg   Present Indicative / Present Subjunctive
      walk.1SG / SJV walk.1SG
      I walk

    The inflected verb itself in (5), *merg* 'walk' can be interpreted in either the indicative mood or
the subjunctive mood, depending on context. Without *să* preceding the verb, the verb is considered
to be indicative; with *să* preceding, the verb is considered to be subjunctive.

    To help us better understand the Romanian subjunctive, it is useful to understand the elements
involved in the subjunctive mood formation. In general, scholars are uncertain about the morpho-
syntactic classification of *să*. Dobrovie-Sorin (1993) classifies *să* as either a marker of the subjunctive
mood (a complementizer that is an inflectional prefix) or a coordinating conjunction which occupies
the complementizer position. She offers constituency tests which give support for both status as
an inflectional prefix and a coordinating conjunction.

3.2   *Să* as an inflectional marker

Support for *să* as an inflectional or subjunctive marker comes from the obligatory adjacency between
the verb cluster and *să* (6b), that coordination can only occur in subjunctive verb sentences which

include *să* preceding the verb inflected for the subjunctive (7b), and that *să* can co-occur with wh-elements, unlike the indicative conjunction *că* (8b) (Dobrovie-Sorin 1993).

(6b) shows how *să* cannot be separated from the following verb. If separated, the sentence becomes ungrammatical.

(6)   a.   Vreau   ca   până mâine   să termine   Ion   cartea   asta.
             want.1SG that until tomorrow să finish.3SG.SJV John book.DEF this

             I want (for) John to finish this book by tomorrow.   Dobrovie-Sorin (1993): 93

       b.   *Vreau   ca   până mâine   să Ion   termine   cartea   asta.
             want.1SG that until tomorrow să John finish.3SG.SJV book.DEF

             I want (for) John to finish this book by tomorrow.   Dobrovie-Sorin (1993): 94

The close, adjacent relationship of *să* to the inflected verb in the subjunctive offers evidence for *să* as a complementizer that marks the subjunctive.

(7b) shows how *să* cannot be omitted in subjunctive verb phrase coordinations. If separated, the sentence becomes ungrammatical.

(7)   a.   Vreau   (ca   mâine)   **să** plece   mama și   **să** rămână   Ion.
             want.1SG (that tomorrow) să leave.3SG.SJV mama and să remain.3SG.SJV John

             I want that Mama leaves tomorrow and John stays.   Dobrovie-Sorin (1993): 94

       b.   *Vreau   (ca   mâine)   **să** plece   mama și   rămână   Ion.
             want.1SG (that tomorrow) să leave.3SG.SJV mama and remain.3SG.SJV John

             I want that Mama leaves tomorrow and John stays.   Dobrovie-Sorin (1993): 94

The fact that the verb inflected in the subjunctive cannot stand on its own without *să* offers evidence that it may be an inflectional prefix and a complementizer that triggers the subjunctive inflection in the following verb.

Să can also occur with WH-elements, such as *cu care* 'with which' and *cu cine* 'with whom.' However, the element cannot be replaced with the indicative conjunction *că* 'that' and create a grammatical sentence.[3] This is noted in (8b).

(8)   a.   Caut   o   fată   cu   care   să plec   la munte.
             search.1SG one girl.DEF with which să leave1SG.SJV to mountain

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[3]Note: Both *cu care* 'with which' and *cu cine* 'with whom' form a cacophony in Romanian given the 'c...c' succession. Although these were used in example sentences by Dobrovie-Sorin (1993), native users try to avoid the structures if possible.

I am searching for a girl with whom I can go to the mountains. Dobrovie-Sorin (1993): 95

    b. *Caut   o fată   cu care că pleacă   la munte.
       search.1SG one girl.DEF with which that leave1SG.SJV to mountain
       I am searching for a girl with whom I can go to the mountains. Dobrovie-Sorin (1993): 95

The fact that *să* cannot be replaced by *că* 'that' in (8b) provides evidence that *să* is not the head of a complementizer phrase but occurs as an element in an inflectional phrase along with a verb inflected in the subjunctive. In other words, (8b) supports that *să* occurs under an inflectional phrase and not as part of a complementizer phrase. Overall, since *să* cannot be separated from the inflected verb and can occur with WH-elements, support exists for the classification of *să* as an inflectional, subjunctive complementizer in Romanian.

3.3 *Să* as a subordinating conjunction

There is evidence that supports *să* being classified as an inflectional, subjunctive complementizer. However there is evidence that also supports *să* being classified as a subordinating conjunction in a complementizer position. Such evidence includes the fact that *să* is invariable (like other conjunctions, such as *și* 'and' and *dacă* 'if'), can head an embedded clause, and occupies the leftmost position of the SVO ordered Romanian language (Dobrovie-Sorin 1993). The examples in (9) show these properties. They are then discussed.

(9)   a. Vreau   să nu-l   mai   întâlnesc.
          want.1SG să not-him again meet1SG.SJV
          I do not want to meet him again.   Modified from Dobrovie-Sorin (1993): 95

      b. *Vreau   nu să-l   mai   întâlnesc.
          want.1SG not să-him again meet1SG.SJV
          I do not want to meet him again.   Modified from Dobrovie-Sorin (1993): 95

      c. *Vreau   îl   să mai   întâlnesc.
          want.1SG him să again meet1SG.SJV
          I do not want to meet him again.   Modified from Dobrovie-Sorin (1993): 95

      d. *Vreau   nu-l   să mai   întâlnesc
          want.1SG not-him să again meet1SG.SJV
          I do not want to meet him again.   Modified from Dobrovie-Sorin (1993): 95

In (9), *să* is morphologically the same in every example in which the subjunctive mood is used and is thus invariable. The examples in (9a- 9d) all include embedded clauses with the subjunctive. The sentences become ungrammatical if the order of any element in the embedded clause changes (not only just the order of the complementizer *să* and the following verb). Thus, *să* must head the embedded clauses and precede negation and any clitics. This offers support for *să* as a complementizer in a complementizer position.[4]

Given that support exists for classification of *să* as a complementizer that marks the subjunctive, we can assume that *să* may be an ambiguous element which is an inflectional marker and heads a complementizer phrase. For the purpose of this thesis, I will assume that *să* is a complementizer, given that it triggers the subjunctive every time it is introduced into a sentence and cannot be separated from its complement verb.

3.4 Complexities within the Romanian Subjunctive

The morphology of the 3rd person singular form of the subjunctive is somewhat complex. In detail, the last morpheme changes from the indicative ending. Examples of such rules involve changing the final vowel or the ending morpheme to -*e* if the present indicative inflection ends with -*ea* or -*ă* or to -*ă* if the present indicative inflection ends in -*i*, -*e* or *î*. Although the third person plural subjunctive is not discussed in this thesis, the third person singular inflection of the verb is used for the third person plural of the present subjunctive as well. An example of the rule change is demonstrated for the third person singular of *a merge* 'to walk' in (10).

(10) merge   / să meargă   Present Indicative / Present Subjunctive
      walk.3SG / SJV walk.3SG
      He/She/They(sg) walk (indicative and subjunctive)

For the sake of this thesis, I will focus on the verbs which are most commonly used in the language and introduce few uncommon verbs to test how heritage Romanian users apply their internalized grammar rules to the formulation of a less common word in the subjunctive.

In regard to heritage Romanian users, some are unsure about the creation of the third person singular subjunctive forms. These users will overgeneralize and use the indicative rules to inflect

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[4]The violation in (9b) comes from the Neg head's inability to subcategorize CP in Romanian; in (9c) from a violation of locality and clitic placement; and in (9c) from a violation on both Neg head placement and locality with clitic placement (Dobrovie-Sorin 1993).

the verb in the subjunctive of the third person (ie *să merge* 'to walk' instead of *să meargă* 'to walk'). Through this research, I want to better understand the frequency of such mismatches in heritage users of Romanian who are young adults and investigate morphological and syntactic reasons behind why such mismatches occur.

3.5   How does one use the Romanian subjunctive? – Semantics

As we discussed in Section 2.1, the subjunctive is associated with a certain interpretation, where the proposition denoted by the clause is something that is not yet true, but it is wished for, or feared, or imagined, or in the process of being finished or accomplished, etc. (Cojocaru 2003). Common verbs which trigger the subjunctive include: *a vrea* 'to want', *a sfătui* 'to advise', *a sugera* 'to suggest', *a cere* 'to ask for', *a interzice* 'to forbid', and *a permite* 'to permit' (Cojocaru 2003). These verbs encode meanings of uncertainty and incompleteness which then trigger the *să* complementizer and inflect *să*'s complement verb according to the matrix verb ɸ-features.

The Romanian embedded subjunctive clauses can have both *de se* (personal) and *non-de se* (non-personal) readings and are headed by either *pro* or PRO (Geber and Tonciulescu 2007). In the subjunctive constructions, the matrix verb determines the reading of subjunctive clause interpretations (Dobrovie-Sorin 1993, Geber and Tonciulescu 2007). Overall, this results in the main clause governing the subject or the embedded subjunctive clause, meaning that subjunctive elements and *pro* or PRO subjects are bound in the main clause (Dobrovie-Sorin 1993). This is seen in (11a), which is modified and borrowed from Geber and Tonciulescu (2007).

(11)   a.   Speră   PRO să ajungă   doctor într-o zi
          hope.3SG PRO să become3SG.SJV doctor in-one day
          a) He hopes to become a doctor one day [*de se*]

          b) He hopes he becomes a doctor one day [*non-de se*]

In (11a), the subjunctive inflection in the third person singular is triggered by the matrix verb *speră* 'hopes.' Support for the matrix verb as a trigger also comes from the phrases of uncertainty or near future which trigger the subjunctive reading in embedded clauses: *a fi gata să* 'to be ready to...', *a fi punctul să* 'to be on the verge of...', *cât pe ce să* 'about to...', *a fi să* 'to be about to...', *am să* 'I will...' (Momescu 2021).

Now that we better understand the general subjunctive and the Romanian subjunctive, we will move on to heritage languages in order to gain more background on the topics of this thesis.

4 What are Heritage Users?

Heritages languages are minority languages which individuals learn in settings where the dominant language differs from the heritage language and where few immersive opportunities to speak the language exist (Valdés 2001, Isakson 2016, Benmamoun et al. 2013). Proficiency in the heritage language depends on an individual's familial, sociolinguistic, and geographic background; it usually differs from the standard variety found in schools, media, and literature due to a lack of formal exposure to the language, particularly in educational settings (Polinsky and Kagan 2007). The term gained popularity after sociolinguist Joshua A. Fishman began a program to study heritage languages during the Cold War as a measure of national security (Isakson 2016). In the United States, a heritage language speaker is defined as a language student or speaker who speaks a language other than English in their household (Valdés 2001). In addition, the users have a degree of or complete bilingual proficiency in both the heritage language and in English (Valdés 2001). Outside of the United States, alternative terms, like *minority language*, are preferred to *heritage language* (Benmamoun et al. 2013). Thus, *heritage languages* and *heritage language users* continue to be United States-centric terms.

Carreira and Kagan (2011) profile heritage language learners in their survey, which they conducted through funding by the National Heritage Language Resource Center (NHLRC) between 2007–2009 to determine the most productive methods to teach heritage languages in the United States. To determine fluency in a heritage language, many sociodemographic and environmental factors play an important role, such that each user's ability and story is unique.

According to Carreira and Kagan (2011), place of birth and age of arrival play an important factor into heritage language proficiency, with a later age of arrival in the United States correlating with greater linguistic aptitude. This relates to Montrul (2008)'s finding on sequential and simultaneous bilinguals, which shows that children who learn their second language during childhood after acquiring structural foundations of their first (later heritage) language have fewer problems with using the language than children who are exposed to both their heritage and second language

since birth. Other factors which affect language fluency, as listed in Carreira and Kagan (2011), include exposure to the heritage language outside of the home, generational status, attitudes toward the heritage language, order of language acquisition, languages spoken at home, and the amount of official schooling in the heritage language. Speech rate, or word-per-minute output, may be another method of classification for heritage users' level of fluency (Polinsky and Kagan 2007). According to Polinsky and Kagan (2007) and Benmamoun et al. (2013), heritage users may have a speech rate as low as 30% of the average baseline rate for the heritage language. Compared to monolingual language users, which also demonstrate differences in language acquisition, heritage users have greater variability due to the many factors which affect how, when, and to what extent the users learn their heritage language (Montrul 2016). As such, although patterns of acquisition and language use arise in heritage users, the proficiency rate in a heritage language depends on the individual.

4.1 Heritage Language Acquisition

Some scholars believe that the simplified structure of heritage language output as well as incomplete mastery in several parts of the heritage language comes from an "incomplete acquisition" of the language due to minimal language exposure (Silva-Corvalán 2003, Polinsky 2006, Montrul 2008). However, more recent research challenges these assumptions, positioning heritage language users on a continuum of variation (Polinsky and Kagan 2007). The majority of heritage language research regarding linguistic ability focuses on adults who have established and practically finished developing their heritage language (Montrul 2016), and few longitudinal studies on heritage language development across the years exist (He 2014). In Silva-Corvalán (2014)'s longitudinal study, an interesting pattern arises among simultaneous Spanish-English bilingual children: some children who learn both languages simultaneously demonstrate bilingual development until they are 3 or 4, but once they begin schooling in the dominant language, divergence appears between the ages of 5 to 6. At this point, the dominant language begins to take over, stagnating the development of the heritage language (Silva-Corvalán 2014). In familial settings, research shows that the initial transmission of language from parents to children tends to be more successful than later maintenance of the language, even less so as generations of immigrants pass (Chumak-Horbatsch 1999).

