UC San Diego

UC San Diego Electronic Theses and Dissertations

Title

Subjunctive and Sequence of Tense in Three Varieties of Spanish: Corpus and Experimental Studies of Change in Progress

Permalink

https://escholarship.org/uc/item/2qq173p9

Author

Guajardo, Gustavo

Publication Date

2017

Peer reviewed|Thesis/dissertation

UNIVERSITY OF CALIFORNIA SAN DIEGO

Subjunctive and Sequence of Tense in Three Varieties of Spanish: Corpus and
Experimental Studies of Change in Progress

A dissertation submitted in partial satisfaction of the requirements for the degree
Doctor of Philosophy

in

Linguistics

by

Gustavo Guajardo

Committee in charge:

      Professor Grant Goodall, Chair
      Professor David Barner
      Professor Jeff Elman
      Professor Ackerman Farrell
      Professor John Moore
      Professor Scott Rifkin

2017

The dissertation of Gustavo Guajardo is approved, and it is acceptable in quality and form for publication on microfilm and electronically:

_____

_____

_____

_____

_____

Chair

University of California San Diego

2017

DEDICATION

To my grandfather.

A mi abuelo.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACKNOWLEDGMENTS

Many people have been involved in the success of completing this dissertation and my PhD in general. First, I would like to thank my advisor, Grant Goodall, for his patience and understanding during these last six years. My dissertation committee: Farrell Ackerman, David Barner, Jeff Elman, John Moore and Scott Rifkin for making the dissertation process go so smoothly and for providing me with great feedback and suggestions. I am also indebted to Grant Berry and Facundo Santiago for their help with R and statistics. Thanks for teaching me so much.

I would also like to thank two very important people in the Linguistics department at UCSD, Rachel Pekras and Alycia Randol, whose help and support during my whole PhD program was invaluable and highly appreciated. A big thanks goes to Alicia Muñoz, the Spanish Language program coordinator, whose unconditional support, guidance, feedback and friendship was key to my success in the completion of my PhD program. Likewise, Rodolfo Matas, our former head TA in the Spanish program and my friend, was, and still is, an important mentor and model for my career.

These seven years could not have been possible without the constant support of my friends back home in Argentina and elsewhere. A special thanks goes to Francisco Kuhar, Marina Sztein and Patricia Barbanente, who were always on the other side of the phone to lend me an ear whenever I needed one.

Last, but certainly not least, I thank my amazing family: my dad, my mom and my sister without whose love, understanding and care, all this would be pointless. Thank you for always being there for me.

VITA

2007   BA in English and Education, Joaquín B. González. Buenos Aires, Argentina

2010   MA in Linguistics. University of Montana. Montana, USA.

2017   PhD in Linguistics, University of California, San Diego. La Jolla, USA.

ABSTRACT OF THE DISSERTATION

Subjunctive and Sequence of Tense in Three Varieties of Spanish:

Corpus and Experimental Studies of Change in Progress

by

Gustavo Guajardo

Doctor of Philosophy in Linguistics

University of California, San Diego, 2017

Professor Grant Goodall, Chair

Spanish generally shows a Sequence of Tense (SOT) phenomenon in subjunctive clauses: the tense of the embedded clause (present or past) must agree with the tense of the matrix clause. However, one kind of violation sometimes occurs, in which a present tense subjunctive clause is embedded under a past tense matrix clause (e.g., *Quería que me **ayudes (*present subjunctive)** (instead of **ayudaras (past subjunctive)**) "I wanted you to help me"). The acceptability of this SOT violation has been argued to depend on two main factors: the semantic class of the main predicate (Suñer and Padilla-Rivero 1987, Quer 1998) and the temporal interpretation of the embedded clause (Laca 2010b). A factor that has been less discussed in the literature is cross-dialectal variation; in some dialects SOT seems to be enforced more strongly

and SOT violations are not very common, whereas in other dialects violations of SOT of the type shown above appear to be fully grammatical (Sessarego 2008, 2010; Del Río 2014; Guajardo 2010).

Using corpus and experimental methods, this dissertation examines violations of SOT in Argentinean, Mexican and Peninsular (i.e., European Spanish) to determine what makes violations of SOT more acceptable in certain varieties than others.

The corpus study analyzes the amount of variation found in each of the three dialects. It is found that in Argentinean Spanish, violations of SOT occur at a much higher rate (30%) than in Mexican (6%) and Peninsular Spanish (3%). However, no lexical effects are found in any of the three varieties; any embedded verb appears to be able to engage in this process. An acceptability experiment allows us to examine this variation in more detail by manipulating the temporal interpretation of the embedded clause in order to determine whether interpretation of the embedded clause has any effect on the acceptability of the present subjunctive. These results show that interpretation of the embedded clause does play a role, but to different degrees in the three varieties: Argentina presents a very small effect and Mexico and Spain show much larger effects. In addition, the results show that in Argentina, present and past subjunctive are largely in free variation when embedded under a past matrix clause. I conclude that Argentinean Spanish exhibits higher rates of violations of SOT because the present subjunctive is tenseless and therefore free to occur under any matrix tense.

CHAPTER 1

INTRODUCTION

1.   Goals and Topic of Study of the Dissertation

This dissertation is concerned with the study of language variation and change. The overarching goal of this work is to explore ways that can allow us to disentangle different sources of variability across varieties of the same language. In particular, I aim to demonstrate that variability is not all of the same type and that we can find ways to determine whether a particular variable phenomenon in the grammar is stable variation or a reflex of ongoing language change. By stable variation I mean a situation where the grammar allows optionality but where there is no evidence for the system to be evolving one way or another. For example, in English there is variation in the dative alternation (Green 1971, Gries 2003, 2005, Fellbaum 2005) as in (1) and object placement with verb-particle constructions (Fraser 1976, Chen 1986, Dehe 2002) as in (2).

1.   a.   John gave the ball to Peter.

        b.   John gave Peter the ball.

2.   a.   John picked up **the ball**.

        b.   John picked **the ball** up.

No one has claimed that these types of alternation are cases of language change. The likelihood of using one or the other variant has been found to be quite systematic. For example, with the dative alternation the semantic class of the verb matters (Lapata 1999, Gries 2005), as well as whether the first phrase following the verb is a pronoun vs. lexical noun, definite vs. indefinite, highly accessible in the discourse, human vs. non-human, and shorter vs. longer (Bock and Irwin 1980, Thomson 1990, Bock, Loebell and Morey 1992, Hawkins 2002, Gries 2005, Szmrecsáyi 2005). Based on these factors, the dative alternation can be predicted with 94% accuracy (Bresnan, Cueni, Nikitina, and Bayen 2004). Likewise, with the verb-particle construction similar factors affect the choice between the orders in 2(a-b). For example, length of the NP (Chen 1986, Hawkins 1994), degree of idiomaticity of the verb-particle combination (Fraser 1976, Chen 1986), discourse givenness (i.e., new vs. old information) (Chen 1986) and focus (Dehé 2002) are all factors that have been found to influence which of the two orders is preferred.

On the other hand, in American English we find examples as in (3) where the past tense is used where Standard English would require the past participle (Atwood 1953, Hawkins 2000, Wolfram and Schilling 2015, Geeraert and Newman 2011, Munn 2015).

3.   a.   I may have **saw** it last night.

       b.   She should have **did** that.

       c.   Have you ever **went** to a wine and paint night?

This type of variation has all the ingredients of a case of language change. First, there seems to be no systematic ways in which one could predict when the past tense will be used instead of the past participle in a given context. In addition, this phenomenon looks like a case of leveling with the –*ed* class, where the past tense and the past participle have the same morphological shape (Munn 2015), although a syntactic reanalysis has also been proposed to explain the tendency of this phenomenon to be more frequent with modal verbs (e.g., *he might have saw it*) than with present or past perfect (e.g., *he has/had saw it*) (Hawkins 2000).[1]

The question that I seek to answer in this dissertation is how we can distinguish variation from change in a formal and precise way using empirical quantitative methods. I address this question by conducting two studies on a phenomenon in Spanish that displays variation cross-dialectally. The phenomenon under investigation is the variation found in subjunctive complement clauses embedded under a matrix clause containing a past tense. The variation in this context is between the standard *past* subjunctive and the non-standard *present* subjunctive. The data in (4) illustrate the alternation.

4.   a.   Me   dijo   que   lo   pusiera/ ponga   ahí.
            me   say.3S.Past   that   it   put.1S.Past./Pres.Subj there
            "S/he told me to put it there"

      b.   Queríamos   que   estudiara/ estudie   medicina.
            want.1PL.Past that   study.3S.Past/ Pres.Subj   medicine
            "We wanted him to study medicine"

---

[1] Under this analysis, the sequence *modal+have* is reanalyzed as a single constituent *could've/ coulda* and is interpreted as an adverbial and the past simple retains its finite features.
[2] This is to be read without an intonation break at the end of the sentence. Without the break, the adverb

What makes this data interesting is that for some speakers both present and past subjunctive are possible in the same context. This is similar to the data in (3), where for many English speakers both the past tense and the past participle are possible. This clearly requires an explanation since a present tense cannot really appear where a past tense is expected in any other context in Spanish. What makes it possible here?

More broadly, this context of variation is an example of Sequence of Tense (SOT). When a past tense is embedded under a past matrix clause, the embedded past tense can be ambiguous between two readings: a *past-shifted* reading where the embedded past tense signals a precedence relationship to the event in the matrix clause, and (ii) a *simultaneous* reading where the embedded past tense is interpreted as simultaneous with the matrix event time (Enç 1987). The simultaneous reading is an example of SOT. I will illustrate these two readings with the following example in (2) below.

2. John said that Luna was in town.

In (2) the embedded clause is ambiguous between a simultaneous reading where Luna being in town overlapped with the event of John's saying, and a past-shifted reading where Luna being in town preceded the time of John's saying. The interesting aspect of SOT is that the use of the past tense *was* indicates simultaneity with the matrix event and not precedence, which is the usual temporal relationship of the past tense.

Note, however, that a simultaneous reading is only available for stative predicates; an eventive predicate cannot receive a simultaneous interpretation (3).

3.   John said that Tom left.

In (3) the embedded clause cannot receive a simultaneous interpretation, as it cannot mean *John said that Tom is leaving*. For (3) to be true, Tom must already have left before John said it.

SOT has been analyzed in several ways (e.g., Enç 1987, Ogihara 1995, Stowell 1996, Zagona 2014). Most analyses have in common the fact that they argue that the underlying tense in (2) is not past but present. The analyses differ in how they derive the surface past from the underlying present tense.

To account for the data (1), where the present and past subjunctive alternate, different analyses could be proposed. For example, it could be proposed that SOT is optional in these varieties of Spanish; when SOT is not applied, the present surfaces and when it is applied you get the past subjunctive. The problem is that neither (1a) nor (1b) has a stative predicate in the embedded clause, so these sentences could never receive a simultaneous interpretation. The underlying tense in these sentences, if past were used, is past and not present. So SOT is not responsible for the past tense in (1).

Another possibility is that the present tense in SOT contexts may carry some semantic distinction from the past tense. This has been argued to be the case in standard Spanish (Laca 2010b). In this variety, the present subjunctive can appear under a past tense matrix clause when the embedded proposition refers to an event

interpreted after the matrix event time. This interpretation is usually referred to as the

Double Access Reading (DAR) (Enç 1987, Giorgi and Pianesi 1997, Laca 2010b) and

is illustrated in (4).

4.　　Juan　quería　　　　que　María　venga　　　　　　más　tarde
　　　　Juan　want.3S.Past　that　María　come.3S.Pres.Subj　more　late
　　　　"Juan wanted Maria to come later"

In (4) the embedded clause contains the adverbial *más tarde* "later", which locates the

embedded event in the future with respect to the matrix clause. This reading has also

been described as the unfulfilled event interpretation, meaning that the embedded

clause refers to an event that is unfulfilled with respect to the matrix event time and/or

the speech time (Comrie 1985). I will use the more technical term DAR for the entire

dissertation.

Under the analysis where the present subjunctive embedded under a past

matrix tense gives rise to a DAR interpretation, it is predicted that embedded clauses

with a present subjunctive should be incompatible with an interpretation where the

embedded event refers to a time prior to the matrix clause or to a time that is

unambiguously past, with no possibility of the embedded event being interpreted as

posterior to the matrix event time or the speech time. This prediction is not borne out

in Argentinean Spanish, where the embedded clause can appear in contexts that cannot

give rise to DAR such that only a *past* interpretation of the *present* subjunctive is

available.