In terms of acquisition patterns, Silva-Corvalán (2003) also finds that competency in heritage

languages declines with every generation, which leads to a bilingual continuum in which foreign-born users have strong heritage language skills, but few users beyond the third generation acquire the language or are functionally proficient.

In regard to linguistic abilities, heritage users typically have an accent based on the dominant language of their geographical location (Polinsky and Kagan 2007). They tend to over-generalize the heritage language's morphological patterns and eliminate irregular or infrequent forms (Polinsky and Kagan 2007). Heritage language users may additionally omit or misplace morphemes or will have a smaller range of pragmatic intuitions for certain sentences, specifically idiomatic ones (Benmamoun et al. 2013). For heritage language users in the United States, this may be a result of English interference, since English morphology is not as rich as that of other languages (Polinsky and Kagan 2007). Syntactically, users of heritage languages which have case demonstrate a smaller range of morphological case distinctions and some have difficulties using advanced syntactic structures, specifically those with complex, null elements (Polinsky and Kagan 2007). Overall, heritage languages offer insight into how users and learners acquire language under minimal input (Polinsky and Kagan 2007).

4.2   Heritage Languages in the Classroom

In regard to teaching, heritage language users who wish to take courses and improve their skills require differentiated instruction, so professors must research and understand the students' community, their individual learning styles, and work to connect the learner with their heritage community to consolidate classroom topics in practice (Carreira and Kagan 2011, Carreira 2016). Typically, heritage language instruction focuses on the spoken language, which is a strength of heritage language users, rather than written or literary components; this is a measure taken to build up confidence in users and not discourage them, as many users may face confidence issues regarding the level of fluency and competency they have in the heritage language (Carreira and Kagan 2011). Although this practice helps support heritage users, problems arise in languages that are non-spoken, such as heritage sign language (Isakson 2016) or in users who are completely fluent in speaking and listening but wish to improve their reading and writing abilities. In addition, learning a heritage language in a classroom may discourage users and increase insecurity, especially if students acquired varieties which are stigmatized by society and are told to change their speech

and grammatical patterns to match the "standard" or prescriptively "correct" variety (Beaudrie et al. 2014).[5]

Scholars also disagree on the term "heritage language learner" itself. While some consider heritage language users to be distinct from native users (Valdés 2001, Carreira and Kagan 2011, Polinsky and Kagan 2007), others argue that heritage users are native users of their language (Montrul 2016). In other words, heritage and native users both fall on a language spectrum, only at differing points. Rather than considering heritage users as members of a separate category, heritage language users should be considered as "bilingual natives" with slightly different linguistic output, like members who speak a different variety of the language (Montrul 2016). Considering that users who receive more formal schooling in the language, belong to strong cultural or linguistic heritage language communities, are first-generation immigrants, or moved to the United States at later ages also fall along the heritage language spectrum, I agree with this classification.

4.3 Romanian Heritage Users

This section will introduce demographics on Romanian heritage users in the United States as a result of the diaspora (Camară 2019). I will then discuss the language-learning and maintenance landscape of Romanian in heritage users in the United States.

In 2002, a study conducted by Steve Bonica of the Romanian Tribune Newspaper and the Romanian-American Network demonstrated that there were 1.2 million people who were of Romanian heritage and spoke Romanian in the American-Romanian communities in the United States (M'Enesti 2014). Results from the 2019 United States census approximate that 167,751 citizens currently identify Romania as their country of birth and 46,388 citizens Moldova, although census data may not account for non-citizens (particularly individuals who recently immigrated given the length of residency requirements for residents to become citizens) and individuals who did not partake in the census (Census 2019). Voinea (2014) surveyed language use and identity among Romanian immigrant groups in the United States of American between 2011 and 2013. Of the interviewed individuals, 6.1% of individuals were under 5 years old; 14.3% were in their early adolescence (between 5 to 17 years old); and 9% of individuals were in late adolescence and early

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[5]Certain varieties of language may be stigmatized in society. However, linguists strive to accept all varieties as legitimate varieties of a language and to not look down upon them.

adulthood (between 18 to 24 years old) (Voinea 2014). Of the interviewed individuals, 61.94% primarily spoke Romanian in the home, with 35.67% speaking primarily English (Voinea 2014). The statistics reflect the typical patterns that arise in heritage language users, where the heritage language is primarily the language of home (Carreira and Kagan 2011, Silva-Corvalán 2003), and demonstrate a continuously strong tie to Romanian culture and heritage (Voinea 2014). In fact, during their youth, most Romanian heritage users attend public schools conducted in English, with few to no official Romanian-American bilingual schools existing, and learn English as a second language given a preference to use Romanian at home (M'Enesti 2014).

In groups of adults over 18, the majority primarily used Romanian at home over 65% of the time (Voinea 2014). In particular, 66.07% of young adults between the ages of 18 to 25 spoke Romanian at home (Voinea 2014).

Gălăţeanu-Fârnoagă et al. (2011) discusses research on Romanian courses at UCLA, a university on the West Coast of the United States which offers a full Romanian curriculum. Overall, about one-fifth of the students who took Romanian were heritage users (Gălăţeanu-Fârnoagă et al. 2011). In line with typical heritage language learner attributes, these students had greater proficiency in speaking and comprehension skills, yet more difficulties with reading and writing and understanding how to utilize the formal register (Gălăţeanu-Fârnoagă et al. 2011). Romanian heritage users in the United States tend to fall into two categories: 1) those who have been born in the United States, are less confident in their speaking abilities (regardless of level of proficiency), and have minimal reading and writing skills and 2) those who had schooling or moved from Romania, may reside in Romanian communities, and are more balanced in their reading, writing, and speaking proficiency (Gălăţeanu-Fârnoagă et al. 2011). Heritage Romanian users who enroll in language courses, such as at the university level, express both a desire to study cultural and literary traditions as well as improve their knowledge and linguistic abilities in the standard language use (Gălăţeanu-Fârnoagă et al. 2011).

In a study on the patterns of heritage language acquisition and maintenance in Eastern European immigrants who are professionals in the United States, Nesteruk (2010) finds that parents positively report using the heritage language in the home, with family members, with friends who also speak the language, and with members from the cultural communities. There appears to be a positive correlation with heritage language maintenance and the number of cultural contacts within their

networks (Hulsen et al. 2002). This aligns with the tendency for heritage language learners to better maintain their heritage language if they have multiple spheres outside the home in which they use the language (Nesteruk 2010, Chumak-Horbatsch 1999, Kravin 1992). However, the length of residence in the United States also results in a greater use of English in the home setting for Eastern European immigrants and more leniency on heritage language use (Nesteruk 2010). As such, children may respond to their parents in English and speak solely English with their siblings, which leads to a loss of linguistic features in the heritage language and difficulties in maintenance (Nesteruk 2010). In Ukrainian households, Chumak-Horbatsch (1999) finds that children who learn their heritage languages at a fluent level during their childhood find it difficult to maintain them during their adolescence.[6] This pattern of loss is frequent in heritage language users and may be affected by greater English influence as students enter more English-based school and extracurricular settings during their later primary and secondary schooling years.

4.3.1 Research Rationale: Why are we interested in Romanian Heritage Users and how do they use the subjunctive mood?

Research on Romanian heritage users in the United States will provide insight on how heritage Romanian users use the subjunctive in a setting where the dominant language used in society is not the one which they speak at home. This is a reality that is shared by half of the individuals who are born of Romanian heritage, given that the number of individuals who live abroad proportionally amounts to about half of Romania's domestic population in numbers (Camarǎ 2019). In addition, the subjunctive is a grammatical mood which is usually fully acquired later in the language acquisition process (Benmamoun et al. 2013). Studies have been done on the acquisition of the subjunctive in native and second-language learners (Silva-Corvalán 2003, Montrul 2008), yet there is a lack of research on how the subjunctive is obtained by heritage language learners. The purpose of this study is to determine the extent to which the subjunctive is acquired by Romanian heritage language learners and to see how background factors into command over the subjunctive.

In particular, I am interested in understanding the following research questions:

(12)   a. Which background variables influence subjunctive use in heritage Romanian users?

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[6]Although Romanian is latinate-based language and Ukrainian a Slavic language, cultural similarities exist between the two Eastern European nations, especially in the diaspora communities. In particular, both have religious and cultural centers as community focal points (Nesteruk 2010).

b. How do heritage Romanian heritage users employ the subjunctive compared to native Romanian users?

c. Which specific contexts of the subjunctive use pose the most difficulties for heritage Romanian users?

The research questions as well as the associated results will be further discussed in the following Survey, Methods, and Experiment section.

5   Survey, Methods, Experiment

To investigate the Romanian third person subjunctive in heritage users in the United States, I utilized a mixed methods approach consisting of an anonymous survey distributed nationally and follow-up interviews with selected volunteers who chose to provide further information about their cultural experience with Romanian. Given that the Romanian diaspora in the United States has not one central location but is dispersed throughout the country, using an electronic survey and semi-structured Zoom follow-up interviews allowed for the greatest possibility to recruit participants and develop a realistic overview of the subjunctive in Romanian heritage users in the United States. In particular, the electronic dissemination of my research allowed for a simple way to reach the broader, national population and also allowed me to obtain data on whether geographical and background features played an important influence on the acquisition of the subjunctive in heritage users. The experiment was limited to Romanian users in the United States who are between the ages of 18 and 25. This includes participants who moved to the United States during their university years (aged 18 and older) and who serve as members of a control population within the survey and the interviews. I consider these participants part of the control population since they received more exposure, particularly with official schooling in Romanian, and this may demonstrate different intuitions and linguistic choices in the Romanian they speak.

In particular, the Qualtrics survey investigated whether heritage Romanian users in the United States can identify mismatches in the third person subjunctive. The initial survey collected information on the state of a participant's heritage Romanian and on the interaction between sociodemographic factors and the level of Romanian language that an individual has. The follow-up, semi-structured Zoom interviews further probed whether the participants produced the targeted

mismatch in the third person subjunctive or not. These mixed methods offered a triangulation of data and helped to mediate shortcomings of a reading-based, listening-based survey on heritage users, who are stronger in aural/oral language use (Benmamoun et al. 2013, Carreira and Kagan 2011).

5.1 Qualtrics Survey

I invited all participants to respond to a Qualtrics survey. The survey was distributed widely throughout the United States through personal connections, community centers, and institutions. A total of 85 responses were collected over a two-week period. Out of the 85 responses, 66 met the required inclusion criteria, and 21 self-selected to include their email for follow-up interviews. Out of the 66 responses, 55 were completed and qualified for data analysis. The survey involved two portions: a background section and a linguistic judgement section. With help from from Romanian cultural centers, Romanian professors in the United States, personal messages to Romanian students, and posts on Facebook, Instagram, and Twitter, I recruited participants for the survey.

In the background section, participants answered five eligibility questions at the start of the survey to determine qualification.[7] If participants did not answer accordingly, then they were rerouted to the end of the survey; if they passed them, they then received access to the rest of the survey.[8] After, participants answered 10-12 follow-up questions regarding their Romanian background and language experience.[9]

In the second section, participants gave their linguistic judgements on twenty-five sentences which targeted particular subjunctive structures in the third person. The sentences were short and randomly presented, so that participants could not be primed by previous responses. Between 3-4 similar sentences were presented to the participants, each with one or two particular elements changed. For a sample set of questions, see (13).

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[7]See Appendix A for the eligibility questions.

[8]Participants were eligible to participate in the survey if they were: between the ages of 18-25, of Romanian background or heritage, knew or understood the Romanian language, were currently residing in the United States, or had resided within the United States for portions of their childhood or adolescence. The eligibility criteria was chosen to allow the research to focus on a smaller subset of the Romanian diaspora population in the United States, including individuals who were born in time to participate in the large diaspora immigration patterns (Camară 2019). In addition, the age range was selected to limit the type of data collected and to ensure that each individual was an adult, meaning that they had grown out of the age by which the subjunctive would have been fully acquired.

[9]See Appendix A for the questions. The number of questions each participant answered depended on the answers they gave, as some questions were specific to individuals who were born in the United States and the others to individuals who immigrated after birth.

(13) a. Ea visează   să meargă   la școală.
         she dream.3SG să go.3SG.SJV to school

         'She dreams (that) she goes to school.'

      b. ?Ea visează   să merge   la școală.
         she dream.3SG să go.3SG.IND to school

         'She dreams (that) she goes to school.'

      c. *Ea visează   că   meargă   la școală.
         she dream.3SG that go.3SG.SJV to school

         'She dreams that she goes to school.'

      d. Ea merge la școală în fiecare zi.
         she go.3SG to school in every   day

         'She goes to school every day.'