5.　　a.　　Me　molestaba　　　que　me　　toque
　　　　　　　me　bother.3S.Past　that　me　　touch.3S.Pres.Subj
　　　　　　　"It bothered me that he would touch me"

b.   Quería   que   pierdan   por   ser   River.
       want.1S.Past   that   lose.3PL.Pres.Subj   for   be.inf River
       "I wanted them to lose just for being River"

The data in (5) are actual sentences uttered by Argentinean speakers. The first sentence refers to an event the speaker was describing from his high school years, a few years after he graduated. He was talking about somebody touching him whenever the person would talk to him. The second sentence refers to a soccer fan that clearly does not like River Plate, one of the biggest soccer teams in Argentina. This was said after the game was over, not before. These two sentences suggest that DAR is not a requirement in Argentinean Spanish to license the present subjunctive under a past matrix clause.

These observations are interesting, but the phenomenon has never been explored seriously, let alone quantified in a systematic way. I have claimed in the past that these observations are true for Argentinean Spanish, mostly relying on my own intuitions as a native speaker of the language, but this dissertation aims to study this phenomenon carefully and systematically.

2.   Variation in Linguistic Theory

The type of syntactic variation that this dissertation is concerned with is where individual speakers use two distinct grammatical options in an area of the grammar that normally does not permit optionality. The study of language variation and change requires that we have a theory that is compatible with the existence of optionality in the case of variation, and dynamicity in the case of language change.

Several questions need to be answered in order to include variation in theoretical models. The most important of these questions concerns the architecture of a grammar that allows optionality/ variation. Other cognitive systems do not display the type of variation found in language, so a biologically coherent account is needed of why language manifests the variability that it shows (Lightfoot 2017). In the generative tradition, there have been two types of approaches to the study of language variation and change: the structuralist approach and the variationist approach (Santorini 1989). These two approaches share the fact that they assume a rich and highly structured UG made up of principles and parameters, which are set by triggers in the input. In addition, they both consider that language change and language acquisition are closely connected (Pintzuk 1991). The main difference between these two approaches lies in their account for the gradual nature of language change and for intraspeaker variation during the time change is taking place.

For the structuralist approach, language change is understood as the result of sudden grammatical reanalysis. The learner converges on a grammar that is substantially different from that of the previous generation (e.g., Lightfoot 1979, 1981, 1988; Halle 1962, Andersen 1973). This sudden change is taken to be the result of a change in the setting of a specific parameter of UG. One problem with this approach is the gradualness of language change. Language change does not happen overnight and it can even take hundreds of years for a particular linguistic change to come to completion. One way in which this approach addresses this issue is by arguing that during the period of language change some learners are still able to attain the old grammar, while others successfully acquire the innovating grammar. As more and

more learners eventually converge on the new grammar, language change takes place, albeit gradually.

In contraposition to the structuralist approach, the variationist approach proposes that language variation and change occurs through the existence of alternative linguistic forms that are in competition with one another (e.g., Kroch 1989b, Yang 2002). This type of approach also adheres to the Double Base Hypothesis (Santorini 1992, Pintzuk 1991), which proposes that learners can acquire two distinct competing grammars when exposed to linguistic variability. Under this hypothesis, variability stems from within-speaker variation as a result of speakers acquiring two distinct grammars for that particular aspect of the grammatical system. In Chapter 5, I present one of these approaches that takes grammar competition to be the key element in language variation and change. In Chapter 3, I present some evidence in favor of the Double Base Hypothesis showing that the same speakers produce both alternative variants within the same sentence.

Another important question that requires an answer in the study of language change is the issue of what causes language change. Why does a variety of a language undergo a particular change while others do not? This is arguably the most complex question of all and has come to be known as the *actuation* problem (Weinreich, Labov and Herzog 1968). In the variationist approach, causality in language change, though very hard to establish, is usually argued to fall outside language itself. Given the conservative nature of language learners, it is highly unlikely that without any external disruption of the system, learners will converge on a different grammar than the previous generation's. The only source of discrepancy between generation *n* and

generation $n + 1$ must reside in the linguistic evidence that these two generations are exposed to (Yang 2002). Some of these external factors might be migration of foreign speakers into a community and social and cultural factors that might affect the distributional properties of linguistic expressions. I will not address this issue in depth in this dissertation. However, I will discuss a hypothesis for why this change has happened in Argentina (and in the Andean dialects as well) in Ch 5, though this hypothesis remains speculation at this point.

3. Quantitative Methodologies

As I said above, the goal of this dissertation is to explore ways in which quantitative methods can be used to distinguish stable language variation from language variation that is the result of ongoing language change. To this end, I employed two methodologies that complement each other and whose results combined are extremely informative: a corpus study and an acceptability judgment experiment.

3.1 The Corpus Study

The first study to be discussed is a corpus study conducted using the web version of Corpus del Español (Corpus of Spanish) (Davies 2016). The corpus contains 2 billion words from all Spanish-speaking countries, including the USA. The data is tagged syntactically, morphologically and semantically allowing for very precise searches with highly accurate results. The main advantage of this corpus for the present study is clearly the fact that is morphologically tagged, but also the size of the corpus, making it the largest Spanish corpus to date. In addition, the data have

been collected from websites and blogs so the language is more informal than other corpora available that contain mostly data from literary works. This is crucial for the phenomenon under investigation, as examples of language change may not be found in more formally written texts. An obvious disadvantage of any corpus study is that the researcher has no control over the available data. The corpus was not designed to answer the specific question that I am trying to answer so the type of information available is limited. For example, we do not have a straightforward way to track speakers across sentences if we wanted to study intraspeaker variation. We also do not always have the complete context in which the sentence was uttered, which, in our case, could give us key information as to the temporal orientation of the clause. For these reasons I conducted an experiment in order to verify and extend the corpus study.

3.2.   Sentence Acceptability Experiment

The goal of the sentence acceptability experiment was to address the questions that were left unanswered from the corpus data. First was the issue of the temporal interpretation of the embedded clause. Given the nature of the phenomenon under investigation, it was crucial to be able to determine the exact contexts in which variation was and was not allowed. As I will discuss in detail in Chapter 2, alternation between present and past subjunctive has been claimed to be allowed when the embedded clause contains an event that is interpreted as simultaneous with, or after, the matrix and utterance time (Laca 2010b). Therefore, we designed the experiment so that we could manipulate this aspect to test this claim. Another important piece of

information that we could not gather from the corpus data was the status of each subjunctive form in the language. The rate of past subjunctive is still quite high in Argentinean Spanish so we did not know what the status of these two forms was with respect to each other. Does the variation found in the corpus mean that speakers prefer one variant more than the other? Or does it reflect a transitional state where the proportion indicates the rate of development (i.e., the present subjunctive has started to encroach on the past subjunctive but this process has not reached completion) rather than the degree of preference of one form over the other? The experiment helped us answer this question with somewhat surprising results.

One of the concerns about conducting a formal experiment was the impact the formal setting would have on participants. The concern was that by asking participants to rate sentences on how well they sounded, they might subconsciously fall on the older standard variant. Fortunately, the general results of the corpus study and of the acceptability experiment largely corroborated each other, thus increasing our confidence that their results are valid.

A problem we ran up against given the nature of the experiment had to do with participant recruitment. Since we conducted a comparative study, we needed participants from three different countries. Amazon Mechanical Turk (AMT) seemed like an appropriate tool to use for this type of experiment and AMT has been shown to provide very reliable data (Sprouse 2011). However, we did not anticipate not finding Argentinean speakers on AMT. Therefore, they had to be recruited via Facebook and personal contacts. It is important to note that no friend, friends' partners or relative of the author of this dissertation completed the study. As will become clear when I

discuss the results of the experiments, this difference in recruitment does not seem too have had an impact on the outcome of the experiment.

4. Structure of the Dissertation

The dissertation is organized in four chapters plus the introductory chapter. In Chapter 2, I discuss the theoretical background to understand the implications and content matter of the entire dissertation. I describe Sequence of Tense (SOT) in general and in the Spanish subjunctive in particular and introduce the type of data that this dissertation is concerned with. In addition, I present my earlier analysis of the development of the present subjunctive into a tenseless subjunctive.

Chapter 3 contains the corpus study, where besides exploring different ways in which we can analyze corpus data in order to look at differences between variation and change, I also discuss the actual change that the language is going through: is the past subjunctive being lost or is SOT being lost? The results show that the variation found in Argentinean Spanish is quantitatively different from Mexico and Spain. Yet the variation found in Mexico and Spain is also distinct from one another, though to a much smaller degree than in Argentina.

In Chapter 4, I present the results of a sentence acceptability experiment. I will show that in Argentinean Spanish the distinction between present and past subjunctive has been lost in past contexts such that both forms are equally acceptable in complement clauses embedded under a past matrix clause. In addition, the results show that Mexico and Spain differ with regard to embedded clauses that are

interpreted in the future, with Mexico accepting the present subjunctive in these contexts a little more often than Spain.

In Chapter 5, I address some of the implications of the results and the research contained in this dissertation as well as a tentative hypothesis about why this linguistic change has occurred in Argentinean Spanish and in the other dialects where it has been reported. With respect to some of the implications of the results, I will argue that there is enough evidence both from the results as well as theoretical principles governing language acquisition and change that suggest that the subjunctive system in Argentinean Spanish is on a path to specialization of forms, where there will be no tense contrasts in the subjunctive; only an aspectual difference between simple and perfect (or anteriority in general) and a modal form, namely the past subjunctive signaling counterfactuality. Regarding the cause of the change, I will propose that the dialects that present this type of change (Argentinean and Andean dialects) all have in common the fact that they have, or have had, a high number of bilingual speakers due to mass immigration in the case of Argentina, and indigenous languages in the case of the Andean dialects.

CHAPTER **2**

SEQUENCE OF TENSE AND THE SPANISH SUBJUNCTIVE

1. Introduction

  This chapter introduces the general phenomenon of Sequence of Tense (SOT) with its semantic and syntactic analyses. In section 2, I present the Spanish subjunctive paradigm and discuss the relationship between SOT and the so-called impoverished tense contrasts in the subjunctive. In the last section, I describe the variability found across Spanish varieties in the application of SOT and discuss the analysis proposed in Guajardo (2010) to account for violations of SOT in those dialects where the present subjunctive often appears under a past matrix clause.

1.1. Sequence of Tense

The tense of an embedded complement clause under a finite matrix verb derives its temporal interpretation from the matrix clause (Hornstein 1990, Laca 2010b).

1.   a.   John said that Mary is pregnant.

    b.   John said that Mary was pregnant.

    c.   John said that the Chargers lost the game.

The event time of the embedded clause in (1a) is interpreted relative to utterance time (Hornstein 1990). In (1a) what John said was that Mary was pregnant at the time the sentence was uttered. This means that Mary is still pregnant now. This interpretation is referred to as the Double Access Reading (DAR) (Enç 1987, Giorgi and Pianesi 1987; more on this in section 2.1). Sentence (1b), on the other hand, has two possible readings. Mary may still be pregnant or she may have delivered the baby. These two readings are illustrated in (2).

2.   a.   John said "Mary is pregnant".

   b.   John said "Mary was pregnant"

The reading of (1b) exemplified by the scenario in (2a) is an instance of sequence of tense (SOT) and is referred to as the *simultaneous* reading (Enç 1987). On the other hand, the scenario in (2b) means that Mary had been pregnant at some point *prior* to the matrix event time. This reading is called the *past-shifted* interpretation (Enç 1987). Past-shifted readings are more easily obtained with non-stative predicates like in (1c) where is it clear that by the time of John's utterance, the Chargers had lost; (1c) cannot receive a simultaneous interpretation.

   In simultaneous readings, the understanding is that the embedded verb is underlyingly present (as shown in (2a)) but is interpreted relative to the temporal evaluation of the event time of the main clause (Enç 1987, Hornstein 1990) (more on this below). Because this event time is in the past, the present tense is also interpreted in the past. Generally speaking, the claim has been that this temporal relationship is

encoded by the overt past morphology of an otherwise semantically present tense. In other words, the verb *looks like* a past tense but semantically it *behaves* as a present tense. That the underlying tense is present and not past can be seen in the following examples.

3.   a.   John thought that Mary returned tomorrow.

        b.   *Mary returned tomorrow.

        c.   Mary returns tomorrow.

4.   a.   John said Luke was cooking tomorrow.

        b.   *Luke was cooking tomorrow.

        c.   Luke is cooking tomorrow.

The data in (3) and (4) illustrate the difference between a past tense in an embedded clause as a result of SOT and the same past tense in an independent clause. The incompatibility of the adverbial *tomorrow* with a past tense in independent clauses should be of no surprise. The interesting fact about these data is that the same sentence embedded under a past tense becomes grammatical. This can only be possible if the underlying tense in the embedded clause is present tense as (3c) and (4c) illustrate. To further underscore this point, we can look at embedded future events.

5. a. *John said he would come home yesterday.[2]

  b. *John will come home yesterday.

The data in (5) show that the past adverbial *yesterday* is incompatible with the future modal *will*. This is clearly expected in (5b) as the meaning of *yesterday* is incompatible with a future modal. But even when the morphology is past tense as in (5a) the adverb *yesterday* still makes the sentence ill-formed. This is another piece of evidence that SOT is simply a morphological reflex of the temporal relationship between the embedded and the matrix clause; the semantic structure of the underlying tense remains unaffected after SOT has applied (Hornstein 1990).