In (13), (13a) represents the subjunctive construction with the subjunctive complementizer *să* followed by the verb 'to go' inflected according to the subjunctive mood. To test whether or not the participants understood the change in the inflection rules for third person singular verbs, sentences like (13b) included the subjunctive complementizer *să* followed by a verb with the indicative inflection (like *merge* 'goes'). In general, these constructions are considered ungrammatical by Romanian users who accept the standard Romanian subjunctive rules and change the third person subjunctive inflection. However, the constructions may be considered grammatical by participants who allow the indicative mood inflection in the third person subjunctive. To further test participants on the standard subjunctive construction rules, sentences like (13c) involved a change from the subjunctive complementizer *să* to the indicative conjunction că 'that' and the following verb was inflected according to the subjunctive in the third person. If participants considered this ungrammatical, it would mean that they understood the inherent structure of the standard subjunctive construction, yet only did not acquire the ending-change rule in the third person. Lastly, control sentences such as (13d) which do not use the subjunctive mood or have an embedded clause after the matrix should have been accepted by all participants and provided a baseline knowledge of participants' Romanian intuitions. The verbs in the sentences were selected so that there was a mixture of commonly used verbs in the third-person subjunctive inflection and a few less commonly used verbs. Participant reactions to more common verbs, such as *să meargă* 'to go', investigated whether participants understood common patterns in third-person subjunctive inflections or the

standard subjunctive inflection rules. The less commonly used verbs allowed participants to apply their intuitions to verbs that may not be used as often, probing whether or not they internalized and used the rules of the standard subjunctive.

I recorded myself pronouncing the sentences in a neutral tone in order to allow participation from heritage users who may have had less confidence in their oral/aural language skills. After reading or listening to the sentences, participants utilized a Likert scale from 1 (least natural sounding) to 5 (most natural sounding) to give their judgements. Figure 1 gives the format in which sentences appeared during the sentence-judgement portion of the Qualtrics survey.[10]
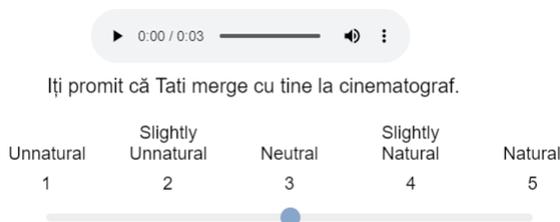
Figure 1: Sample sentence-selection question

At the beginning of the sentence judgement portion, participants read instructions telling them to select the first judgement which came to mind and to not spent great amounts of time thinking through any single sentence. Questions in this section involved the standard use of the third-person subjunctive in both common verbs (such as *a merge* 'to walk' and *a pleca* 'to leave') and less commonly used verbs (such as *a pieri* 'to perish').[11] By including both verbs of high and low frequency in the subjunctive, I hoped to discern whether heritage participants used the standard form of the subjunctive due to actually having acquired the standard rules or if they simply mimicked the correct form as a result of memorization due to frequency and exposure to the form.

The penultimate question asked users to specify whether they listened to the sentences, read the

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[10]This particular example belongs to the control group of sentences which used the indicative conjunction *că* within the sentence to determine the extent to how natural the sentence sounds. The four categories of sentences were: subjunctive (sentences which use the subjunctive mood according to standard Romanian rules), mixed (sentences which used the subjunctive complementizer *să* with the indicative in the third person, as anticipated by heritage users, or *să*+IND), indicative (sentences which used the indicative conjugation with the subjunctive inflection of the following verb, or *că*+SJV), and control (sentences which had no mention of the subjunctive complementizer *să* or indicative conjunction *că*, which every participant should ideally have found natural

[11]See Appendix A for a complete list of the sentences used in the second portion of the Romanian language survey.

sentences, or used both during the majority of the judgements section. By asking this question, I was able to gain potential insight into the extent of fluency that participants have in their heritage Romanian language. Finally, the last question asked participants who were willing to be contacted for follow-up interviews to leave their email address.

5.2 Semi-Structured Zoom Interviews

A smaller subset (10 individuals out of 21) who left their emails at the end of the survey participated in the Zoom interviews. The participants were selected randomly through Research Randomizer (https://www.randomizer.org/) and a Calendly link was emailed out (bcc) to allow those interested to schedule the interview. All interviews took place over Zoom through password-protected invitation links, and participants consented to the sessions being recorded in the moments they signed up for interview slots. Each interview lasted between 5 minutes and 30 seconds and 8 minutes and 30 seconds, with follow-up discussions where participants described their experience during the interview, learned about the structures I targeted, and shared their personal thoughts on the subjunctive use. Each participant spoke solely in Romanian. The semi-structured questions first asked the participant about their personal history with the language, such as when they learned Romanian and how they use the language in their everyday life, and then went into guided mini scenarios. In more detail, the mini scenarios asked participants to give biographical information about themselves in the third person. The questions used during the mini scenarios prompted the use of simple future obligations and desires, which generally should employ the subjunctive. Participants first answered questions in the third person about their immediate obligations that night and then about their career aspirations. The recordings of the interviews were then analyzed and the frequency of subjunctive use was recorded for each participant. An outline of the guided interview questions can be found in Appendix B. Each question was selected to elicit the use of the target structure.

6 Analysis

The 55 complete Qualtrics survey responses that qualified for data analysis were split into two groups to compare heritage users to a control group of individuals. Those who were born in

the United States or moved to the country between birth and age 17 formed the heritage group, and those who first moved to the United States after 18, typically for university studies, formed the control group. The heritage group consisted of 47 respondents, and the control group of 8 respondents. The control group was significantly smaller than the heritage group, yet responses from the control group provided an idea of patterns that users who have the greatest exposure to standard Romanian have.[12]

Participants came from various regions of the United States, allowing for diverse representation. Overall, the heritage group performed better than anticipated on the sentence-selection portions. The heritage group accepted the mixed (subjunctive complementizer and indicative, third person inflection) sentences more readily than the control group. In the semi-structured interviews, the mismatch appeared frequently in the speech of several participants. This suggests that, for a subset of heritage Romanian users, the mismatch in the third-person subjunctive exists.

The control group conformed to native Romanian linguistic norms in the Qualtrics survey, with an exception in the semi-structured interview portion. Both of the control participants in the semi-structured interview avoided using the subjunctive, stating that the targeted use of the construction sounded odd in the guided scenarios.

Regarding Romanian language use, the control group demonstrated the highest self-score ratings (five on a scale of five) for Reading, Writing, Speaking, and Listening/Comprehension in Romanian. The heritage group demonstrated anticipated patterns of linguistic abilities, self-scoring highest on Listening/Comprehension and lowest on Reading, Writing, and Speaking. The heritage group scores correlated with age, such that participants who learned English at later ages scored themselves higher in each category.

6.1   Demographic Analysis of Survey Participants

The biographical portions of the survey asked participants information on their demographics and experience with the Romanian language. This analysis begins with demographic data and moves into language data.

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[12]Originally, the survey was intended only for users who were born or raised in the United States. However, the criteria permitted users who moved to the United States up until age 25. While interpreting the results, a division of the groups into two sets of participants allowed for an in-depth analysis of the survey and results which would not have otherwise been attained if the two sets of participants remained grouped together.

In the heritage group of forty-seven participants, the majority were born in either the United States ($n = 21$) or Romania ($n = 20$). Six other participants were born elsewhere, specifically in Canada ($n = 3$), Moldova ($n = 1$), Italy ($n = 1$), and France ($n = 1$). All countries of birth which participants reported are home to Romanian diaspora communities (Camară 2019). From the control group of eight participants, the majority were born in Romania ($n = 6$) and the remaining in Moldova ($n = 2$).

For the twenty-six participants who moved from another country to the United States, twenty-three chose to identify the age at which they immigrated (see Figure 2). Among those, the mean age was 5.52 years old. The median age was 4 years old. Thus, most individuals who were part of the heritage group and immigrated to the United States did so at age 4 and under ($n = 14$). The majority of individuals who moved to the United States did so during early childhood years.
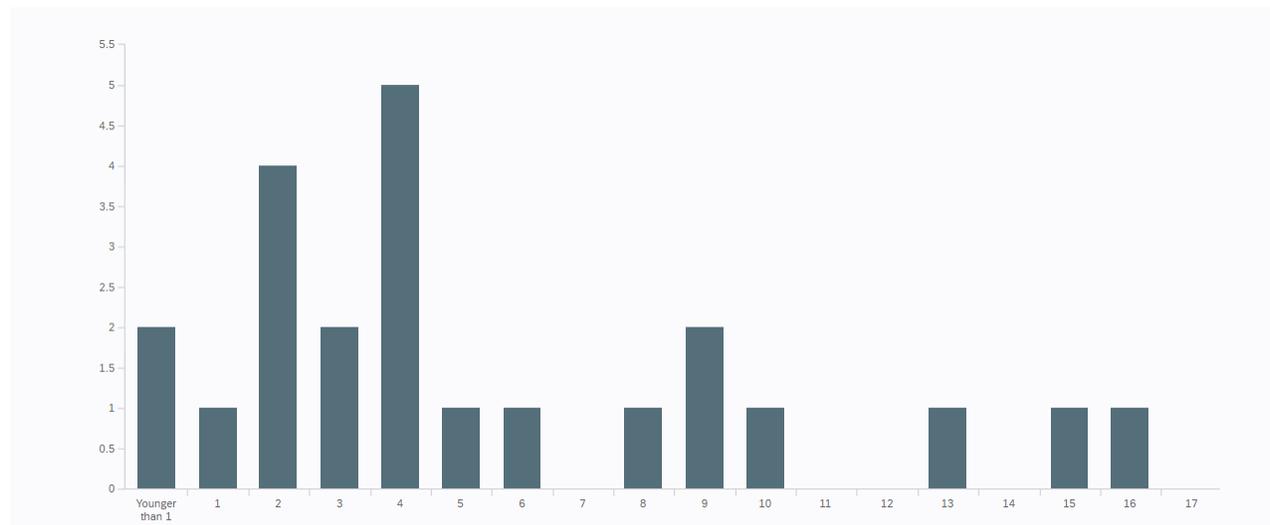
Figure 2: Age of heritage participants who immigrated to the United States

In the control group of eight participants, the mean age of immigration to the United States was 19 years old (see Figure 3). The median age was also 19 years old. No individuals identified as having moved between ages 21 and 25.[13]

Overall, the years of birth for survey participants centered around individuals born in the late 1990s (See Figure 4). The mean year of birth was 1999. The median year of birth was also 1999. The standard deviation among years of birth was 2.12.

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[13]While no participants moved to the United States between ages 21 and 25, the survey overall included participants who were born during these years.
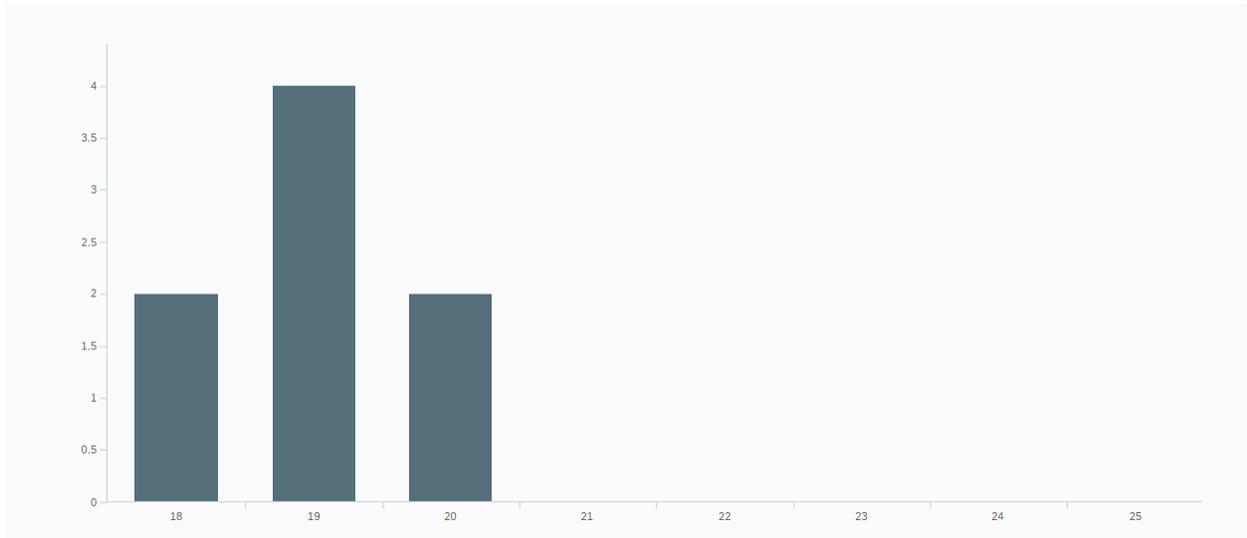
Figure 3: Age of control participants who immigrated to the United States
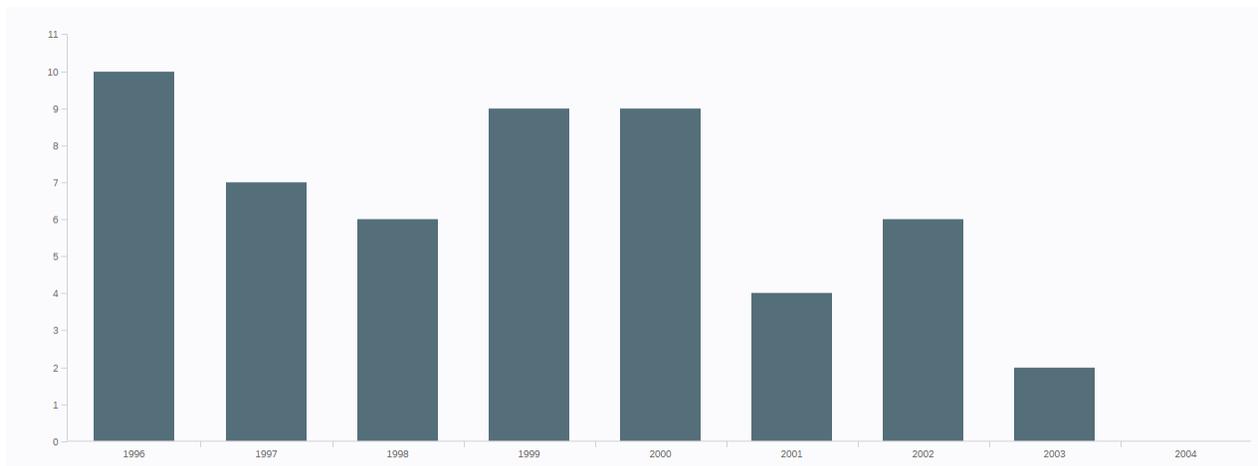
Figure 4: Participant birth years

In the heritage group of forty-seven participants, both the mean and median years of birth were 1999. The standard deviation among responses was 2.18, meaning that there was a normal curve in the data. The data ranges from 1996 to 2003, meaning that the participants birth years clustered around the 1999. The majority of the heritage group individuals were between ages 22 and 23.