   Cross-linguistically, not all languages behave like English (or Spanish) with respect to the simultaneous reading. Russian, Japanese and Hebrew, for example, do not apply SOT for simultaneous readings (Ogihara 1995). When the event of the embedded clause is simultaneous with the matrix event time, then the present tense is used (6a). Past tense under past receives a past-shifted reading (6b). In this case embedded past is interpreted as prior to the event in the matrix clause (Khomitsevich, 2007).

6. a. God nazad Ivan dumal, čto Maša boleet
     yeah ago Ivan thought that Masha ails
     "A year ago Ivan thought that Masha was ill (lit. is ill) (at the time of
       thinking)"

  b. Ivan dumal čto Maša bolela
     Ivan thought that Masha ailed
     "Ivan thought that Masha had been ill (at some previous time)

                  (Khomitsevich, 2007: 2)

---

[2] This is to be read without an intonation break at the end of the sentence. Without the break, the adverb is read as modifying the downstairs tense, on analogy with "*John said that yesterday Harry would leave for New York" (Hornstein 1993: 218).

Languages like English and Spanish are called SOT-languages and languages like Russian non-SOT languages. Table 1.1 illustrates the possible readings that are available in each language type depending on the tense in the embedded clause.

Table 2.1. Typology of Embedded Tense Interpretations

	SOT	Non-SOT
Past under Past	Shifted & Simultaneous	Shifted
Present under Past	Double-Access	Simultaneous

As is clear from table 2.1, one important difference between SOT and non-SOT languages is how simultaneity is encoded in the embedded clause. Note that the semantic meaning remains constant (i.e., the embedded event is interpreted as simultaneous with the matrix event time), the difference is the morphological realization of the embedded verb: present in non-SOT and past in SOT languages. In order to explain this difference, a distinction is often made between true semantic tenses, usually written in capital letters PRESENT/ PAST, and the actual morphological realization of tense *present* or *past* (e.g., -s and –ed in English). Under this view, both SOT and non-SOT languages use PRESENT in the embedded clause under a past matrix to express simultaneity. The difference resides in the fact that in non-SOT languages the morpheme *present* always expresses PRESENT and *past* always expresses PAST (Stowell 2007).

There have been various proposals to account for the possibility that *past* in SOT languages is ambiguous between PAST and PRESENT (e.g, Ross 1967,

Ladusaw 1977, Enç 1987, Abush 1988, Stowell 2007, Ogihara 2013). The challenge of these proposals is to account for the ability of a seemingly past tense morpheme to be semantically present in the right syntactic context so that the simultaneous reading is available. The earliest theoretical account dates back to Ross's (1967) transformational rule of Sequence-of-Tense. This proposal relies on a copying mechanism of the *past* feature of a PAST matrix clause onto the tense node of the embedded clause. Under this analysis, there are two types of surface past tenses in embedded clauses: (i) *past* originating as underlying PAST (past-shifted reading) and *past* originating as underlying PRESENT (simultaneous reading). Similarly, Abush (1988) proposes that there are two types of past tenses in English (and SOT languages in general): Past-1 and Past-2. Past-1 always yields a past-shifted interpretation and its syntactic distribution is not restricted. Past-2 has the semantics of a present tense and its distribution is restricted to embedded clauses under a past matrix clause. Enç (1987) proposal relies on principles of Binding Theory (Chomsky 1981). Her main assumption is that *past* in complement clauses always has the lexical past-shifting semantics of a true semantic PAST. Leaving the technical details aside, she proposes that the simultaneous reading obtains when the embedded ET is bound by the matrix clause ET. If no such binding takes place, then we obtain the past-shifted reading.

The problem with these accounts is that they do not explain why only *past* is ambiguous between a past-shifted and a simultaneous interpretation when embedded under a PAST matrix clause (Abush 1988). Stowell (2007) attempts to solve this problem by proposing that PAST and PRESENT in English are phonetically null. The morphological realizations *present* and *past* are instantiations of a syntactic category

that he calls Z.[3] Z is the head of ZP, which is a time-denoting phrase complement of T. In this analysis, the null PRESENT and PAST tenses have the semantics associated with these tenses (i.e., PRESENT means simultaneity of Event Time (ET) and Utterance Time (UT) and PAST means ET prior to UT), but the morphological *present* and *past* forms are taken to be polarity items. Morphological *past* is a PAST Polarity Item so the ZP that it heads must be under the scope of a true PAST tense. The morpheme *present* is an anti-polarity item so the ZP that it heads must not fall under the scope of any true PAST tense. Let us see an example to see how the simultaneous reading is derived under this analysis.

7.   John believed that Anne was pregnant.

In this sentence, *past* appears as the overt head of the ZP complement of the null tense in both clauses. In the matrix clause, the null tense must be PAST so that the matrix *past* is licensed. The null tense of the embedded clause is free to be PAST or PRESENT as the morpheme *past* in the embedded clause is still licensed by falling under the scope of the main clause PAST. If the embedded clause tense is PAST, we get the past-shifted reading. If it is PRESENT, the result is the simultaneous interpretation. The advantage of this analysis is that morphological *present* or *past* are not the locus of the ambiguity between the two possible readings. Ambiguity arises from the possible values assigned to the null tense but the meaning of each tense remains constant.

---

[3] Z stands for the German word *Zeit* "time".

This type of analysis raises a very important and relevant question concerning language change. When a language loses the morphological reflex of SOT, does that mean that the language has become non-SOT? Or could we still maintain that SOT applies even in the absence of the overt application of the morphological change characteristic of SOT? I will discuss and provide an answer to these questions in Chapter 3.

SOT plays a very big role in the distribution of subjunctive tenses in Spanish. With the subjunctive being a verb form mostly limited to embedded contexts, the possible tense combinations between main and embedded clauses are influenced by SOT. In the next section I describe and discuss the subjunctive system in Spanish and the interaction between subjunctive tense and SOT.

2.   The Spanish Subjunctive

Traditionally, Spanish grammars distinguish three moods: imperative, indicative and subjunctive. Compared to the indicative, the subjunctive paradigm makes fewer contrasts both in tense and aspect. The subjunctive contrast is based on a PAST and NON-PAST temporal system, with present and past being the contrastive forms (e.g., *cante* "sing"(Pres); *cantara* "sing"(Past)). There is no future subjunctive in modern Spanish, it having disappeared from the language since at least the 18th century (Ridruejo 1990, Eberenz 1983)[4]. The only aspectual distinction is between anterior and non-anterior conveyed by the contrast between simple and perfect forms,

---

[4] The future subjunctive can still be found in legal documents but it is a learned form and restricted to this highly specialized register. It is also fossilized in the idiomatic phrase *sea lo que fuere* "be that as it may".

but there is no imperfect-perfective contrast in the past tense as there is in the indicative. Traditionally, tenses in Spanish conflate true tenses (e.g., present, future) with aspect, so for example in the past indicative there is an aspectual distinction between perfective and imperfective but these two forms are considered different tenses in traditional grammars of Spanish, though technically speaking they are both past tenses.

The imperative is only distinct from the subjunctive in the second persons singular and plural of the affirmative paradigm (cf. *pon* *"put!"* vs *que pongas* "that you should put"; *come* "eat!" vs. *que comas* "that you should eat"). The rest of the forms, including the negative paradigm are morphologically identical to the present subjunctive (cf. *no comas* "Don't eat" vs. *que comas* "that you should eat"). Tables 2.2 and 2.3 show the verb *hablar* in the indicative and subjunctive moods[5].

Table 2.2. Indicative paradigm for the verb *hablar* "to talk/ speak"

	Indicative				
	Present	**Perfective**	**Imperfect**	**Future**	**Conditional**
	hablo	hablé	hablaba	hablaré	hablaría
	hablas/ hablás	hablaste	hablabas	hablarás	hablarías
	habla	habló	hablaba	hablará	hablaría
	hablamos	hablamos	hablabamos	hablaremos	hablaríamos
	hablan/ habláis	hablaron/ hablasteis	hablaban/ hablabais	hablarán/hablarais	hablarían/ hablaríais
	hablan	hablaron	hablaron	hablarán	hablarían
hablar					
	Pres. Perfect		**Past Perfect**	**Future Perfect**	**Perfect Conditional**
	he hablado		había hablado	habré hablado	habría hablado
	has hablado		habías hablado	habrás hablado	habrías hablado
	ha hablado		había hablado	habrá hablado	habría hablado
	hemos hablado		habíamos hablado	habremos hablado	habríamos hablado
	han/ habeis hablado		habían/ habías hablado	habrán/ habrais hablado	habrían/ habríais hablado
	han hablado		habían hablado	habrán hablado	habrían hablado

---

[5] Spanish has three verb classes as seen on the infinitive ending: -ar (*hablar* "to talk"), -er (*comer* "to eat") and –ir (*escribir* "to write"). Each class has slightly different endings for each tense (but there is a lot of syncretism between –er and –ir verbs) but the number of tenses remains the same. Since the focus of this section is to contrast the number of oppositions between the indicative and the subjunctive, I will only use one verb as an example.

Table 2.3. Subjunctive tenses of the verb *hablar* "to talk".

	Subjunctive			
	Present	**Past**	**Pres. Perfect**	**Past Perfect**
	hable	hablara	haya hablado	hubiera hablado
hablar	hables	hablaras	hayas hablado	hubieras hablado
	hable	hablara	haya hablado	hubiera hablado
	hablemos	habláramos	hayamos hablado	hubiéramos hablado
	hablen/ hableis	hablaran/ hablarais	hayan/ hayais hablado	hubieran/ hubierais hablado
	hablen	hablaran	hayan hablado	hubieran hablado

The fewer temporal contrasts in the subjunctive have been attributed to the fact that its appearance is mainly restricted to embedded clauses. In this context, the subjunctive tenses are often subject to sequence of tense restrictions referred to in the Spanish linguistics literature as *Concordantia Temporum* (CT), especially when embedded under volitional, directive and causative predicates (Quer 1998, Suñer and Padilla-Rivera 1987, Laca 2010b). In the following section I will discuss in detail the conditions under which CT operates and the possible interpretations that can be obtained when/if it is not applied.

2.1.   Tense in the Subjunctive

As mentioned in the previous section, the subjunctive is subject to restrictions on the possible tense combinations between the embedded and the matrix clause when it appears embedded in complement clauses to volitional, directive and causative predicates. The following data illustrate CT with the volitional predicate *querer* "to want" and lack of CT restrictions for the predicate *pensar* "to think", which does not require a subjunctive complement clause.

1. Quiero que Juan me llame/ *llamara.
    want.1S.Pres that Juan me call.3S.Pres.Subj call.3S.Past.Subj
    "I want Juan to call me".

2. Quería que Juan me *llame/ llamara.
    want.1S.Past that Juan me call.3S.Pres.Subj call.3S.Past.Subj
    "I wanted Juan to call me"

3. Pienso que Juan me llama/ llamó
    think.1S.Pres that Juan me call.3S.Pres.Ind call.3S.Past.Ind
    "I think Juan is calling me/ called me".

In (1) there is a main verb in the present tense and this rules out the past subjunctive in the embedded clause; only the present subjunctive is grammatical. I will refer to this pattern as [−PAST, −PAST]. Sentence (2) is the mirror image of (1), with the main verb in the past; the only possible form here is the past subjunctive. I refer to this configuration as [+PAST, +PAST]. Sentence (3) also has a main verb in the present tense, but *pensar* "to think" does not take a subjunctive complement clause (unless it is negative *no pensar* "not to think") and both present and past indicative are possible in the embedded clause. Building on this distinction, Picallo (1990) argues that the subjunctive is a defective tense. Under this hypothesis, the morphological distinction between past/ non-past does not correlate with a temporal distinction in the syntax, which means subjunctive forms do not have an independent temporal interpretation. In this context, they are argued to rely on the tense specification of the matrix clause (Quer 2006). In contrast to the indicative, whose feature specification is [+Tense, +Agr], the subjunctive is [−Tense, +Agr]. Because of the lack of an independent interpretation of the feature [TENSE], the subjunctive relies on the tense values of the matrix T, creating an anaphoric link between the embedded and the matrix T heads.

The defective nature of subjunctive tense would also explain why it could not appear in root contexts; in the absence of an anchoring matrix tense the subjunctive is unbound and its temporal interpretation is left unspecified.

3.   *María   termine   la   cena.
         María   finish.3S.Pres.Subj the.fem.sg   dinner
         "Maria f   inish(SUBJ) dinner"

The Defective-Tense hypothesis has been challenged by many authors. Quer (1998) argues that SOT restrictions only apply to a subset of subjunctive contexts, namely those with *intentional* subjunctives. These are subjunctives that are selected by volitional, directive and causative predicates. These predicates categorically exclude the indicative and give rise to subject obviation effects. In addition, he proposes that the only tense restriction is [−PAST, +PAST], arguing that volitionals, directives and causatives need to operate on a set of future alternatives and the [-PAST, +PAST] configuration violates this requirement. Similarly, another analysis claims that strict sequence of tense arises from a lexical specified feature [+SUBSEQUENT], which bars non-agreeing sequences such as [−PAST, +PAST] and [+PAST, −PAST] (Suñer and Padilla-Rivera 1987, 1990). The [+SUBSEQUENT] feature requires that the embedded event be interpreted after the event time of the matrix clause. Directives, volitionals and causatives are all said to carry this feature as part of their lexical meaning and as a result the only non-agreeing feature combination that is banned is [−PAST, +PAST]. Having said that, Suñer and Padilla-Rivera acknowledge that native speakers feel very strongly against the temporal feature mismatch [+PAST, −PAST] with volitional

predicates (*desear* "to desire/wish", *querer* "to want", *preferir* "to prefer", *esperar* "to hope", etc). So volitionals are an exception in their analysis but they do give an explanation of what is causing speakers to disregard the [+SUBSEQUENT] feature that is proposed.

In an attempt to argue that subjunctive tense is not defective but contributes its own temporal interpretation to the embedded clause, Laca (2010a, 2010b) argues convincingly that the sequence [+PAST, −PAST] is possible when it can give rise to a Double Access Reading (DAR). Only if a DAR interpretation is not available from the context of the sentence (for example with an overt past adverbial) will the feature mismatch result in ungrammaticality.

A Double Access Reading (Enç 1987, Girogi and Pianesi 1987, Suñer 1990) refers to the temporal interpretation where the embedded event can be anchored to the matrix event time (ET) and Utterance time (UT). The temporal relationship to both anchors can be simultaneity with present states (4) or posteriority with future states (5) and present eventive predicates (6).

4.   Diego dijo   que   está   cansado.
       Diego say.3S.Past   that   be.3S.Pres   tired
       "Diego said that he is tired"

5.   Diego dijo   que   estará   cansado.
       Diego say.3S.Past   that   be.3S.Fut   tired
       "Diego said that he will be tired"

6.   Diego dijo   que   te   llama.
       Diego say.3S.Past   that   you.Dat   call.3S.Pres
       "Diego said that he will call you"

Under this view, the possibility of DAR effects in subjunctive embedded clauses
stems from the temporal semantics of the present subjunctive. Laca (2010b) argues
that a clause with a stative predicate in present subjunctive yields a simultaneous
reading with UT (7), whereas eventive predicates follow UT (8). In other words, the
present subjunctive is a deictic tense because it situates the event in reference to UT.

7. Te   pido   que   seas   fuerte.
   you.Dat   ask.1S.Pres that   be.2S.Pres.Subj   strong
   "I'm asking you to be strong"

8. Te   pido   que   vuelvas   temprano
   you.Dat   ask.1S.Pres that   return.2S.Pres.Subj   early
   "I'm asking you to come back early"

These two possible configurations are exactly the type of configurations that can give
rise to DAR effects. A problem with this argument arises with telic predicates as the
following example illustrates.

9. España consiguió   que   en   la   cumbre   europea
   Spain manage.3S.Past that in   the.fem.sg   summit   European

   de   Turín los   países   miembros   de   la
    of   Torino the.masc.pl countries   members   of   the.fem.sg

   UE   **se**   **comprometan**   a   eliminar el
   EU   **reflex.3**   **commit.3.Pl.Pres.Subj**   to   eliminate the.sg.masc

   terrorismo   como delito politico
   terrorism   as   crime   poilitical
   "Spain obtained from EU member states at the Torino summit the commitment
   to eradicate terrorism as a political crime"   (Laca 2010b:25)

The sentence in (9) would seem to show evidence that [+PAST, −PAST] is still possible even without a DAR interpretation. Note that *se comprometan* "that they should commit" appears in the present subjunctive and the matrix verb *consiguió* "it obtained/ managed" is in the perfective past. The problem arises because clearly the EU member states reached a commitment before the sentence was uttered. However, a DAR reading becomes available if the result of the telic event, not the telic event proper, is considered (i.e., eradication of terrorism as a political crime) (Laca 2010b).

Likewise, the ill-formedness of the configuration [-PAST, +PAST] can be derived from the temporal semantics of the past subjunctive. The past subjunctive can be ambiguous between real past and fake past (Laca 2010b)[6]. A real past interpretation expresses anteriority to UT, whereas a fake-past can be irrealis or anaphoric, depending on the syntactic context. In counterfactual clauses, fake-past receives an irrealis interpretation, whereas in sequence of tense contexts fake-past is anaphoric on a higher past tense. In the configuration [−PAST, +PAST], the past subjunctive would be interpreted as irrealis or real past because there is no higher past tense that can be its proper antecedent. Therefore, the unacceptability of this sequence should follow from the incompatibility of the context in allowing for either of these readings.

2.2   Violations of SOT in absence of DAR effects

Although the observations and analyses of violations of SOT just discussed in the previous section hold for standard Spanish, there are some Spanish varieties where the

---

[6] The term *fake* past was first coined by Iatridou (2000) to refer to uses of past tense that do not receive a past temporal interpretation (e.g., counterfactuality).

configuration [+PAST, −PAST] is grammatical even in absence of a DAR interpretation. In this section I present the data and analysis of this phenomenon.

According to Laca's (2010b) analysis of CT, the configuration [+PAST, -PAST] should only be unacceptable when the context disallows a DAR interpretation as in (10).

10.   *Quería   que   vengas   ayer
      want.1S.Past   that   come.2S.Pres.Subj   yesterday
      "I wanted you to come(Pres.Subj) yesterday"

Under this analysis, the adverbial *ayer* "yesterday" would block the possibility of assigning a DAR interpretation to the embedded clause. In other words, *ayer* clearly locates the embedded event prior to UT and therefore a DAR configuration cannot arise. As she acknowledges, this type of sentences are indeed possible in some Spanish dialects including Peruvian, Bolivian, Paraguayan (Sessarego 2008, 2010; Del Rio 2014) and Argentinean Spanish (Guajardo 2010). In these dialects, DAR is not a requirement for the configuration [+PAST, −PAST] to be acceptable. The following data from Argentinean Spanish in Corpus del Español (Davies 2016) illustrate this observation.

11.   a.   Todos   queríamos   que   vuelva   Riquelme
            everyone   want.1PL.Past that   return.3S.Pres.Subj   Riquelme

            y   volvió
            and   return.3S.Past
            "We all wanted Riquelme to come back and he did".

b.　　Tocaron　　　lo　　　que　　　todos　　　　querían
　　　play.3PL.Past the　　　that　　everyone　　　want.3PL.Past

que　　toquen
that　　play.3PL.Pres.Subj
"They played what everyone wanted them to play"

In (11a-b) the present subjunctive occurs in a complement clause where the matrix clause has a verb in the past tense. None of these sentences could give rise to DAR effects. (11a) is saying that they wanted Riquelme to come back and *he did*. If he did come back, then there is no room for a DAR interpretation as DAR requires either simultaneity with, or posteriority to, the matrix event time *and* UT; in (11a) the embedded event has already taken place so it cannot be interpreted as either simultaneous with, or posterior to, UT. (11b) depicts a similar scenario. The sentence is about a concert and it says that the band played everything the fans wanted them to play. Clearly, this sentence was uttered *after* the concert so again, a DAR interpretation is not possible. The question is whether we can explain away these data in a similar fashion as in (9), namely that the result of the (embedded) telic event, not the telic event proper, might allow a DAR interpretation. There are two problems with this type of analysis. One is that (11b) does not contain a telic event, the embedded event in (11b) is an activity and the explanation for (9) was meant to apply only to telic events. The most important difference between (9) and (11a-b), however, is that there is no result to be evaluated after the matrix event time in (11a-b). (11a) describes a *returning* event that has already happened. There is no other pending result from it. The same explanation applies to (11b); this is a playing event that has already happened and no other result out of it is expected. Based on these data, we can safely

conclude that these are both instances of the sequence [+PAST, −PAST] in a subjunctive clause in absence of DAR.

These data raise the question of what is different in these dialects that do not require DAR to license the present subjunctive under a past matrix tense. One possibility is to say that in these dialects any tense configuration is possible. In this case, the subjunctive would behave more like the indicative where any temporal configuration is possible as long as it does not violate the lexical semantics of the predicate (Quer 2006). In this context, the subjunctive would be a fully contentful tense as the indicative, with its own independent temporal contribution. However, this position cannot be maintained in light of the unacceptability of the configuration [−PAST, +PAST] shown in (12a-b).

12.   a.   *Quiero   que   vinieras
           want.1S.Pres. that   come.2S.Past.Subj

      b.   *Hace   que   comieran
           make.3S.Pres   that   eat.3Pl.Past.Subj

The data in (12) show two important aspects with respect to CT. The most obvious is that CT must apply when the matrix verb is in present tense. The past subjunctive being an anaphoric tense in CT contexts, it needs an antecedent of the appropriate type, a past tense, and the present tense does not fulfill the temporal requirements. This suggests that the past subjunctive is not [-Tense] as the Defective Tense Hypothesis claims. The tense on the subjunctive is defective as far as the contribution to the temporal interpretation of the embedded clause in sequence of tense contexts is

concerned but it is specified as requiring a past tense antecedent. Based on (12), we can see that the difference between the dialects that allow [+PAST, −PAST] without DAR (No-DAR dialects) and those that require DAR (DAR dialects) must lie in the behavior of the present subjunctive. The past subjunctive behaves in the same way across the two groups (i.e., we do not find dialects where [−PAST, +PAST] is a licit configuration). Therefore, the question that I started this section with becomes more specific: what is different *about the present subjunctive* in the dialects that do not require DAR that allows it to appear under past matrix clauses?

In Guajardo (2010) I proposed that in Argentina the present subjunctive must be tenseless. I will discuss this analysis in detail in the next section.

2.3. A Tenseless Subjunctive

As I pointed out in the previous section, the difference between the standard dialects and the Andean and Argentinean varieties lies exclusively in the behavior of the present subjunctive. So let us first review the type of data that needs accounting for.

13.   Me   dijo   que   llegue   temprano
        me   say.3S.Past   that   arrive.1S.Pres.Subj   early

        y   me   olvidé
        and   me   forget.1S.Past
        "S/he told me to be on time but I forgot".

14. Nos pidió   que seamos   amables   cuando
   us   ask.3S.Past that be.1PL.Pres.Subj kind   when

   fuimos   a su casa
   go.1PL.Past to his house
   "He asked us to be kind when we visited his home"

15. Siempre me decía   que tenga   fe
   always   me say.3S.Imp that have.1S.Pres.Subj faith

   cuando   era   chico
   when   be.1S.Past kid
   "He would always tell me to have faith when I was a kid"

The data in (13-15) all contain a past matrix clause and a present subjunctive in the embedded clause. Note that the type of past tense of the matrix clause (perfective in 13-14 and imperfect in 15) does not affect the possibility of having a present subjunctive in the embedded clause. This is interesting because the imperfect in the main clause yields a habitual reading of the entire sentence. In the case of (15) the embedded clause refers to a past state, but an eventive predicate (e.g., *llegar temprano* "arrive early") is also possible with a habitual interpretation.

Based on these observations, in Guajardo (2010) I argue that in the dialects where the configuration [+PAST, −PAST] is acceptable in absence of DAR the present subjunctive must be tenseless. Only in these dialects is the present subjunctive specified as [-Tense, +Agr]. Adopting a Neo-Reichenbachian approach to the syntax of tense, I developed an analysis of the temporal interpretation of the present subjunctive using Binding Theory. More specifically, I argued that the present subjunctive receives a temporal interpretation through binding of the embedded temporal argument Reference-Time (R-T) with E-T of the matrix clause. I will discuss

the main components of this analysis and show how it accounts not only for the unrestricted distribution of the present subjunctive as far as CT is concerned, but also for a variety of facts about subjunctive clauses more broadly.

In Reichenbach's theory of Tense (1947), tense is made up of three primitives: Event Time (E-T), Speech Time (S-T) and Reference Time (R-T). The linear ordering of these primitives accounts for the tenses in natural language, assuming the following conventions:

(i)   A point earlier than another point is located to the left separated by a line:

E ___ S

(ii)   If two points are contemporaneous they are placed adjacent to each other separated by a comma and they are said to be associated: E, S.

I will illustrate the system with examples from English, which are equivalent for Spanish.