In the control group of eight participants, the mean age of birth was 1998. The median age of birth was 1999. The standard deviation among the recorded birth years was 1.64. The data ranges from 1996 to 2000, with group participants slightly older than the heritage group. However, the results from the heritage and control groups inform us that the majority of the participants who took the Qualtrics survey were between 21 and 23 years old.

In terms of geography, the majority of participants came from the Midwest region, with 38% ($n = 21$) of participants residing in Ohio, Michigan, and Illinois at the time of the survey (see Figure 5). The East Coast was the second largest geographical category of participants, with 33% ($n = 18$) of all participants residing in New York, Massachusetts, Connecticut, Maryland, and New Hampshire. 20% ($n = 11$) of participants came from the West Coast, specifically from California and Washington. Participants were in an almost even distribution from the Midwest, East Coast, and West Coast regions, but fewer participants came from the South. Since the survey included 55 participants, a larger sample size would help determine correlations between survey distribution and the diaspora distribution.
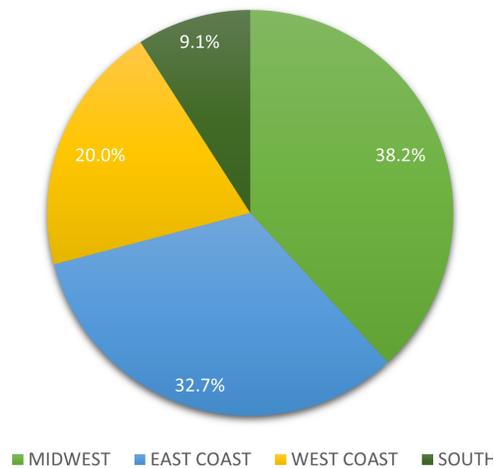
Figure 5: Geographic distribution by region

In the heritage group, 30% ($n = 14$) identified their location as Ohio alone (see Figure 6). New

York was the second state from which the most heritage participants came, comprising 13% ($n = 6$) of heritage group participants. The distribution of the heritage group participants aligns with the overall distribution of participants, given that the largest percentages of participants came from the Midwest and the East Coast.
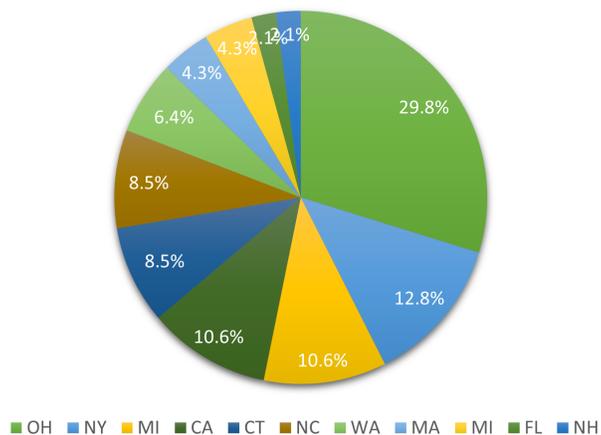
Figure 6: Geographic distribution by state

Since the control group of participants included only eight participants, no definitive overall conclusions can be drawn from the group. However, interesting patterns emerged. Of the participants, 63% ($n = 5$) identified as residing in an East Coast state, with responses including Connecticut, Maryland, and New York. The remaining participants, 37% ($n = 3$), identified as residing in California, the state with the most control responses. While no overall significant pattern can be drawn, the biographical distribution of the control group may be due to secondary education locations to which control group participants may have moved.

Regarding contexts in which the Romanian language was used, 95% ($n = 53$) of the fifty-five participants stated that they use Romanian with their family and friends in the United States and 95% ($n = 51$) with relatives and friends in Romania (see Figure 7). A little over half of the participants, 51% ($n = 28$) identified church and cultural centers as contexts in which they use the Romanian language. This follows patterns for languages which fall under the heritage languages spectrum (Benmamoun et al. 2013).

When analyzing contexts of language use and age of arrival, we notice a better picture of the differences between the control group participants ($n = 8$) and the heritage group participants
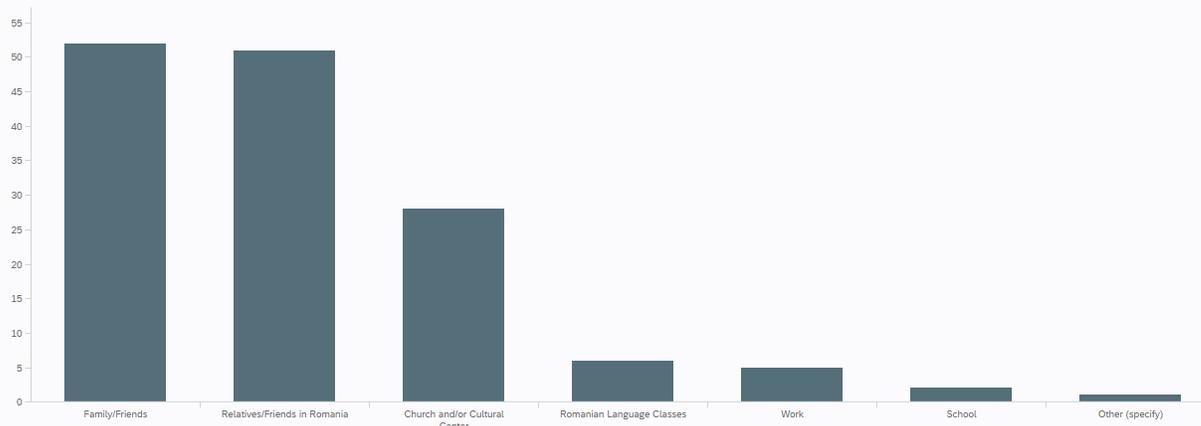
Figure 7: Contexts of Romanian language use

($n = 23$) who moved to the United States after birth. Figure 8 gives Romanian context data filtered by age of arrival to the United States, with ages for which there is no data removed. In the control group, 100% ($n = 8$) of the participants selected that they use Romanian when speaking to their family and friends in Romania. Of the heritage group of individuals who moved to the United States, 100% ($n = 23$) of the participants selected using Romanian when speaking to family and friends in the United States. An interesting difference between the two groups is that only 25% ($n = 2$) of the participants in the control group selected "Church and/or Cultural Center" as a context while 52% ($n = 12$) of the participants in the heritage group of individuals who moved stated they used Romanian in church or cultural center contexts. In addition, fewer people who moved to the United States in their teenage years (ages thirteen and older) appeared to have their Romanian language connected to language or cultural centers. Additional biographical research may provide clearer reasons for this apparent trend. The smaller sample size, geographical location, and whether or not participants belong to a Romanian community in the United States may additionally factor into the reason why participants selected certain contexts over others.

When we separate the context data by country of birth and factor in the individuals who were born in the United States, as in Figure 9, we see similar trends compared to the overall group: participants selected family and friends in the United States, family and friends in Romania, and church and cultural centers as the top three contexts in which they use Romanian. In addition, this data follows similar patterns as the members of the heritage group who were born outside of
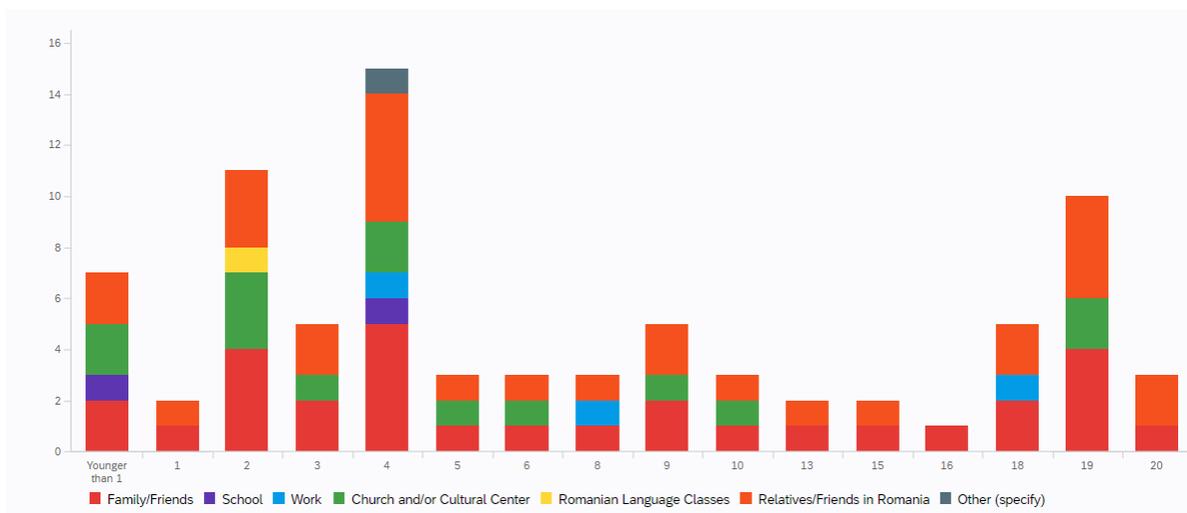
Figure 8: Age of immigration and contexts of Romanian language use

the United States.
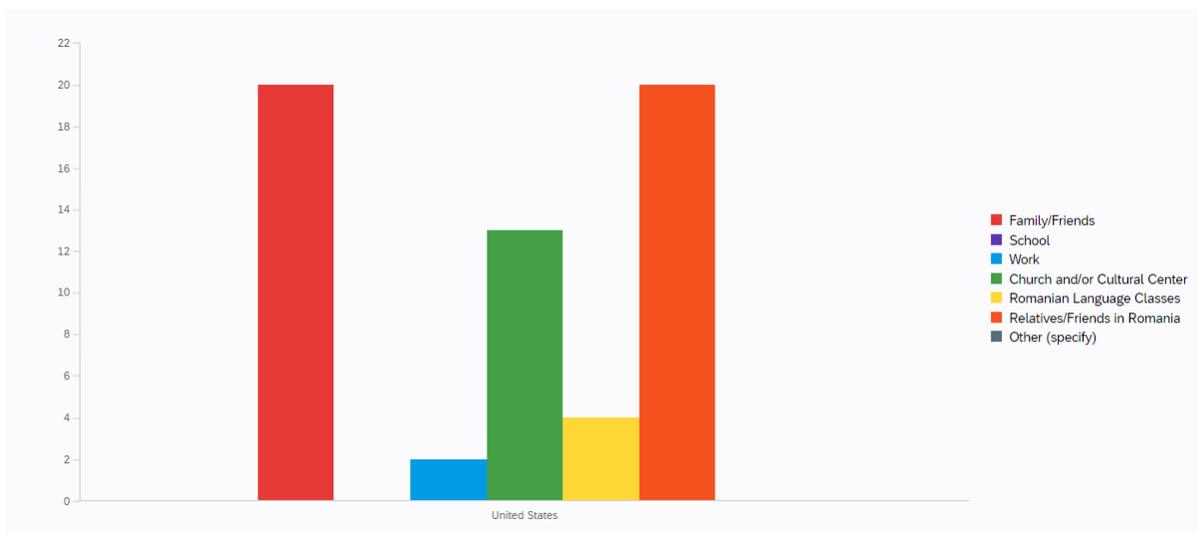
Figure 9: Contexts of Romanian language use for participants born in the United States

Figure 10 shows the relation between self-attributed Romanian language scores and the age at which participants learned both English and Romanian. In regard to Romanian, 94% ($n = 52$) of the participants began learning the Romanian language since birth. The remaining 5% ($n = 3$) began learning the Romanian language between ages 1 and 5. Of the two groups, both had highest self-ratings in the "very fluent" (score of 5) category of the Listening/Comprehension section, respectively 73.1% ($n = 38$) and 66.7% ($n = 2$). Less than 50% of participants who learned Romanian either since birth or between the ages of 1 and 5 rated themselves as "very fluent" (score

of 5) in the Speaking, Writing, or Reading categories. Overall, the Writing category received the lowest ratings, with only 34.5% ($n = 19$) of participants rating themselves "very fluent" (score of 5).