16. a.   John kicked the ball   →   E,R ___ S

     b.   John is kicking the ball   →   E,R,S

     c.   John will kick the ball   →   S ___ E,R

The data in (16) illustrates the Reichenbachian primitives with simple tenses. In (16a), E-T is located prior to S-T, which yields a past interpretation. In (16b) E-T and S-T are contemporaneous so we get the interpretation that the kicking event is happening at the same time the sentence is being uttered. (16c) illustrates the future tense, where

E-T is interpreted after S-T. The reader must have noticed that I have omitted mentioning of R-T in this discussion. This is because in simple tenses the role of R is not clear because it is always contemporaneous with E-T as the linear ordering in (16) shows. To better illustrate the need to have the R-T primitive in this system, we need to look at the perfect forms.

17.   John will have left by 9pm.

In (17) we understand the event of John's leaving as taking place in the future but unlike (16c) above, we expect this event to be completed by a specific time in the future, namely 9pm in this example. So E-T is located relative to two points: E-T must be interpreted *after* S-T (because it's future) but *before* 9pm. The time frame denoted by 9pm is R-T. For this sentence to be true, E-T must not only take place after S-T but also prior to R-T. This is illustrated in (15).

18.   S ____ E ____ R

Once the relationship between each of these primitives is established in main clauses, the immediate question becomes how do they account for the temporal interpretation of embedded clauses in the absence of tense. Let us start by discussing infinitival clauses, which are the key component to the analysis of the present subjunctive as a tenseless form.

Infinitival clauses have two distinct properties: (i) they only appear in embedded clauses and (ii) they depend on the tense of the main clause to be temporally interpreted. These two generalizations can be derived by assuming that infinitival clauses lack an S point and therefore must always undergo SOT (i.e., the infinitival is evaluated relative to the event time of the matrix clause). This means that the tense structure of infinitival only establishes the relationship between E and R (Hornstein 1993).

In embedded clauses, the interpretation of S, R and E can be achieved in two ways. With tensed embedded clauses, SOT can apply by associating S and the R, E points of the embedded clause with the matrix E point. Alternatively, S can be assigned the default interpretation (i.e., utterance time) and be mapped onto the moment of speech. With S being utterance time, then R and E can receive an interpretation. If there is no S, as assumed for infinitivals, then S cannot receive the default interpretation and SOT must always apply. This accounts for the fact that there are no matrix infinitives as R and E do not have a default interpretation and therefore cannot be interpreted. Recall that R is an arbitrary reference point and E is always interpreted through R. In absence of S, R cannot get a temporal value and in turn neither can E. Per the Principle of Full Interpretation (PFI) (Chomsky 1986), requiring that no linguistic element be vacuous, leaving R and E uninterpreted leads to ungrammaticality.

Hornstein (1993) argues that in embedded clauses, infinitivals can avoid violation of the PFI by association of a point R_{n+1} with a point E_n in the main clause. Consider the data in (19) to illustrate this.

19. a. John wants to leave. S_1, R_1, E_1
     $|$
     R_2, E_2

   b. John wanted to leave $E_1, R_1 \underline{\quad} S_1$
     $|$
     R_2, E_2

In (19a-b) R_2 is associated with E_1 so it inherits whatever temporal interpretation E_1 receives. In (19a) John's leaving is located at speech time by association of R_2 with E_1. With E_2 and R_2 being contemporaneous, we derive the interpretation that John wants to leave now. There is another interpretation where John's leaving may take place in the future. In this case, E_2 would have to appear to the right of R_2 (i.e., $R_2 \underline{\quad} E_2$). The same procedure holds of (19b), except in this case the embedded clause is interpreted in the past, as E_1 is located prior to S.

Having shown how infinitival clauses get temporally interpreted despite lack of an S point, we are now in a position to address the interpretation of the tenseless subjunctive. In Guajardo (2010) I propose that Hornstein's neo-Reichenbach associative relationship can be incorporated in the syntax in terms of binding theory. Moreover, I assume that an embedded clause with a tenseless subjunctive, like a clause with an infinitive, lack an S point. This assumption is supported by the fact that neither infinitivals (20a) nor subjunctives (20b) can appear in independent clauses.

18. a. *Nadar   todos los   días.
         swim.Inf   every the   days

b.   *Nades   todos   los   días.
      swim.2S.Pres.Subj   every   the   days

c.   Nada   todos   los   días.
      swim.3S.Pres every   the   days
      "S/he swims every day"

Following previous work (Partee 1973, Enç 1987, Kratzer 1998, Roberts and Roussou 2002) I take tense to have semantic properties similar to pronominals. The denotation of a pronoun is not intrinsically fixed by properties of the pronoun, but must be established in relation to an NP higher in the clause or previously mentioned in the discourse. Relatedly, the denotation of a time interval must somehow be established, as it is not intrinsically fixed. Roberts and Roussou (2002) propose that a time interval can be established through syntactic binding and propose the T-criterion.

20.   T-criterion:
        T must be bound

For them, binding is a co-membership in a chain or dependency. A dependency is formally defined in (21). Note that (21a.ii) states that α attracts β' (21a.iii) incorporates the Minimal Link Condition (MLC). [7]

---

[7] Minimal Link Condition (Chomsky 1995): K attracts α only if there is no β, β closer to K than α, such that K attracts β.

21. a.   (α, β) is a well-formed dependency iff
           i. α assymetrically c-commands β.
           ii. There is some feature F such that α and β share F.
           iii. There is no ɣ such that ɣ asymmetrically c-commands β but not α.

     b.   If (α₁ … αₙ) is a well-formed dependency and (β₁ … βₘ) is a well-formed dependency and (αₙ, β₁) satisfies (32a), then (α₁ … βₘ) is a dependency.

My proposal departs from Roberts and Roussou's in that I claim that like pronominals Tense sometimes must be bound (anaphors) and sometimes must be free (pronouns). More specifically, I propose that temporal binding is sensitive to the syntactic environment where T appears: T must be free in main clauses and bound in embedded clauses. This explains the anaphoric behavior of embedded tenses as they cannot be interpreted on their own, but are always evaluated in terms of a higher, c-commanding tense. This parallels the behavior of pronominal anaphors, which cannot appear without a proper antecedent and are therefore excluded from matrix subject position, much like infinitivals are barred from main clauses.[8]

In main clauses we find dependencies between (C … T), (T … Asp) and (Asp … V). For example, the (C … T) dependency in English is well known to be grammaticalized in terms of the type of complementizer and finiteness of the embedded clause: *that* with finite clauses and *for* with non-finite. Similarly, we find a morphological realization of the (C … T) dependency in Irish where different complementizers appear based on the tense of the main clause (Cottell 1995).

---

[8] Russian allows matrix infinitivals but they receive a modal interpretation. The interpretation is that what the clause describes is beyond the subject‟s control. The subject in these clauses is always in the dative case (see Perlmutter & Moore 2002 and references therein)

With these observations in place, we can show how a tenseless subjunctive embedded clause gets temporally interpreted. Consider (22) and its schematic syntactic derivation in (23).

22. Juan   dijo   que   vaya
     Juan   say.3S.Past   that   go.1S.Pres.Subj
     "Juan told me to go"
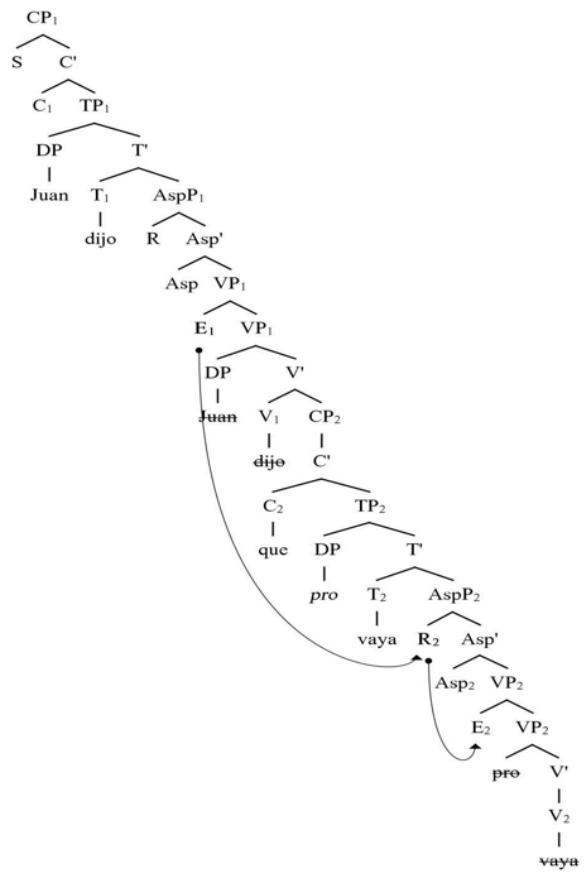
**Fig 2.1 Phrase Structure Tree for a tenseless
subjunctive embedded clause.**

The syntactic structure in (23) shows that the matrix E_1 binds the embedded R_2, which in turn binds E_2. Binding takes place in the form of dependencies as discussed above. The dependencies formed in (23) are $(VP_1...AspP_2)$ and $(AspP_2...VP_2)$. The first dependency $(VP_1...AspP_2)$ binds the temporal argument of VP_1 with the temporal argument of $AspP_2$. This dependency assigns a temporal interpretation to the reference time of the embedded clause and it is therefore temporally interpreted as simultaneous with E_1. The second dependency $(AspP_2...VP_2)$ binds the temporal argument of the embedded AspP (i.e., $AspP_2$) with the temporal argument of the embedded VP (i.e., VP_2). Because in simple tenses R and E are simultaneous, the event time of the embedded clause gets interpreted as simultaneous with the matrix event time through R_2 (which is bound by E_1). In this way, the present subjunctive derives its temporal interpretation in the same way as an infinitive, a welcome similarity since they appear in the same syntactic contexts. The difference between subjunctive and infinitival clauses is that subjunctive clauses impose a disjoint reference requirement between the embedded and the matrix clause. Under this analysis, it is the presence of agreement in subjunctive (Agr-S), and its absence in infinitives, that causes disjoint reference (Avrutin and Babyonyshev 1997).

An important prediction of this analysis is that we do not expect the present subjunctive to be a possible option in just any context where the past subjunctive appears. The present subjunctive in lieu of the past should only be available in SOT contexts, where the past subjunctive is anaphoric. In counterfactuals (i.e., irrealis) and real past readings, where the past subjunctive is not anaphoric, we should not find the

present subjunctive as a grammatical option. This prediction is borne out as the data in

(24) illustrate.

24.   a.   Si   ***pueda/ pudiera**   te   ayudaría
                if   be.able.to.1S.Pres.Subj/Past.Subj   you.Dat   help.1S.Cond
                "If I could, I would help you"

        b.   Ojalá ***sea/ fuera**   viernes hoy
                I.wish be.3S.Pres.Subj/ Past.Subj   Friday today
                "I wish it was Friday today"

        c.   Qué   lástima   que   no   ***vengas/ vinieras**   ayer
                what   pity   that   not   come.2S.Pres.Subj/ Past Subj yesterday
                "It was a pity that you didn't come yesterday"

(24a-b) are counterfactual contexts, where the past subjunctive receives an irrealis

interpretation[9]. (24c) is an example of an evaluative-factive context. This type of

context presupposes the truth of the evaluated proposition (i.e., you didn't come, and

that is a pity) so here the past subjunctive is a real past, expressing anteriority to UT.

As I show in (25), the present perfect subjunctive is also possible in (24c), anteriority

being the characteristic interpretation of perfect forms.

25.   Qué   lástima que   no   hayas   venido.
        what   pity   that   not   have.2S.Pres.Subj   come.Past-Part
        "It's a pity you didn't come"

---

[9] The present subjunctive is compatible with *ojalá* "I wish" but with a different interpretation. *Ojalá +
pres. subjunctive* conveys simultaneity to Utt-T with statives, and a forward-shifted interpretation
obtains with telic predicates. In English, for example, the difference between *ojalá* with a present or
past subjunctive is grammaticalized by using a different predicate: "I wish" for counterfactuals and "I
hope" for simultaneous or forward-shifted interpretations (cf. I wish I could pass vs. I hope I can pass).

As these sentences show, the present subjunctive is not a grammatical alternative form for the past subjunctive when the past subjunctive receives an irrealis or a real past interpretation.

Another relevant prediction of the proposal that in Argentinean Spanish the present subjunctive is tenseless is that it should not occur in embedded clauses that receive an independent temporal interpretation. Temporal clauses, for example, are argued to derive an independent temporal interpretation (Demirdache and Uribe-Etxebarria 2007). In Spanish, future-oriented temporal clauses traditionally require a subjunctive as in (26).

26. Cuando   venga   Juan   te
    llamo   when   come.1S.Pres.Subj   Juan
    you   call.1S.Pres
    "When Juan arrives, I'll call you"

If the proposal that temporal clauses are temporally independent is correct, then we predict that tenseless forms would be barred from such constructions. This prediction is borne out in Argentinean Spanish where we find the present indicative in future-oriented temporal clauses as illustrated in (27).

16. Cuando   salgo   te   aviso
    when   leave.1S.Pres.Ind   you   warn.1S.Pres.Ind
    "When I leave, I'll let you know"

Example (27) contains a present indicative *salgo* "I leave" where the standard variety would use the present subjunctive *salga* "that I may leave". The pragmatic and

semantic conditions of this new construction are not clear, and the present indicative is not always possible with a future-oriented reading (for example if the future event is too far ahead in time). However, if this construction is the result of the present subjunctive becoming tenseless, then we should also find it in the Andean dialects, where the present subjunctive appears in [+PAST, −PAST] configuration. An in-depth analysis of this construction is required before we can conclude its source and assess its predictions. I will leave this for further research.

3.   Conclusion

In this chapter I have discussed theoretical accounts of SOT both as a general mechanism in language and in Spanish in particular. I have also described my previous proposal and analysis of violations of CT found in Argentinean Spanish, where I propose that the present subjunctive is tenseless in Argentina. This proposal should also be valid for the Andean dialects where the present subjunctive is often found embedded under past in absence of DAR effects.

CHAPTER 3:

A CORPUS STUDY OF VIOLATIONS OF *CONCORDANTIA TEMPORUM*

1. Introduction

This chapter examines variation in the tense of the subjunctive in three Spanish dialects, namely Argentinean, Mexican and Peninsular Spanish. The context of variation under investigation is the alternation between present and past subjunctive in complement clauses with a past tense matrix verb. This context is referred to as *concordantia temporum* in the Spanish linguistics literature (e.g., Suñer and Padilla-Rivera 1987). *Concordantia temporum* (CT) is an agreement relationship between the tense of the matrix clause and that of the embedded clause. Outside the Spanish linguistics literature this phenomenon is referred to as Sequence of Tense (SOT). In English, for example, one can say *I think it will rain*, where the main verb *think* is a present tense and the embedded clause is also in present tense. If the tense of the main verb is changed to past, so must the tense of the embedded auxiliary yielding *I though it would rain*. Notice that leaving the embedded auxiliary unchanged results in ill-formedness **I thought it will rain.*

In Spanish, embedded clauses to predicates that take obligatory subjunctive as their complement are subject to the same temporal agreement mechanism, such that a matrix clause with a present tense requires a present tense subjunctive in the embedded clause (1a). Likewise, a past tense matrix verb requires a past tense subjunctive (1b).

1. a.   Espero   que   no   llueva/   *lloviera.
          hope.1S.Pres   that   not   rain.3S.Pres.Subj   rain.3S.Past.Subj
          "I hope it will rain/ *would rain"

   b.   Esperaba   que   no   *llueva/   lloviera.
          hope.1S.Pres   that   not   rain.3S.Pres.Subj   rain.3S.Past.Subj
          "I was hoping it *will rain/ would rain"

The pattern in (1) is not without exceptions. There has been a lot of ink devoted to the study of when CT might be violated in Spanish. The consensus is that the violation that is never possible is the one illustrated in (1a), where the past subjunctive is embedded under a present tense (Suñer and Padilla-Rivero 1987, Laca 2010b, Quer 1998). The violation in (1b), in which the present subjunctive appears embedded under a past tense, has proven to be more problematic to account for. The acceptability of this type of violation has been argued to depend on two main factors, namely the semantic class of the main predicate (Suñer and Padilla-Rivero 1987, Quer 1998) and the temporal interpretation of the embedded clause (Laca 2010b). A factor that has been less discussed in the literature, which contributes to the acceptability of the present tense under past, is cross-dialectal variation; in some dialects CT seems to be enforced more strongly whereas in other dialects violations of CT of the type shown in (1b) are considered grammatical (Sessarego 2008, 2010; Del Río 2014; Guajardo 2010).

In this chapter I explore whether violations of CT in Argentinean Spanish (i.e., a present subjunctive embedded under a past matrix clause) might be the result of language change. This will be done by examining corpus data exhibiting violations of CT with four main predicates belonging to two semantic classes: volitionals (*querer*

"to want" and *esperar* "to wait/hope) and causatives (*lograr* "to manage" and *hacer* "to make").

The data is analyzed in several ways to provide a thorough description and analysis of the phenomenon. First, I look at token and type frequency of the embedded verb in present and past subjunctive to determine the amount of variation in subjunctive tense with each main predicate across the three countries. Then I examine the amount of present subjunctive and past subjunctive in the top 100 embedded verbs in the data for each main predicate and country. This will provide us with an overview of the distribution of the variation in the lexicon. Finally, I look at the top ten most frequent verbs in the corpus and analyze how often they appear with each of the two subjunctive tenses with each main predicate. Since high frequency verbs are resistant to engage in language change (Bybee 2003), their appearing in the present subjunctive would be indicative of a more advanced language change process than if they did not. These three ways of analyzing the data point to the conclusion that Argentina exhibits a much higher rate of violations of CT than Mexico and Spain, but there does not appear to be any interaction between the type of the embedded verb and the rate of present subjunctive use. Whatever is responsible for present subjunctive use seems to be blind to the particular embedded verb; it seems to happen with any and all verbs. This property seems to be consistent across all matrix predicates and in all three countries. In addition, there appears to be no effect of lexical frequency.

The chapter is organized as follows: Section 2 discusses the previous research on the topic. Section 3 is a comparison of this study to previous similar studies. In section 4, I describe the methodology and the corpus. Section 5 contains the first

analysis of the results by token frequency and section 6 presents the results of type frequency. In section 7, I discuss the major findings and the implications of the results and present a summary and a conclusion in section 8.

2. Previous Research on Concordantia Temporum

Previous research on *concordantia temporum* (CT) has focused on two aspects: the contexts where CT is enforced and where the temporal harmony can be lifted (Suñer and Padilla-Rivero 1987, Quer 1998, Laca 2010) and the amount of violations in different Spanish varieties (Sessarego 2008, 2010).

Concordantia Temporum only applies in obligatory subjunctive clauses (Quer 1998). These are clauses in which subjunctive is the only allowable finite form. The predicates in this category belong to three semantic classes: volitional, directive and causative (Laca 2010b).

One of the most prominent theories that attempted to account for CT maintained that subjunctive tense is defective so it is always anaphoric on the tense of the matrix clause (Picallo 1990). Under this approach, no tense mismatches between matrix and embedded clauses are possible: (i) a past subjunctive embedded under a present matrix clause, i.e., [-past, +past] and (ii) a present subjunctive embedded under a past matrix clause [+past, -past]. However, this theory proved to be too strong and it has been challenged by several researchers (e.g., Suñer and Padilla-Rivero 1987, Suñer 1990, Quer 1998). Of the two logical CT violations, only (i) never appears to be a possible grammatical combination in any Spanish dialect. The acceptability of the sequence in (ii) depends on the temporal interpretation of the embedded clause. In

standard Spanish [+past –past] is a possible sequence when the embedded event is interpreted either as simultaneous to the matrix and speech time or prospective to both. This type of interpretation is known as the Double Access Reading (DAR) (Enç 1987, Giorgi and Pianesi 1987, Laca 2010b) and it is illustrated in (3) below.

3.   Me   pidió   que   cocine   mañana.
      me   ask.3S.Past that   cook.1S.Pres.Subj tomorrow
      "He asked me to cook tomorrow"

In (3) the embedded clause contains the adverbial *mañana* "tomorrow", which locates the embedded clause in the future with respect to both the matrix event time and the speech time. Needless to say, there does not need to be an overt adverbial for the DAR interpretation to be available; the right context in the discourse can make this interpretation possible.

The availability of DAR has been challenged by some authors in that not all predicate types seem to allow for the possibility of DAR effects. On the one hand, Laca (2010b) argues convincingly that the three semantic types (i.e., volitional, directive and causative) allow for DAR interpretations because they are semantically future oriented predicates. On the other hand, Suñer and Padilla-Rivero (1987) argue that directive predicates do allow for DAR effects but volitionals do not.[10] Suñer and Padilla-Rivero do not provide a theoretical account of their claim but they rely on informal native speakers' intuitions and say that speakers categorically dislike a present subjunctive with a volitional predicate in the past tense.

---

[10] Suñer and Padilla-Rivera (1987) do not discuss causatives.

On the quantitative side of research, we find two studies that measure the amount of violations of CT using corpus data. Sessarego (2008) examines subjunctive complement clauses in Peruvian and Bolivian Spanish using CREA (Corpus de Referencia del Español Actual). CREA is one of the Spanish Royal Academy's corpora containing 160 million words. For his study, Sessarego looked at written sources from books and newspaper articles. Only embedded clauses that clearly referred to a past event were analyzed, so clauses that could give rise to DAR effects were removed. He found that violations of CT were much more frequent in Bolivian Spanish (37%) than in Peruvian Spanish (9%). Moreover, verb class of the main clause is not a significant factor in Bolivian Spanish but it is in Peruvian Spanish. One of the problems with this study, however, is that the data contained both obligatory subjunctive and operator-triggered subjunctive clauses. The latter type is made up of clauses with matrix predicates that normally require the indicative except when some modal operator such as negation or interrogation is present. For example, *creer* "think/believe" does not take the subjunctive in affirmative clauses (4a), but if negation is present (4b) or if it appears in a question (4c) then the subjunctive becomes grammatical.

4. a.   Creo   que   Juan   miente.
         believe.1S.Pres   that   Juan   lie.3S.Pres.Ind
         "I think that Juan is lying"

   b.   No   creo   que   Juan   mienta.
         Not   believe.1S.Pres   that   Juan   lie.3S.Pres.Subj
         "I don't think Juan is lying"

c.   ¿Crees   que   Juan   mienta?
      believe.2S.Pres   that   Juan   lie.3S.Pres.Subj
      "Do you think Juan is lying?

As I mentioned above, CT is a property that only holds of obligatory subjunctive so it is hard to understand what the amount of variation really means in terms of the status of CT in these two dialects when both obligatory and operator-triggered subjunctives are collapsed together.

In Sessarego (2010) twenty Latin American dialects are included. Peninsular Spanish is not considered because it is said to exhibit very little variation of CT, meaning violations of CT are said to be quite rare. The data were extracted from CREA as in the previous study and were analyzed using a VARBRUL analysis where weights are assigned indicating how likely a dialect is to use the present subjunctive. Bolivian (0.89), Paraguayan (0.86) and Ecuadorian Spanish (0.72) were at the top favoring the present subjunctive the most whereas Cuban (0.30), Guatemalan (0.29) and Puerto Rican Spanish (.24) were at the bottom. Argentinean Spanish was somewhere in the middle with a weight of 0.53. For the countries at the top, verb class was not a factor for the presence or absence of past subjunctive, but it was significant for the rest of the countries.

Sessarego's explanation for both studies is that the countries with high amounts of present subjunctive show a simplification pattern and since the sequence [+PAST +PAST] is redundant, then the present subjunctive is used. This type of explanation still leaves a lot of unanswered questions. First, Sessarego does not explain why using the present subjunctive is simpler than using the past subjunctive,

and redundancy itself cannot be the only explanation. There is redundancy at all levels of grammar in language, so the existence of redundancy per se cannot be a sufficient reason to trigger change. Second, the question remains why Spanish dialects exhibit the high degree of variation described in the use of the present subjunctive with past matrix clauses. For example, is a grammar that generates such high amounts of violations of CT such as Peruvian Spanish the same type of grammar as a more conservative dialect like Mexican Spanish? And can we really talk about *violations* of CT in, say, Bolivian Spanish, when speakers produce present subjunctive at such high rates? In other words, a violation implies breaking a rule, but if the pattern [+past, -past] is the norm, can it be considered a *violation* anymore? Third, and most importantly, how can a *present* verb form appear in a clause that refers to a *past* event in a language where this is not at all possible anywhere else? These are the type of questions that I try to address in this study, namely: (i) is the difference in the amount of violations of CT between Argentinean Spanish and Mexican and Peninsular Spanish simply a matter of quantity, or can we find qualitative differences between these grammars with respect to CT? (ii) What makes the present subjunctive different in Argentinean Spanish that allows it to appear in complement clauses with a past matrix verb more often than in other varieties? and (iii) what kind of variation does this phenomenon illustrate: (a) stable variation or (b) ongoing language change?

With these questions in mind, a corpus study was conducted to compare violations of CT in Argentinean Spanish with two other groups that have been reported to present low variation, namely Mexico and Spain.