In regard to English, 49% ($n = 27$) learned English between the ages of 1 and 5 (see Figure 10). A quarter, 25% ($n = 14$), of participants learned English between the ages of 6 and 12. One fifth, 20% ($n = 11$) of the participants learned English since birth. Almost all participants, 94% ($n = 52$) reported learning English between birth and age 12. With respect to self-reported scores, participants who reported learning English since birth or between the ages of 1 and 5 scored themselves below the total average rating in the "very fluent" (score of 5) category for Reading, Writing, and Speaking. For example, while the a total of 34.5% ($n = 19$) participants rated themselves "very fluent" in Writing, only 18.2% ($n = 2$) of participants who learned English since birth and 18.5% ($n = 5$) of participants who learned English between ages 1 and 5 rated themselves "very fluent" (score of 5) in Writing. In contrast, between half and one hundred percent of the participants who reported learning English between the ages of 6 and 12, 13 and 18, and during adulthood scored themselves "very fluent" (score of 5) in each category (Reading, Writing, Speaking, and Listening/Comprehension).

Q11: How would you rate your fluency in Romanian? 1 = not fluent 5 = very fluent or native speaker level			Q14: At what age did you start learning English?						Q15: ... start learning Romanian?		
			Total	Since birth	Age 1-5	Age 6-12	Age 13-18	As an adult	Total	Since birth	Age 1-5
	Total Count (Answering)		55.0	11.0	27.0	14.0	2.0	1.0	55.0	52.0	3.0
	Reading	1	1.8%	0.0%	3.7%	0.0%	0.0%	0.0%	1.8%	1.9%	0.0%
		2	7.3%	27.3%	3.7%	0.0%	0.0%	0.0%	7.3%	7.7%	0.0%
		3	23.6%	9.1%	33.3%	14.3%	50.0%	0.0%	23.6%	25.0%	0.0%
		4	21.8%	27.3%	33.3%	0.0%	0.0%	0.0%	21.8%	19.2%	66.7%
		5	45.5%	36.4%	25.9%	85.7%	50.0%	100.0%	45.5%	46.2%	33.3%
	Writing	1	7.3%	0.0%	14.8%	0.0%	0.0%	0.0%	7.3%	7.7%	0.0%
		2	18.2%	36.4%	18.5%	7.1%	0.0%	0.0%	18.2%	19.2%	0.0%
		3	20.0%	0.0%	29.6%	14.3%	50.0%	0.0%	20.0%	15.4%	100.0%
		4	20.0%	45.5%	18.5%	7.1%	0.0%	0.0%	20.0%	21.2%	0.0%
		5	34.5%	18.2%	18.5%	71.4%	50.0%	100.0%	34.5%	36.5%	0.0%
	Speaking	2	3.6%	0.0%	7.4%	0.0%	0.0%	0.0%	3.6%	3.8%	0.0%
		3	10.9%	27.3%	3.7%	7.1%	50.0%	0.0%	10.9%	11.5%	0.0%
		4	41.8%	36.4%	59.3%	21.4%	0.0%	0.0%	41.8%	38.5%	100.0%
		5	43.6%	36.4%	29.6%	71.4%	50.0%	100.0%	43.6%	46.2%	0.0%
	Listening/Comprehension	2	1.8%	0.0%	0.0%	0.0%	50.0%	0.0%	1.8%	1.9%	0.0%
		3	5.5%	9.1%	7.4%	0.0%	0.0%	0.0%	5.5%	3.8%	33.3%
		4	20.0%	36.4%	18.5%	14.3%	0.0%	0.0%	20.0%	21.2%	0.0%
		5	72.7%	54.5%	74.1%	85.7%	50.0%	100.0%	72.7%	73.1%	66.7%

Figure 10: Ages when participants began learning Romanian and English

Of the 55 total participants, 95% ($n = 52$) learned Romanian since birth. The remaining 5% ($n = 3$) learned Romanian between the ages of 1 and 5 (see Figure 11).

In terms of English, we see more variety, but the majority of participants learned the English
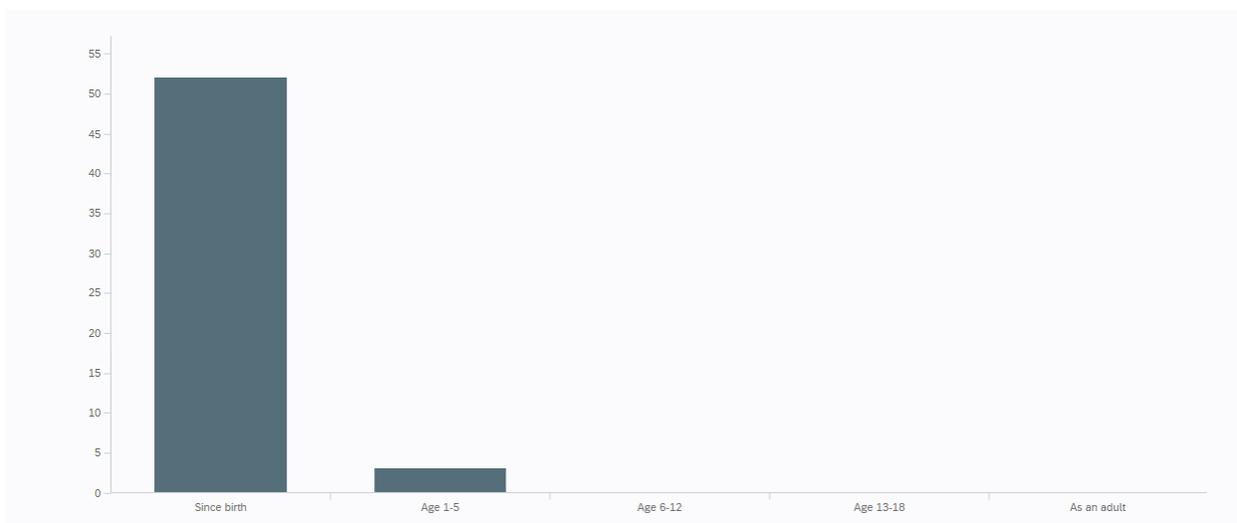
Figure 11: Ages participants began learning Romanian

language before their teenage years. Of the 55 participants, 49% ($n = 27$) learned English between

the ages of 1 and 5. A quarter of the participants, 25% ($n = 14$) reported learning English between

the ages of 6 and 12. The third-most reported group was at birth, with 20% ($n = 11$) of participants

selecting 'since birth' (see Figure 12).
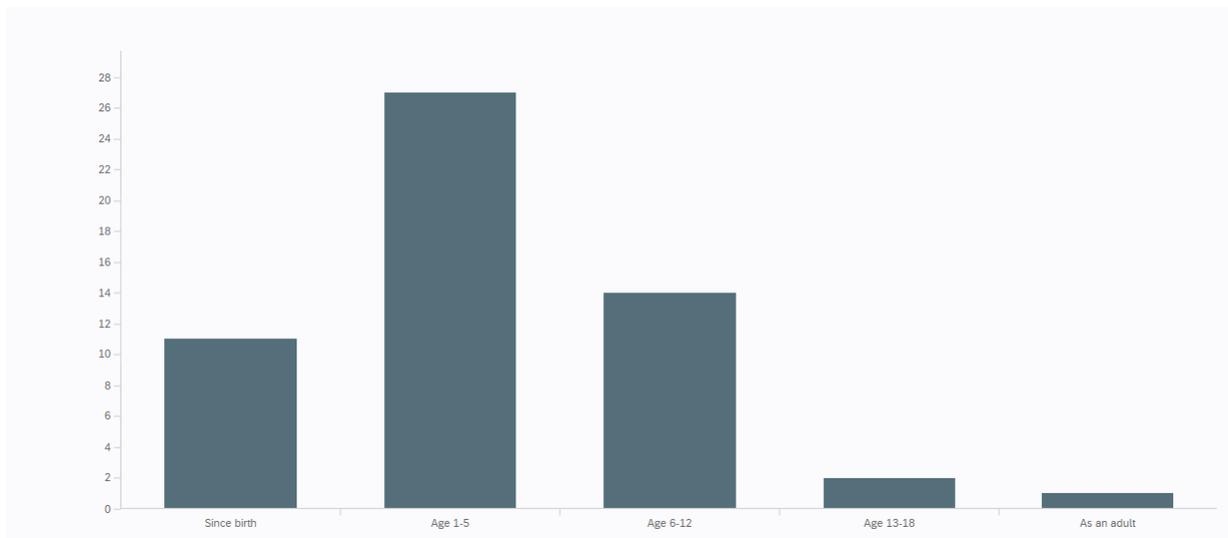
Figure 12: Age participants began learning English

6.2 Performance Analysis on Judgement Tasks

As I designed the sentences for the judgement selection portion of the Qualtrics survey, I labeled each as either: "subjunctive", "indicative", "mix", or "control". The "subjunctive" category (14a) included sentences which used the subjunctive properly according to standard Romanian subjunctive rules. The "indicative" category (14b) included sentences which used the indicative conjunction *că* with a subjunctive inflected verb; this is unacceptable according to standard Romanian rules and is typically not produced by Romanian language users. The "mix" category (14c) included sentences which mixed the subjunctive complementizer *să* and the indicative inflection in third-person subjunctive constructions. The "control" category (14d) included sentences which either did not use any subjunctive complementizer *să* or indicative conjunction *că* or used the indicative *că* in contexts acceptable by standard Romanian rules.

An important note is that the "indicative" and the "mix" category both include a mix of the elements found in the indicative and subjunctive verb + complement phrases. However, the "mix" category is titled so because the focus of this paper is to understand whether or not users of heritage Romanian produce a mix with the subjunctive complementizer *să* and the indicative inflection of the following verb. This construction may occur in Romanian speech, and even native users produce the mismatch from time to time. The "indicative" mix with *că* and the subjunctive inflection of the following verb is a construction that should not be produced in the Romanian language. This may be given the complementizer versus conjunction classification of *să* and *că* respectively.

(14)   a. Ea visează   să meargă   la școală.
             she dream.3SG să go.3SG.SJV to school
             'She dreams (that) she goes to school.'

        b. ?Ea visează   să merge   la școală.
             she dream.3SG să go.3SG.IND to school
             'She dreams (that) she goes to school.'

        c. *Ea visează   că   meargă   la școală.
             she dream.3SG that go.3SG.SJV to school
             'She dreams that she goes to school.'

        d. Ea merge la școală în fiecare zi.
             she go.3SG to school in every day
             'She goes to school every day.'

According to standard Romanian rules, sentences which belong to the "subjunctive" and "control" categories should be most easily accepted by Romanian language users. The "indicative" category should not be accepted, as it combines the indicative conjunction with the subjunctive inflection. Likewise, the "mix" category should not be accepted according to standard rules, although participants may accept them given that the subjunctive typically uses the indicative inflection of verbs in all but the third person inflections and native users occasionally produce the mismatch as well.

For data analysis purposes, I combined the results from each of the groups of sentences and separated them into three further groups: heritage, control, and overall. The overall group provided the overall results from both the heritage and control participants, allowing me to identify any interesting patterns that may deviate from the overall trend in the individual heritage and control groups. One caveat to the overall and control data is that the results from the control population account for only 8 of the 55 answers. This may not provide an accurate representation of how participants who use Romanian on a more native end of the spectrum approach the subjunctive in the third person and other sentences.

Table 3 gives the results from the sentence-selection tasks for the overall group, the heritage group, and the control group of participants.

In the subjunctive group of sentences, the mean response was 3.94 with a standard deviation of 1.27. The median response for the subjunctive section overall was 4.25. The median score provides a clearer understanding of overall behavior for the subjunctive group in this case, since the reported score is the most frequently given and does not factor in outliers. In the heritage group, the mean was 3.92 with a standard deviation of 1.28. The median for this group was 4.25; this score is higher than the mean score and indicates outliers. In the control group, the mean was 4.02 with a standard deviation of 1.09. The median score was 4.25, which is closer to the mean that in the heritage or overall group.

In the indicative group of sentences, the overall mean was 3.15 with a standard deviation of 1.25. The median score was 3.00. In the subjunctive group, the mean was 3.19 with a standard deviation of 1.27. The median score was 3.00. In the control group, the mean score was 2.96 with a standard deviation of 1.10. The median score was 3.00, although it appears that some outliers brought the mean score down.

In the mixed subjunctive group, the overall mean was 2.40 with a standard deviation of 1.60. This group had the lowest acceptability ratings among the four groups of sentences. The median overall was 1.67, which suggests that outliers bring the mean rating up in the overall group. In the heritage group, the mean is slightly higher at 2.56. The standard deviation is 1.62, and the median score is 1.83. Since the median score is lower than the mean, outliers bring the mean score up. In the control group, the mean rating is 1.49 with a standard deviation of 1.05. The median is 1.11, which suggests that outliers bring the acceptability ratings slightly higher.

Lastly, the control group of sentences had the most uniform set of responses between the two groups. The overall mean was 4.45 with a standard deviation of 0.99. The median was 4.80. The heritage group mean was 4.43 with a standard deviation of 1.01. The median was 4.90. The control group mean was 4.40 with a standard deviation of 0.60. The median was 4.40, which suggests that outliers in the group brought the score down. This was unexpected. On average, both groups responded that the control sentences were between slightly natural to natural.

Sentences	Overall	Heritage Group	Control Group
Subjunctive	$\bar{x} = 3.94$	$\bar{x} = 3.92$	$\bar{x} = 4.02$
	$\sigma = 1.27$	$\sigma = 1.28$	$\sigma = 1.09$
	$\tilde{x} = 4.25$	$\tilde{x} = 4.25$	$\tilde{x} = 4.25$
Indicative	$\bar{x} = 3.15$	$\bar{x} = 3.19$	$\bar{x} = 2.96$
	$\sigma = 1.25$	$\sigma = 1.27$	$\sigma = 1.10$
	$\tilde{x} = 3.00$	$\tilde{x} = 3.00$	$\tilde{x} = 3.00$
Mix	$\bar{x} = 2.40$	$\bar{x} = 2.56$	$\bar{x} = 1.49$
	$\sigma = 1.60$	$\sigma = 1.62$	$\sigma = 1.05$
	$\tilde{x} = 1.67$	$\tilde{x} = 1.83$	$\tilde{x} = 1.11$
Control	$\bar{x} = 4.43$	$\bar{x} = 4.43$	$\bar{x} = 4.40$
	$\sigma = 0.99$	$\sigma = 1.01$	$\sigma = 0.60$
	$\tilde{x} = 4.80$	$\tilde{x} = 4.90$	$\tilde{x} = 4.40$

Table 3: Sentence-selection results

Of the participants, 50 chose to report which methods they used when completing the sentence-judgement section. Overall, 62% ($n = 31$) of the participants identified both reading and listening to the sentences. An additional 32% ($n = 16$) only read the sentences, and 6% ($n = 3$) of participants only listened to the sentences (see Figure 13).
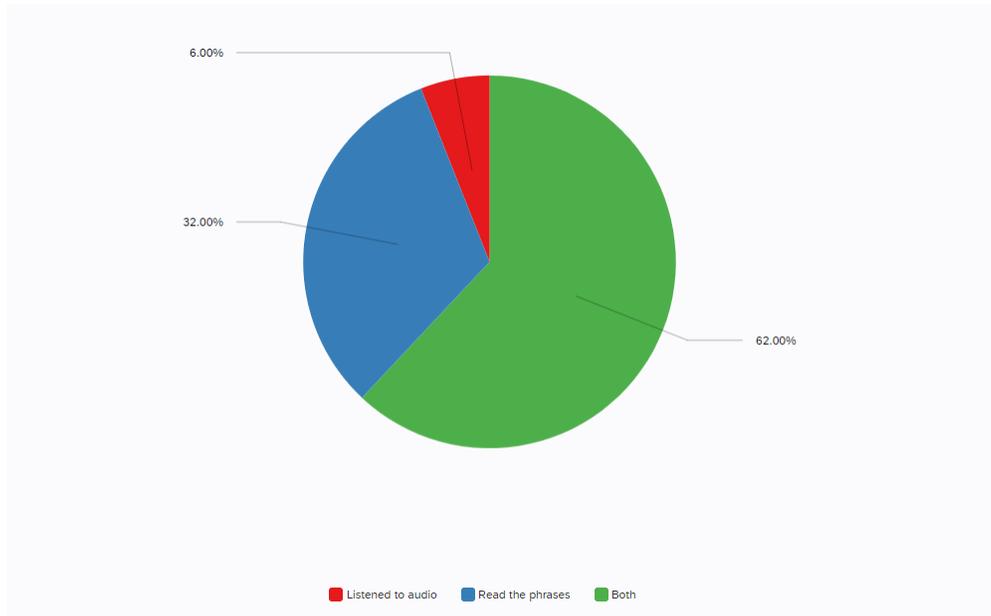
Figure 13: Methods of completing the sentence judgement section

6.3 Follow-Up Interviews

The follow-up interviews offered an in-depth perspective on how the subjunctive, particularly in the third-person singular, appears in the speech of heritage Romanian users. From each interview, each instance of the subjunctive was noted and analyzed for correct of incorrect use.

Of the 10 individuals who participated in the follow-up interviews, 8 participants belonged to the heritage users group and 2 belonged to the control group. On average, participants utilized the subjunctive 13.7 times during the brief, guided interview, with an overall low of 3 uses and a high of 23 uses. Almost every sentence produced in the subjunctive followed the *o să* 'will' future construction (also known as the future 2 construction, see (15b)). Few sentences combined the modal verb *a trebui* 'to must' with *să* to convey a future subjunctive (see (15a)).

The sentences in (15) show various sample future constructions (modified to ensure anonymity) that participants produced in the semi-structured Zoom interviews. Individually, (15a) represents constructions produced with the subjunctive which aligns with the standard Romanian subjunctive rules, in which the inflection of the subjunctive differs from that of the indicative in the third-person singular. (15b) represents sample sentences produced by participants with a subjunctive mismatch, where the subjunctive complementizer *să* preceded verbs inflected according to the indicative in the third-person singular. These productions are typically not accepted by Romanian users who

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acquired a standard variety of Romanian, but the construction appeared in the speech of some heritage users. The final example (15c) represents the alternative, future 1 construction which control group users preferred (instead of the subjunctive).

(15) a. Ea trebuie   să vină   acasă.
      she must.3SG să come.3SG.SJV home
      'She must come home.'

    b. El o   să merge   la somn.
       he AUX să go.3SG.IND to sleep
       'He will go to sleep.'

    c. El va   petrece   timpul   cu   alții.
       he AUX.3SG spend-time.INF time.DEF with others
       'He will spend time with others.'

In the sentences that both groups of participants produced, the five verbs which appeared in speech most were some of the most frequently-used verbs: *a merge* 'to go', *a face* 'to make', *a lucra* 'to work', *a avea* 'to have', *a mânca* 'to eat' (see table 4). In the two most-produced verbs, *a merge* 'to go' and *a face* 'to make' almost half of the uses contained "incorrect" (in accordance to standard Romanian rules) productions of the subjunctive, in which the subjunctive complementizer *să* preceded a verb in the third person singular indicative. In particular, this construction appeared in 47% ($n = 8$) of the instances with *a merge* 'to go' and 33.33% ($n = 4$) of the instances with *a face* 'to make'. Over half of the instances in which the verb *a avea* 'to have' appeared in speech, 57.14% ($n = 4$) were cases in which the subjunctive-indicative mismatch was produced. Some of the participants additionally self-corrected their speech when they realized that they produced the subjunctive in the third person "in violation" of standard Romanian rules, as found with *a lucra* 'to work' and *a mânca* 'to eat'.

The heritage participants produced the subjunctive at a slightly higher rate, with an average of 16 uses. The control users avoided the use of the subjunctive, incorporating it into their speech an average of 5 times and instead opting for an alternative construction.

The preferred construction among the control group was the simple future construction, which appeared an average of 10.5 times during conversations. The simple future construction (or the future 1 construction) is composed of a future auxiliary that matches the subject of the sentence in ϕ-features and is followed by an infinitive (Cojocaru 2003). In everyday speech, this construction

Verbs	Frequency	Correct	Incorrect	Self Correction
a merge	17	9	8	0
'to go'		52.90%	47.00%	0%
a face	12	8	4	0
'to make'		66.67%	33.33%	0%
a lucra	8	7	0	1
'to work'		87.50%	0%	12.50%
a avea	7	3	4	0
'to have'		42.86%	57.14%	0%
a mânca	6	4	1	1
'to eat'		66.67%	16.67%	16.67%

Table 4: Most frequently-produced verbs in follow-up interviews

should not be the preferred construction when discussing future, particularly near future, plans. Instead, it is typically used in formal or official contexts (Cojocaru 2003). Preference in the control group for the simple future construction was unexpected and raises further questions about subjunctive use patterns between heritage users and control group users. The simple future alternative construction appeared in speech produced by heritage users, although very infrequently with a total of 3 times across two interviews and an average of 1.5 times.

Given the sample size, these numbers cannot be statistically significant. However, they point out areas of interest in the use of the subjunctive construction among heritage users and potential differences between them and non-heritage users. The areas of interest discussed in the Analysis section can be used for further research which may produce more definitive results.

7 Discussion

A review of the data from the analysis section in comparison to the research questions informs us that a mismatch exists in the third person form of the subjunctive in a subset of heritage group participants. In addition, the data reveals that heritage group individuals employ the subjunctive in different ways when compared to members of the control group. This may point to a diaspora variety of Romanian in the United States.

7.1 Research Question 1: Which background variables influence subjunctive use in heritage Romanian users?

The background patterns which arose during the demographic information portions of the survey followed patterns of languages which fall on the heritage language spectrum, particularly using Romanian with family or friends (either in the United States or Romania) and in church or cultural center contexts (Carreira and Kagan 2011). This suggests that elements of family and friends may be at the core of the heritage language and culture in survey participants, whether or not the heritage language is used within an immediate community or one abroad.

One surprising result was how the individuals who moved to the United States during their later teenage years into adulthood identified church and cultural centers as contexts in which they use their language less often. Motivations for travel and methods of travel may influence these choices: the heritage users who moved to the United States during childhood likely did so with family members and parents, who may have had further connections within established Romanian communities and with cultural centers. Individuals who moved to the United States during later years may have immigrated on their own, such as members of the control group who traveled to universities during adulthood to receive their secondary education. Further background information regarding motivations for moving and circumstances may provide insight or support for these suppositions.

In terms of age, both the heritage group and the control group follow similar trends. Given that the mean and median year of birth for the heritage group was 1999 and the mean and median for the control group was 1998 and 1999 respectively, the groups have stable, similar variables which allow for a somewhat equal point of comparison and overall makeup. For the control group, the higher average age of participants (19 years old) is further understandable once we realize that individuals who move countries for university or higher schooling tend to be between ages 18 and 20.

The fact that the majority of participants identified as residing in the Midwest connects with the early patterns of immigration for the Romanian community in the United States, in which individuals first settled in the Great Lakes region (Gârdan and Eppel 2012). The communities around this region established themselves over time, particularly centering around the church and

attracting relations from Romania (Gârdan and Eppel 2012). Such was the case for my own family, who moved to Cleveland, Ohio and became part of the community where the first Romanian Orthodox parish in the United States was founded in 1904 (Gârdan and Eppel 2012). This information additionally explains why fewer participants came from the South, from which most participants were recruited by connections at the University of North Carolina at Chapel Hill. Overall, the geographic distribution of the survey followed similar patterns to the geographic distribution of the Romanian communities in the United States. One potential overlooked factor involves college students who participated in the survey: their current state and city of residence at their university may not correlate to where their family's hometown in the United States or abroad may be. While no overall significant pattern can be drawn in the control group, the demographic distribution of the group in either California or East Coast states may be due to secondary education locations to which control group participants have moved. In comparison to the control group, all of the heritage group individuals accepted the use of the subjunctive in future contexts. This was an unexpected result, particularly given how the simple future construction which the control group preferred is usually limited to official settings (Cojocaru 2003).

Relating to subjunctive acquisition, it is interesting to note that the majority of participants learned English before their teenage years (49% ($n = 27$) between the ages of 1 and 5; 25% ($n = 14$) between the ages of 6 and 12). Considering that participants use the indicative inflection of verbs where the third person subjunctive inflection should be used, an early influence of English may also contribute to an incomplete acquisition of the standard Romanian subjunctive rules. Since the majority of the instances in which the subjunctive is used in Romanian have morphology identical to the indicative, an over-generalization pattern may contribute to acceptance of the mixed third person subjunctive sentences and speech production.

The majority of the participants who elected to report the methods they used to complete the sentence-selection tasks, 62% ($n = 31$), both read and listened to the sentences. Given time constraints, it is probable that many people who complete surveys do so in the quickest way possible. In the case of the sentence-selection tasks, this would mean rapidly reading through the sentences and giving judgements. However, only 32% ($n = 16$) of the participants simply read the sentences. The fact that the majority of the participants both read and listened to the sentences brings up the question of whether reading alone might not be enough for some

participants. Listening to the sentences in addition to reading them may be a strategy to reinforce or supplement understanding, particularly for heritage participants whose reading and writing skills may not have been as completely developed as listening and comprehension skills (Benmamoun et al. 2013). Thus, reading alone may not have offered participants sufficient understanding of the sentences to lead to confident judgements. A smaller percentage, 6% ($n = 3$), of participants only listened to the sentences. These participants may be part of the subset of heritage users who may have not learned how to read or write in the Romanian language. One caveat to these interpretations is the interplay between individual learning styles and survey preferences. For example, the participants who elected to both listen and read the sentences may have been overall curious to utilize both options before making judgements. In addition, individuals who selected to only listen to the sentences may simply be predominantly auditory learners or prefer listening to reading. Regardless, the results from the sentence-selection methods question follow heritage language patterns, where heritage language users are more proficient in their oral and aural skills and may have less proficiency in reading and writing skills (Benmamoun et al. 2013).