3. The Present Study vs. the Previous Corpus Studies

The present corpus study differs from what has been previously done in several ways. First, a much larger corpora was used: Corpus del Español: Web/dialects (CEWD). While CREA contains 160 million words, CEWB contains nearly 2 billion words. Second, the two studies I discussed above were done with an older version of CREA, which, unlike the current version, was not tagged for parts of speech so the search power was much more limited. Sessarego had to look for specific inflected forms such as "me dijo que", "me ordenó que", etc (Sessarego p.c). CEWD is tagged for parts of speech so very general searches can be done with verbs in all persons and numbers at the same time, both in the main and the embedded clause. An additional aspect is the type of language each corpus contains. CREA contains texts from newspapers and books (there is an oral version also but this was not used in the studies and it is very small) raging from 1975 to 2004. So the register of texts in CREA is quite formal. On the other hand, the Spanish in CEWD is much more modern; the texts were collected during 2013-2014. On top of that, the texts come from websites and blogs so the register is more informal than in CREA. The reason register is an important aspect in this case is because we are looking at a non-standard construction in the language so it is expected that the more formal the register, the fewer data points one might find, which may mask the actual rate of violations of CT in everyday language. An important advantage of CEWD in general is that the tagging is very accurate; the top 40,000 lemmas were manually reviewed to check for accuracy between lemma and part of speech. Finally, the crucial difference between my study and Sessarego's is that only matrix predicates that take obligatory subjunctive were

used in my study. As I mentioned earlier, this is a problematic factor in both of Sessarego's studies because CT only applies to obligatory subjunctive. So the results of my study will be more reflective of true violations of CT and will provide us with a more accurate description of the facts regarding this phenomenon.

4. Methodology

4.1. Corpus

The data comes from the Web/Dialect version of Corpus del español (Davies 2016). The corpus contains nearly 2 billion words from 21 Spanish-speaking countries, including the U.S. The data is tagged for morphosyntactic, lexical and semantic information and comes from websites including blogs and forums.

4.2. Data Collection

We extracted data from Argentina and two other Spanish-speaking countries: Mexico and Spain. We chose Mexico and Spain to compare to Argentina for the following reasons. First, both Spain and Mexico have been found in the literature to have very low variation in sequence of tense so they can be used as a baseline for how much variation can be found under "normal" circumstances. Second, Argentina is geographically very far away from Mexico and Spain and this helps avoid areal effects. The third reason is of practical concerns; Argentina is the third country with respect to the amount of data in the corpus (93,195,550 words), preceded by Spain (208,808,667 words) and Mexico (132,651,925 words). The equivalent data size

makes it likely that if we find any differences between the dialects it will not be due to a discrepancy in the size of the subcorpus for that country.

Regarding the type of data we looked at, we chose two types of predicates based on the strict temporal restriction they impose on the subjunctive complement clause: desideratives and causatives. For the first group, we used *querer* 'to want' and *esperar* 'to hope'. The second group comprises the causatives *hacer* 'to make' and *lograr* 'to get (somebody to do something)'. Given the lexical semantics of each predicate type, the desideratives are much more frequent in the imperfect past so we chose this form of the verb in this group. The causatives are much more frequent in the preterite so this is the form we used.

There are two past subjunctive forms in Spanish, usually referred to as the *-ra* and the *–se* forms because these are the characteristic endings (cf. *caminara/ caminase* "that he should have walked"). The frequency of the *-se* form is very low, and most of the forms in *–se* are high frequency verbs, which already feature in the *-ra* form. Thus, we collected two subjunctive verb forms: the present tense and the past form in *-ra*.

The data were processed in two different ways. Following Poplack's (1991) seminal work on the loss of the subjunctive in Canadian French, we analyzed type and token frequency of the embedded verbs. One way to understand why token and type frequency of the embedded verb are relevant factors to consider is the fact that we are interested in establishing how extended loss of the past subjunctive might be in the lexicon (or conversely, how extended the tenseless subjunctive is); determining token and type frequency of the embedded verb will allow us to quantify just this. The four

predicates we chose require obligatory subjunctive and we will see in the results section that they behave very similarly in how much variation we find with each.

First, we counted token frequency of the embedded verbs in present and past subjunctive to determine the overall amount of variation in each dialect. Second, we analyzed type frequency of the embedded verb in present and past subjunctive for each of the four main predicates. Type frequency provides a more fine-grained analysis of variation and it allows us to gauge the productivity of the present subjunctive in this environment.

To arrive at type frequency, we simply counted each type in each tense per main predicate. For example if *ser* "to be" appeared 85 times in the past and 47 times in the present, we counted *ser* as a type in present and a type in past.

5. Results I: Token Frequency

Argentina had the highest number of present subjunctive in both conditions and overall Spain had the lowest. We present the raw counts of token frequency for each predicate and each subjunctive tense and percentages of present subjunctive in table 3.1.

Table 3.1. Total token counts in present subjunctive and past subjunctive per main predicate in past tense and percentage of present tense subjunctive by predicate.

	Argentina			Mexico			Spain		
	Pres	**Past**	**% Pres**	**Pres**	**Past**	**% Pres**	**Pres**	**Past**	**% Pres**
querer	185	361	33.88	45	688	6.14	37	1021	3.49
esperar	58	154	27.36	23	326	6.59	10	550	1.79
lograr	23	44	34.33	6	67	8.22	8	62	11.43
hacer	113	328	25.62	29	445	6.12	30	712	4.04
Total	379	887	30.00	103	1526	6.32	85	2345	3.50

When we calculate the means of the total number of present subjunctives per predicate a clear picture emerges. As figure 3.1 shows, in Argentinean Spanish the present subjunctive appears 30% of the time, whereas the present subjunctive only appears at 3.50% in Peninsular Spanish with Mexico in between at 6.32%.
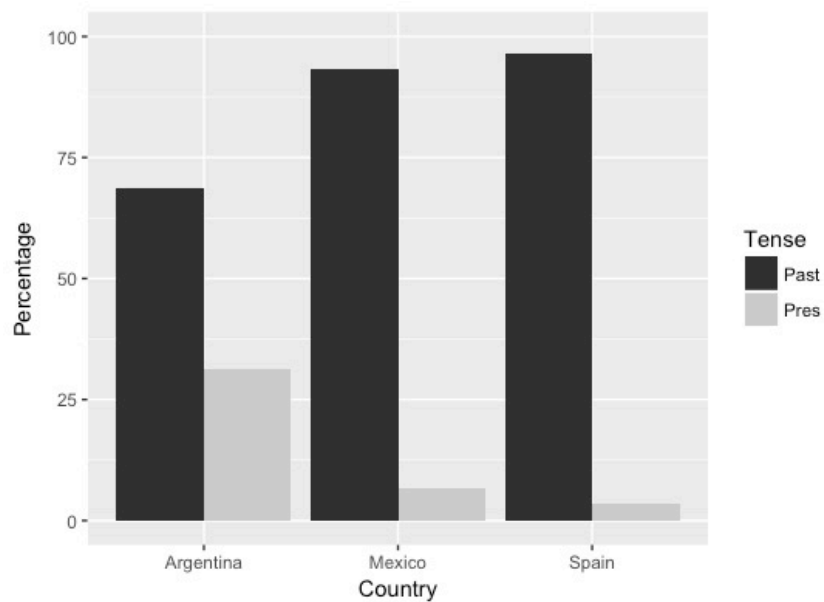
Figure 3.1. Total Percentage of Token Frequency for Present and Past Subjunctive

5.1 Analysis

Pairwise chi-squared tests were conducted in order to establish whether the differences between each country were statistically significant. We found that the amount of variation in each country was significantly different from one another, except with the causative predicates in Mexico and Spain. The biggest difference was between Argentina and the other two countries across the four predicates. The difference between Mexico and Spain was significantly different with the volitional predicates, but still much less so when compared to Argentina as both the $\chi 2$ value and the p-value show. These results are reported in table 3.2 below; shaded areas show significant differences.

Table 3.2. Pairwise Chi-Squared Test Results of Token Frequency per Main Predicate and Country.

	Arg-Mex		Arg-Sp		Mex-Sp	
	χ^2	*p* value	χ^2	*p* value	χ^2	*p* value
querer	161.43	< 0.001	276.3	< 0.001	6.3267	0.01
esperar	44.381	< 0.001	44.381	< 0.001	12.846	0.0003
lograr	12.955	< 0.001	12.955	< 0.001	0.13258	0.7158
hacer	64.816	< 0.001	64.816	< 0.001	2.2668	0.1322

In corpus studies, an important distinction is made between token and type frequency. Type frequency is argued to underlie productivity in language (p, so it is a very informative measure in studies of language variation and change. In the next

section, we look at type frequency to examine the productivity of the present subjunctive (or conversely of the past subjunctive) in CT contexts.

6. Results II: Type Frequency

In this section I provide a more detailed description and analysis of the variation between present and past subjunctive. We will first examine the most frequent 100 verbs in the data per main predicate by country to have a bird's view of the distribution of the variation with each main predicate[11]. Then, we will look at the results of type frequency and conclude that there appear to be no lexical effects in any of the countries; variation in the embedded verb between present/past subjunctive is not lexically conditioned.

Before we present the results and analysis of type frequency, it is worth bearing in mind what the possible relationship between type and token frequency may turn out to be. Berg (2014) discusses four possible outcomes of the comparison between token and type frequency. I will discuss the three most relevant to our discussion.

The first case is where there is no distinction between type and token frequency, in which case the distinction seems unwarranted. The second possibility is that type frequency shows more extreme values than token frequency. This means that whatever trend is seen in token frequency, it is strengthened in type frequency. The third possibility is the opposite of this; token frequency may show more extreme

---

[11] With some main predicates there were fewer than 100 data points so in those cases we simply used the entire data set.

results than type frequency. As will become clear when we present our results, the data fall into the first type: there is no distinction between type and token frequency.

6.1   Distribution of Present and Past Subjunctive Across the Main Predicates

Language change proceeds gradually with frequency playing a major role in the development and progress of new forms and constructions (e.g., Krug 2000, Kroch 1989b, Bybee and Thompson 1997, Yang 2002). Since we know that main predicates behave differently with respect to CT, we might expect that these differences will also play a role in the process of language change. For example, a predicate that enforces CT strongly like *querer* is likely to exhibit a lower rate of change than a causative predicate. In addition, frequency and markedness have been shown to play a role in language processing, variation and acquisition (Erker and Guy 2012). In the past subjunctive, for example, the most frequent verbs are mostly irregular verbs exhibiting stem allomorphy with the infinitive form (e.g., est $\rightarrow$ fuer (BE); ten $\rightarrow$ tuv (HAVE); ven $\rightarrow$ vin (COME)). High frequency coupled with their marked status may increase the likelihood of these forms to appear in the past subjunctive. In order to explore this possibility, type frequency of the embedded verb per main predicate was calculated.

This section contains a lot of data and information, so I will present each main predicate across the three countries and discuss the observations from the data one main predicate at a time for ease of comprehension. Tables 3.3, 3.4, 3.5 report the tense distribution per embedded verb for *querer*. Shaded areas represent cases where

the present subjunctive appears as many times as, or more than, the past subjunctive with a particular predicate.

The main predicate *querer* shows a lot of variation in Argentina, with 41% of the verbs appearing in the present subjunctive as many times as or more than in the past subjunctive. Mexico and Spain show much less variation with 5% and 3%, respectively. In Argentina, three verbs that are very high in frequency appear more times with the present than with the past subjunctive, namely *volver* "to return", *seguir* "to continue/ to follow" and *ir* "to go".

Table 3.3. Distribution of subjunctive tense with *querer* in Argentina for the most frequent 100 verbs in the data.