An in-depth analysis of the demographic information that participants provided is necessary for a more complete understanding of how background information factors into subjunctive performance. In particular, correlating the background variables with individual performance on sentence judgement tasks or speech production would allow for a more nuanced understanding of how subjunctive acquisition was affected. Considering whether participants belong to the immigrant, first, second, or third generation populations of Romanian immigrants in the United States would additionally provide particular insight into the language-learning process. Further considerations include how the country of birth and length of residency (if participants were born elsewhere and not in Romania or Moldova) affect subjunctive acquisition, particularly for individuals who come from countries like Spain or Italy, where the dominant language is another Romance language with the marked subjunctive.

7.2 Research Question 2: How do heritage Romanian heritage users employ the subjunctive compared to native Romanian users?

The heritage and control group of participants followed similar patterns in types of responses they gave for the Qualtrics sentence-selection tasks. One main difference between the two groups is the

presence of the third-person subjunctive mismatch in a subset of the heritage group members. In these cases, participants combined the subjunctive complementizer *să* with the indicative inflection of the following verb. Such tolerance to the subjunctive mismatch in the heritage group, in cases where the construction would be rejected by users following standard Romanian rules, may have developed as a result of overgeneralization, a poverty of stimulus, and a lack of full immersion in the Romanian language. For the participants who belong to Romanian communities and produced the mismatch, this result appears surprising, given that they lived in a more immersive environment compared to heritage users who may not have. This result may indicate the importance of full immersion in the language and formal schooling in order to completely acquire the standard rules of the subjunctive.

In the semi-structured interview, the heritage participants employed the subjunctive without hesitation while discussing their future plans. On the other hand, the control group rejected the use of the subjunctive in contexts of the future and opted to use the simple future instead. This rejection by the control group was unexpected. When debriefed, the control group participants mentioned the use of the subjunctive in contexts of the near and long-term future felt unnatural. The interviews were conducted with formal Romanian language and were described as "low-stakes" and "conversational" in attempt to remove biases surrounding formal interview settings. However, the control participants mentioned that the use of the subjunctive in an interview setting additionally felt overly informal. Instead, the use of the simple future, which is used in official, formal settings, was preferred (Cojocaru 2003). According to their personal judgements, the control group participants additionally mentioned that the use of the subjunctive in future settings was a construction typically used in adolescent or child's speech. While the different interpretations of subjunctive use in the future were unexpected in the semi-structured interview portion of the experiment, this latter piece of information offers potential insight as to why heritage users may not have any reservations when using the subjunctive to explain their future plans. On the one hand, this construction is more readily accepted in domestic, conversational settings (which are the settings in which the heritage participants have used the Romanian language most frequently). On the other hand, if the use of the subjunctive in future contexts is associated with the the speech of children and adolescents, this may indicate incomplete acquisition to the standard grammar rules of the subjunctive. The incomplete acquisition may be due to a lack of immersive opportunities

in Romanian and a lack of formal settings in which formal Romanian standard rules would have been learned. In fact, some of the heritage participants mentioned never having officially learned the formal register of Romanian.

7.3 Research Question 3: Which specific contexts of the subjunctive use pose the most difficulties for heritage Romanian users?

From the semi-structured interview results, the verbs which appear most frequently in the Romanian language proved to be those which resulted in the most mismatches, where the subjunctive complementizer *să* appeared with an third person indicative inflection (instead of the subjunctive). Table 4 reported the frequency and usage of the five most frequent verbs which participants produced during the follow-up interviews. The fact that the most frequently-produced verbs were similar to the verbs which appear most often in the everyday Romanian language is not surprising. However, close to half of the instances in which the verbs were used in a subjunctive construction for the first two verbs (*a merge* 'to walk' and *a face* 'to make') were produced using a mixture of the subjunctive complementizer and the third-person indicative inflection of the verb. This result was unexpected. Another frequent verb in the Romanian language, *a avea* 'to have' produced similar results with over half of the sentences including the mismatch. Given that the verbs which are more frequently in the language appeared to have the most mismatches, this may indicate an incomplete acquisition of the standard Romanian subjunctive rules in the heritage participants who produced the mismatches. The occasional self-corrections also indicate that participants may understand that the forms which they produce in mismatch do not fall under standard rules.

8   Conclusion

This thesis explored the acquisition and use of the subjunctive in Romanian. After introducing the subjunctive and heritage language acquisition processes through literature reviews, I further explored the demographic background of heritage Romanian users in the United States through a two-part experiment. The experiment involved a survey that prompted sentence-judgements from participants and follow-up interviews that prompted subjunctive production in natural speech, allowing for triangulation of data and the opportunity probe the existence of a mismatch through two

different means. The results of the Qualtrics survey and the semi-structured, follow-up interviews confirmed that a mismatch exists within a subset of heritage Romanian users in the United States. Unexpectedly, the follow-up interviews also demonstrated a rejection of the subjunctive by control group members in situations involving the future. Instead, control group members preferred the simple future. The overall results from the experiments point to an additional variety of Romanian in the diaspora communities of the United States. This diaspora variety accepts the indicative inflection of verbs in third person singular subjunctive constructions and additionally the use of the subjunctive to describe the future.

Limitations of this research include sample size, time, and the rapidly-changing landscape of diaspora communities worldwide. For a better understanding of how prevalent the mismatch is in diaspora communities and in heritage Romanian users, a larger study of more diverse sentences and groups of verbs would help. Additionally, in-depth comparisons of individual results and sentence-selection performance would assist in narrowing down correlations between background variables and subjunctive use, particularly between the control and heritage groups. On a larger scale, it would be interesting to witness whether the mismatch exists in Romanian heritage language users from countries whose dominant language is another Romance language.

Overall, this research offers an updated understanding of heritage Romanian users between the ages of 18 and 25 in the United States. The results suggest a difference in the Romanian variety of a subset of heritage users which is characterized by more lenient subjunctive rules in the third person singular. These results and future ones may be useful for Romanian heritage language users, as they point out an aspect of their Romanian variety which differs from the standard variety. The results are additionally useful for heritage language professors and heritage language instruction in the United States, as they point to a mismatch in the third person subjunctive, and knowledge of this mismatch can be used to further develop curriculum that is designed for heritage users.

A   Qualtrics Survey Questions

Yale Qualtrics Survey Tool

<u>**Consent to Participate in Research Study**</u>

Hello, my name is Andreea Ciobanu. I am a senior in the linguistics department at Yale University. You are invited to participate in this research study because you are between the ages of 18 and 25 and are of Romanian heritage in the United States.

Procedures in this study

This research study will examine Romanian language use in Romanian diaspora members of the United States between the ages of 18 and 25. Participation in this study is voluntary, and there is no compensation for your participation. This study will involve filling out information about your language and Romanian background and then choosing how natural phrases in Romanian sound on a scale of 1 to 5. You have the option to read and/or listen to the phrases in the survey. On a voluntary basis, we ask you to participate in a semi-structured, Zoom interview to reflect on your Romanian language experience. We will ask for your consent to record the Zoom interview. Your involvement will require about **10–15** minutes for the survey, and should you choose to participate, about **20** minutes for the interview.

Risks and Benefits

The benefits to you are that you will reflect on your Romanian background and language. You will have the opportunity to think about which ways of expressing certain phrases sound most natural to you in Romanian. We hope that our results will add to the knowledge of Romanian language use in diaspora members of the United States.

There is a possible risk of a highly unlikely breach of confidentiality with regard to the data collected and the recording of an interview.

Confidentiality

All of your responses will be held in confidence. Only the researchers involved in this study and those responsible for research oversight (representative of the Yale University Human Research Protection Program, and the Yale University Human Subjects Committee) will have access to the information that you provide. Your responses will be numbered and the code linking your number with your name will be stored in a password-protected file folder. Should we publish any results from this study, we will do so in a way that does not identify you. We may also share the data with other researchers so that they can check the accuracy of our conclusions but only if we are confident that your confidentiality is protected.

Your participation is voluntary, and you may choose to withdraw from the study at any time.

You must be at least 18 years old to participate.

Questions

If you have any questions about this study, you may contact the investigator, Andreea Ciobanu (andreea.ciobanu@yale.edu).

If you would like to talk with someone other than the researchers to discuss problems or concerns, to discuss situations in the event that a member of the research team is not available, or to discuss your rights as a research participant, you may contact the Yale University Human Subjects Committee, Box 208010, New Haven, CT 06520-8010, 203-785-4688, human.subjects@yale.edu. Additional information is available at https://your.yale.edu/research-support/human-research/research-participants/rights-research-participant.

Do you agree to participate in the survey portion of the study?

◯ Yes
◯ No

→

Yale Qualtrics Survey Tool

The following questions will ask you about your basic background and experience with Romanian. This section should take between **5–10 minutes.** The first four questions determine your eligibility for this survey.

→

Yale Qualtrics Survey Tool

Are you between 18–25 years old?

○ Yes
○ No

→

Yale Qualtrics Survey Tool

Are you Romanian or do you have Romanian heritage?

(Romanian heritage = one or more parents or family members are of Romanian descent)

○ Yes
○ No

→

Yale Qualtrics Survey Tool

Which of the following apply to you?

Select as many as apply.

- ☐ I use Romanian (speaking and/or writing)
- ☐ I understand Romanian (listening and/or reading)
- ☐ None of the above

→

Yale Qualtrics Survey Tool

Which of the following apply to you?

Select as many as apply.

- ☐ I currently reside in the United States
- ☐ I resided in the United States for part of my childhood/adolescence
- ☐ I do not and have never resided in the United States

→

Yale Qualtrics Survey Tool

When were you born?

☐ ⌄
1996
1997
1998
1999
2000
2001
2002
2003
2004

→

Yale Qualtrics Survey Tool

In which country were you born?

○ United States

○ Romania

○ Elsewhere (specify) [_____]

→

Yale Qualtrics Survey Tool

Where do you currently live in the United States?

(If you live elsewhere, where did you spend the majority of the time when you resided in the US?)

Major City   [   ]

State   [   ]

→

Yale Qualtrics Survey Tool

At what age did you (first) immigrate to the United States?

Younger than 1
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

→

Yale Qualtrics Survey Tool

At what age did you (first) immigrate to the United States?

6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

→

Yale Qualtrics Survey Tool

In which of the following contexts do you use Romanian?

Select as many as apply.

☐ Family/Friends
☐ School
☐ Work
☐ Church and/or Cultural Center
☐ Romanian Language Classes
☐ Relatives/Friends in Romania
☐ Other (specify) [＿＿＿＿＿＿＿＿]

→

Yale Qualtrics Survey Tool

With whom do you predominantly speak in English? That is, if given the choice between Romanian and English, you would speak with them in English.

Select as many as apply.

- ☐ Parents
- ☐ Siblings
- ☐ Relatives (in the United States or abroad)
- ☐ Friends (of your age or younger)
- ☐ Friends (older)
- ☐ Religious Leaders
- ☐ Instructors/Teachers/Professors
- ☐ Other (specify) [   ]

→

Yale Qualtrics Survey Tool

With whom do you predominantly speak in Romanian? That is, if given the choice between Romanian and English, you would speak with them in Romanian.

Select as many as apply.

- ☐ Parents
- ☐ Siblings
- ☐ Relatives (in the United States or abroad)
- ☐ Friends (of your age or younger)
- ☐ Friends (older)
- ☐ Religious Leaders
- ☐ Instructors/Teachers/Professors
- ☐ Other (specify) [   ]

→

Yale Qualtrics Survey Tool

How would you rate your fluency in Romanian?

1 = not fluent
5 = very fluent or native speaker level

1	2	3	4	5

Reading

Writing

Speaking

Listening/Comprehension

→

Yale Qualtrics Survey Tool

Where did you learn Romanian?

Select as many as apply.

☐ I lived in Romania during my childhood/adolescence
☐ From my family/Romanian community
☐ Romanian classes
☐ Other (specify) [_____]

→

Yale Qualtrics Survey Tool

Have you taken Romanian classes? If yes, in which of the following contexts?

Select as many as apply.

- ☐ School in Romania
- ☐ Classes at a cultural center
- ☐ Classes at a religious center (church or church-affiliated)
- ☐ University courses
- ☐ Other (specify) [_____]

→

Yale Qualtrics Survey Tool

At what age did you start learning English?

- ○ Since birth
- ○ Age 1-5
- ○ Age 6-12
- ○ Age 13-18
- ○ As an adult

→

Yale Qualtrics Survey Tool

At what age did you start learning Romanian?

- ○ Since birth
- ○ Age 1-5
- ○ Age 6-12
- ○ Age 13-18
- ○ As an adult

→

Yale Qualtrics Survey Tool

For this portion, you will read (or hear) a series of everyday phrases in Romanian. Express how natural you find the following phrases. In other words, would you accept them as something a Romanian speaker would say, or do they sound "off" or unusual? Do not spend much time on any phrase but give the first impression you have. There are no right or wrong answers. This portion should take between **5–10 minutes** to complete. If you are using a mobile device, you may have to slide the screen to the left or right to see all of the options.

→

0:00 / 0:03

Ea visează să meargă la școala.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→
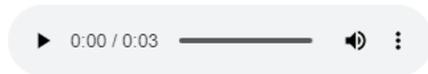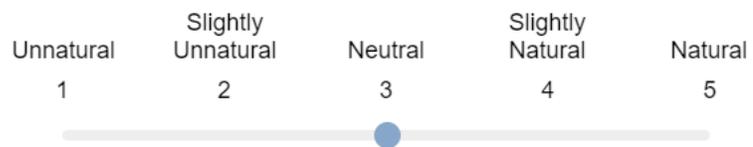
▶ 0:00 / 0:03 ━━━━━ 🔊 ⋮

Ea visează să merge la școală.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→

▶ 0:00 / 0:03 ━━━━━━━ 🔊 ⋮

Ea visează că meargă la școală.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→

▶ 0:00 / 0:03 ——————— 🔊 ⋮

Ea merge la școală în fiecare zi.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→

▶ 0:00 / 0:03 ──────── 🔊 ⋮

Mă supără că trebuie să plece.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→

▶ 0:00 / 0:03 ——————— 🔊 ⋮

Mă supără că trebuie să plece.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→
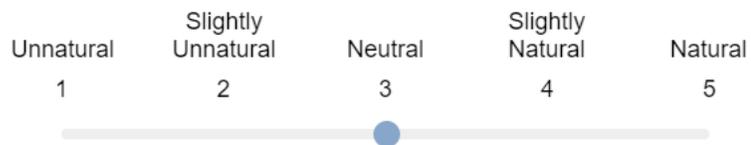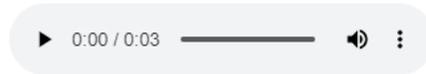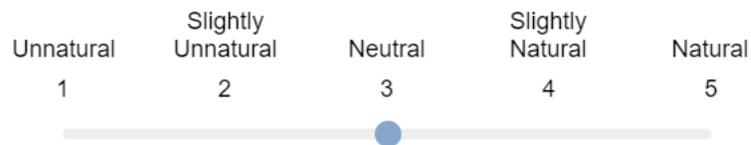
▶ 0:00 / 0:04 ────────── 🔊 ⋮
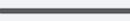
Nu te supăra, pleacă acasă în curând.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→

▶ 0:00 / 0:03 ——————— 🔊 ⋮
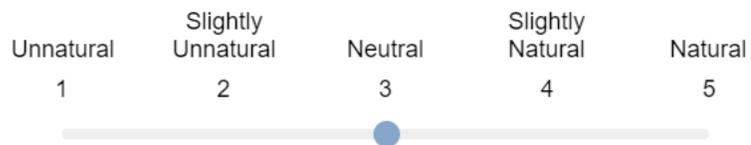
Când se întoarce acasă, o să cadă în groapă.
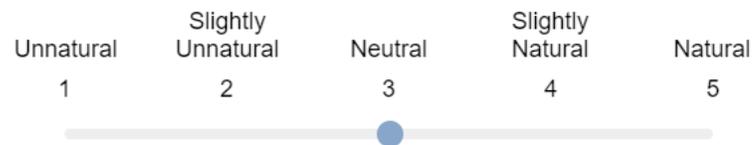
	Slightly		Slightly	
Unnatural	Unnatural	Neutral	Natural	Natural
1	2	3	4	5

→

▶ 0:00 / 0:03 ━━━━━━ 🔊 ⋮

Când se întoarce acasă, o să cade în groapă.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→

► 0:00 / 0:03 ━━━━━━━━ 🔊 ⋮

Este gata să plece la serviciu.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→

▶ 0:00 / 0:03 ━━━━━━━ 🔊 ⋮

Este gata să plece la serviciu.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→

▶ 0:00 / 0:03 ━━━━━━━ 🔊 ⋮
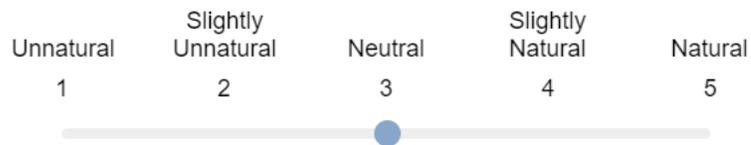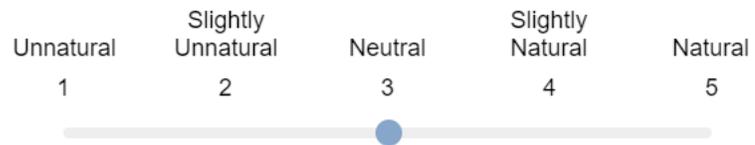
Pleacă la serviciu în câteva minute.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→

▶ 0:00 / 0:04 ━━━━━━━━━ 🔊 ⋮
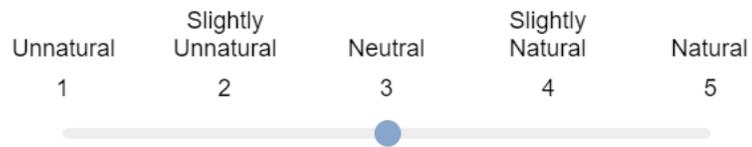
Era cât pe ce să piară când l-au găsit pierdut în pădure.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→

▶ 0:00 / 0:04 ——————— 🔊 ⋮
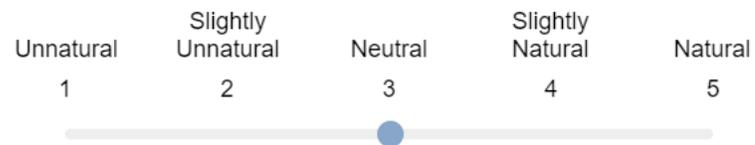
Era cât pe ce să piere când l-au găsit pierdut în pădure.

| Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→

▶ 0:00 / 0:04 ———————— 🔊 ⋮

Era cât pe ce că piere când l-au găsit pierdut în pădure.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→

▶ 0:00 / 0:04 ━━━━━━━ 🔊 ⋮

E ciudat că trebuie să doarmă în aceeași cameră ca sora ei.

	Slightly		Slightly	
Unnatural	Unnatural	Neutral	Natural	Natural
1	2	3	4	5

→

▶ 0:00 / 0:04 ——————— 🔊 ⋮
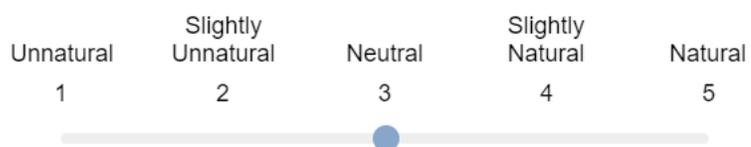
E ciudat că trebuie să doarme în aceeași cameră ca sora ei.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→

▶ 0:00 / 0:03 ────── 🔊 ⋮

Iți promit că Tati merge cu tine la cinematograf.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→

▶ 0:00 / 0:03 —————— 🔊 ⋮

Iți promit că Tati merge cu tine la cinematograf.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→

► 0:00 / 0:04 ──────── 🔊 ⋮

Iți promit să meargă Tati cu tine la cincematograf.

	Slightly		Slightly	
Unnatural	Unnatural	Neutral	Natural	Natural
1	2	3	4	5

→

▶ 0:00 / 0:04 ━━━━━━ 🔊 ⋮
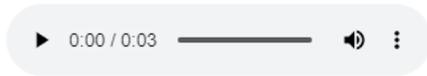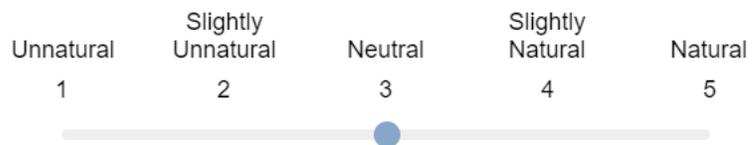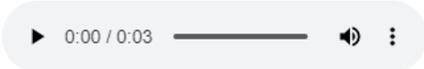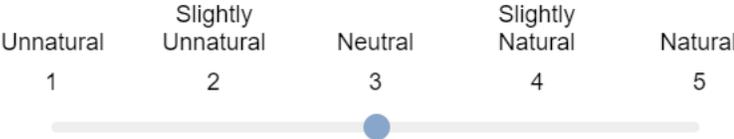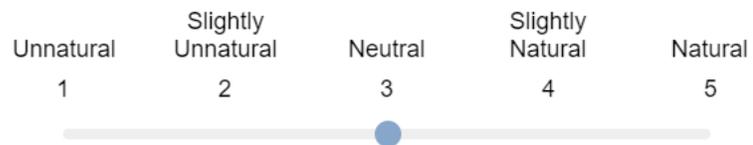
Iți promit să merge Tati cu tine la cincematograf.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→

▶ 0:00 / 0:03 ━━━━━━━━ 🔊 ⋮

Hai, mergem la cinematograf împreună?

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→
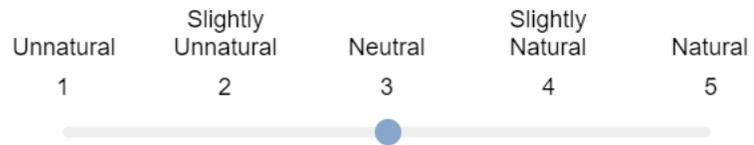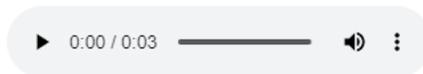
▶ 0:00 / 0:03 ━━━━━━━━ 🔊 ⋮

Nu-i place să cânte în corul școlii.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→
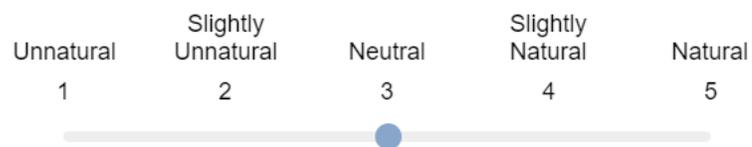
▶ 0:00 / 0:03 ━━━━━━ 🔊 ⋮

Nu-i place să cântă în corul școlii.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→
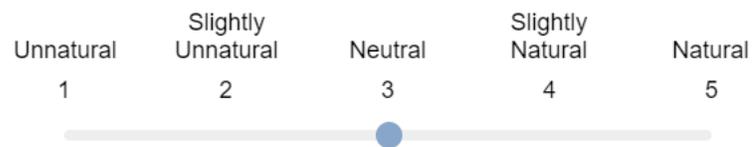
▶ 0:00 / 0:03 🔊 ⋮

Nu-i place că cântă în corul școlii.

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→
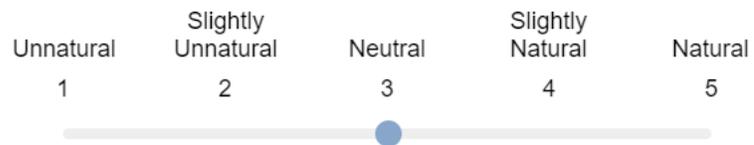
▶ 0:00 / 0:02 ⎯⎯⎯⎯⎯ 🔊 ⋮
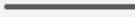
Cine cântă așa de frumos?

Unnatural	Slightly Unnatural	Neutral	Slightly Natural	Natural
1	2	3	4	5

→

Which of the following did you use most often of during the phrases portion of this survey?

○ Listened to audio
○ Read the phrases
○ Both

→

Yale Qualtrics Survey Tool

If you are willing to be part of the follow-up interviews, please leave your email address below so that we may contact you.

The rest of yours answers in the survey are anonymized and encrypted. This question is solely for follow-up purposes.

<div style="border:1px solid #ccc; padding:10px;"> </div>

→

Yale Qualtrics Survey Tool

We thank you for your time spent taking this survey.
Your response has been recorded.

B   Semi-Structured Interview Questions

1. *Îmi puteți spune despre experiența Dvs. cu limba română? Cum ați învățat-o? Cum o folosiți?* 'Can you tell me about your experience with Romanian? How did you learn it? How do you use it?'

2. *Acum vom urmări un mic scenariu în care îmi spuneți o biografie la persoana a treia. Îmi puteți spune despre planurile pe care le aveți pentru restul serii? Ce trebuie să facă [Prenumele participantului]?* 'Now we will follow a mini simulation in which you will tell me a mini biography about yourself narrated in the third person. Will you tell me about the plans that you will have for the rest of the night? What will [Name of Participant] have to do tonight?'

3. *Acum analizăm planurile de viitor. Ce o să facă [Prenume de participant] în viitor? Ce o să*

devină? 'Now we will analyze future plans. What will [Name of Person] do in the future? What will they become?'

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