QUERER															
Embedded V	Past	Pres	%	Embedded V	Past	Pres	%	Embedded V	Past	Pres	%	Embedded V	Past	Pres	%
SER "be"	54	27	33.33	ESTUDIAR "study"	3	1	25.00	ESCUCHAR "listen"		2	100.00	BOXEAR "box"		1	100.00
HACER "make"	32	12	27.27	PERDER "lose"	3	1	25.00	FORMAR "form"	2		0.00	CAER "fall"		1	100.00
ESTAR "be"	22	7	24.14	SOBREVIVIR "survive"	4		0.00	MOJAR "wet"		2	100.00	CAMBIAR "change"	1		0.00
PASAR "spend"	17	3	15.00	BAJAR "go down"	2	1	33.33	NACER "to be born"	2		0.00	CANTAR "sing"		1	100.00
SABER "know"	14	6	30.00	CORRER "run"	2	1	33.33	OCURRIR	2		0.00	CENAR "have dinner"	1		0.00
GANAR "win"	13	5	27.78	DAR "give"	3		0.00	PAGAR "pay"		2	100.00	COLABORAR "collaborate	1		0.00
TENER "have"	10	5	33.33	ENTREGAR "submit"	2	1	33.33	PONER "put"		2	100.00	COMENZAR "begin"	1		0.00
VOLVER "return"	6	8	57.14	FIRMAR "sign"	1	2	66.67	REEMPLAZAR "replace"		2	100.00	COMPARTIR "share"	1		0.00
SALIR "leave:	7	6	46.15	HABLAR "talk"	2	1	33.33	REGRESAR "regresar"	1	1	50.00	CONFRONTAR "confront"		1	100.00
SEGUIR "continue"	5	8	61.54	LEER "read"	3		0.00	REPETIR "repeat"	2		0.00	CORTAR "cut"	1		0.00
IR "go"	3	9	75.00	PENSAR "think"	3		0.00	SUBIR "go up"	1	1	50.00	DECLARAR "declare"	1		0.00
LLEGAR "arrive"	9	1	10.00	ACTUAR "act"	1	1	50.00	SUCEDER "happen"	1	1	50.00	DISMINUIR "decrease"		1	100.00
VENIR "come"	7	3	30.00	AGARRAR "grab"		2	100.00	SUFRIR "suffer"	1	1	50.00	DISPONER "have"	1		0.00
VER "see"	6	4	40.00	APARECER "appear"	2		0.00	TOCAR "touch"		2	100.00	DONAR "donate"		1	100.00
HABER "be"	7	2	22.22	APRENDER "learn"	1	1	50.00	TRABAJAR	1	1	50.00	DURAR "last"		1	100.00
JUGAR "play"	4	5	55.56	ASCENDER "ascend"	1	1	50.00	VIVIR "live"	1	1	50.00	EMPEZAR "start"	1		0.00
QUEDAR "stay"	6	3	33.33	CERRAR "close"	2		0.00	ABORDAR "board"	1		0.00	ENTENDER "understand"	1		0.00
TERMINAR "finish"	4	4	50.00	CESAR "cease"	2		0.00	ACABAR "finish"	1		0.00	ESCOGER "choose"	1		0.00
DECIR "say"	5	1	16.67	CONFESAR "confess"	1	1	50.00	AGREGAR "add"	1		0.00	ESPERAR "hope"	1		0.00
PUBLICAR "publish"	5	1	16.67	CONOCER "know"	2		0.00	ARCHIVAR "file"	1		0.00	FALTAR "lack"		1	100.00
TOMAR "take"	3	3	50.00	CONTINUAR "continue"		2	100.00	ARMAR "prepare"	1		0.00	FINALIZAR "finalize"		1	100.00
DESAPARECER "disappear"	4	1	20.00	CUMPLIR "comply"		2	100.00	ARREGLAR "fix"	1		0.00	FLOTAR "float"	1		0.00
ENTRAR "come in"	5		0.00	DESCENDER "descend"	2		0.00	ASUMIR "assume"		1	100.00	OTOGRAFIAR "photograph"		1	100.00
SONAR "go off"	4	1	20.00	DESPERTAR "wake up"		2	100.00	ATAR "tie"		1	100.00	GRABAR "record"	1		0.00
DEJAR "quit"	2	2	50.00	ESCRIBIR "write"	2		0.00	AYUDAR "help"		1	100.00	IMPACTAR "impactar"	1		0.00

Table 3.4. Distribution of subjunctive tense with *querer* in Mexico for the most frequent 100 verbs in the data.

QUERER

Embedded V	Past	Pres	%	Embedded V	Past	Pres	%	Embedded V	Past	Pres	%	Embedded V	Past	Pres	%
SER (be)	154	6	3.75	ABORTAR (abort)	2	2	50	ENGAÑAR (deceive)	2		0	COBRAR (charge)		1	100
HACER (make)	52	3	5.45	ENTRAR (come in)	4		0	ESPERAR (wait)	2		0	COLGAR (hang)	1		0
SABER (know)	38	4	9.52	JUGAR (play)	4		0	EXISTIR (exist)	2		0	COMPETIR (compete)		1	100
ESTAR (be)	25	4	13.79	PARECER (seem)	3	1	25	FIRMAR (sign)	2		0	COMPRAR (buy)	1		0
CRECER (grow)	26		0	SUFRIR (suffer)	4		0	INGRESAR (enter)	2		0	CONFESAR (confess)	1		0
SALIR (leave)	21	2	8.70	VIVIR (live)	4		0	INTERPRETAR (interpret)	2		0	CONSERVAR (keep)	1		0
VENIR (come)	18	1	5.26	ABRIR (open)	3		0	LEER (read)	1	1	50	CONTAR (tell)	1		0
TERMINAR (finish)	18		0	AMANECER (dawn)	3		0	MORIR (die)	2		0	CONTEMPLAR (contemplate)	1		0
VER (see)	18		0	BAJAR (go down)	3		0	NACER (be born)	2		0	CONTESTAR (answer)	1		0
PASAR (spend)	17		0	CAMBIAR (change)	3		0	OPINAR (think)	2		0	CONTRATAR (hire)	1		0
TENER (have)	17		0	CONOCER (know)	2	1	33.33	PREDICAR (predicate)	2		0	CONVERSAR (chat)	1		0
HABER (be)	14		0	CONTINUAR (continue)	3		0	RESPONDER (reply)	2		0	CORTAR (cut)	1		0
SEGUIR (continue)	13	1	7.14	ESCRIBIR (write)	3		0	SACAR (take out)	2		0	CREAR (create)	1		0
IR (go)	12		0	ESCUCHAR (listen)	2	1	33.33	SENTIR (feel)	2		0	DAR (give)	1		0
LLEGAR (arrive)	11	1	8.33	FUNCIONAR (work)	3		0	TRABAJAR (work)	1	1	50	DECIDIR (decide)	1		0
HABLAR (talk)	10	1	9.09	OCURRIR (occur)	3		0	ABORDAR (board)	1		0	DECLARAR (declare)	1		0
DECIR (say)	8	1	11.11	PAGAR (pay)	3		0	ACABAR (finish)	1		0	DESARROLLAR (develop)	1		0
SUCEDER (happen)	9		0	PENSAR (think)	3		0	ACEPTAR (accept)	1		0	DIGERIR (lead)		1	100
ESTUDIAR (study)	7	1	12.5	PONER (put)	3		0	ACTUAR (act)	1		0	DISEÑAR (design)	1		0
VOLVER (return)	5	3	37.5	APRENDER (learn)	2		0	ANDAR (work)	1		0	DISMINUIR (diminish)	1		0
REGRESAR (return)	7		0	COMENZAR (begin)	2		0	APROBAR (approve)	1		0	DOLER (hurt)	1		0
GANAR (win)	6		0	CONFIAR (trust)	2		0	ASISTIR (attend)	1		0	ECHAR (lay off)	1		0
APARECER (appear)	5		0	CREER (believe)	2		0	CAMINAR (walk)	1		0	ELABORAR (elaborate)		1	100
DEJAR (quit)	4	1	20	DESAPARECER (disappear)	2		0	CANTAR (sing)	1		0	EMPRENDER (embark)	1		0
SONAR (go off)	5		0	EMPEZAR (start)	2		0	CLAUSURAR (shut down)	1		0	ENAMORAR (fall in love)	1		0

Table 3.5 Distribution of subjunctive tense with *querer* in Spain for the most frequent 100 verbs in the data.

QUERER

Embedded V	Past	Pres	%	Embedded V	Past	Pres	%	Embedded V	Past	Pres	%	Embedded V	Past	Pres	%
SER (be)	257	3	1.15	APRENDER (learn)	6	1	14.3	COMER (eat)	3		0	IDENTIFICAR (identify)	2		0
HACER (make)	66	2	2.94	CONOCER (know)	6	1	14.3	CONTINUAR (conitnue)	3		0	MOLESTAR (bother)	2		0
SABER (know)	56	3	5.08	EXTENDER (extend)	7		0	MATAR (kill)	1	2	66.67	OLER (smell)	2		0
ESTAR (be)	42	1	2.33	DAR (give)	6		0	NOTAR (note)	3		0	PARTICIPAR (participate)	2		0
TENER (have)	30	3	9.09	ESTUDIAR (study)	6		0	PAGAR (pay)	3		0	PERDER (lose)	2		0
VER (see)	31	1	3.13	LEER (read)	6		0	PARECER (seem)	3		0	ROMPER (break)	2		0
QUEDAR (stay)	20	3	13.04	PONER (put)	6		0	REGRESAR (return)	3		0	SEMBRAR (sow)	2		0
SEGUIR (continue)	23		0.00	TRABAJAR (work)	4	2	33.33	SUFRIR (suffer)	3		0	SERVIR (serve)	2		0
PASAR (spend)	21	1	4.55	FIRMAR (sign)	5		0	SURGIR (come up)	3		0	SOÑAR (dream)	2		0
HABER (be)	20		0.00	JUGAR (play)	5		0	ASISTIR (attend)		2	100	VENDER (sell)	2		0
LLEGAR (arrive)	16	2	11.11	OCURRIR (occur)	5		0	CALLAR (be quiet)	2		0	VOLAR (fly)	2		0
SALIR (leave)	16	1	5.88	SUCEDER (happen)	3	2	40	CENAR (have dinner)	2		0	VOTAR (vote)	2		0
IR (go)	16		0	VIVIR (live)	5		0	CONTENER (contain)	2		0	ABANDONAR (abandon)	1		0
PENSAR (think)	15		0	CAMBIAR (change)	4		0	CONTESTAR (answer)	2		0	ABORTAR (abort)	1		0
ACABAR (finish)	14		0	CONSTAR (comprise)	4		0	CONVIVIR (live with)	2		0	ACEPTAR (accept)	1		0
SONAR (go off)	14		0	DESAPARECER (disappear)	4		0	CORREGIR (correct)	2		0	ACTUAR (act)	1		0
VENIR (come)	14		0	EMPEZAR (begin)	4		0	CRECER (grow)	2		0	ALCANZAR (reach)	1		0
HABLAR (talk)	11		0	ENTENDER (understand)	4		0	DISCUTIR (discuss)	2		0	ALIVIAR (ease)	1		0
TERMINAR (finish)	9	2	18.18	ESCRIBIR (write)	4		0	DISPONER (possess)	2		0	ALMORZAR (have lunch)	1		0
GANAR (win)	10		0	FORMAR (form)	4		0	ESCUCHAR (listen)	2		0	ANDAR (work)	1		0
APARECER (appear)	8	1	11.11	NACER (be born)	4		0	ESPERAR (wait)	2		0	ARRANCAR (start up)	1		0
ENTRAR (come in)	9		0	PELEAR (argue)	4		0	EXISTIR (exist)	2		0	ARROJAR (throw)	1		0
MORIR (die)	9		0	BUSCAR (search)	3		0	EXPLICAR (explain)	2		0	ATENDER (assist)	1		0
DECIR (say)	8		0	CAER (fall)	3		0	GOBERNAR (govern)	1	1	50	AVANZAR (advance)	1		0
VOLVER (return)	8		0	COMENTAR (comment)	3		0	GRITAR (scream)	2		0	AYUDAR (help)	1		0

In tables 3.6, 3.7 and 3.8 we report the results for *esperar* "to wait/hope". This predicate shows less variation than *querer* in Argentina with 30% of the predicates appearing as many as or more times in the present subjunctive, in Mexico this only happens with 5% of the verbs and merely 1% in Spain. As with *querer* the verb *ir* "to go" appears to prefer the present subjunctive. Among the very high frequency verbs, *salir* "to leave" appears in the present subjunctive in 5 out of 8 occurrences (62.5%). Most of the other verbs only appear once so it is hard to derive any meaningful observations.

Table 3.6 Distribution of subjunctive tense with *esperar* in Argentina.

ESPERAR															
Embedded V	Past	Pres	%	Embedded V	Past	Pres	%	Embedded V	Past	Pres	%	Embedded V	Past	Pres	%
SER "be"	27	9	25	ENTENDER "understand"	2		0	EXPLICAR "explain"	1		0	SURGIR "come up"	1		0
LLEGAR "arrive"	13	3	18.75	RESPONDER "answer"	1	1	50	EXTRAER "remove"	1		0	TARDAR "last"	1		0
HABER "be"	6	3	33.33	RODAR "roll"	2		0	FALTAR "lack"	1		0	UTILIZAR "use"		1	100
PASAR "spend"	6	2	25	ROMPER "break"	2		0	HERVIR "boil"	1		0	VENDER "sell"	1		0
PODER "be able to"	6	2	25	SELLAR "stamp"	2		0	LEER "read"	1		0				
SALIR "leave"	3	5	62.5	TERMINAR "finish"	2		0	LEVANTAR "get up"		1	100				
SUCEDER "happen"	6		0	ABORDAR "board"	1		0	MOSTRAR "show"	1		0				
DECIR "say"	4	1	20	ABRIR "open"	1		0	NOMBRAR "name"	1		0				
HACER "make"	4	1	20	ACERTAR "accept"	1		0	PERDER "lose"		1	100				
EMPEZAR "start"	2	2	50	ALCANZAR "reach"		1	100	PIGMENTAR "pigment"		1	100				
ESTAR "be"	3	1	25	ANDAR "go"	1		0	PRODUCIR "produce"	1		0				
FUNCIONAR "work"	1	3	75	APUNTAR "write down"		1	100	PUBLICAR "publish"	1		0				
MORIR "die"	4		0	ARRANCAR "start up"	1		0	QUEDAR "stay"	1		0				
OCURRIR "happen"	4		0	ARRASAR "sweep"	1		0	RECUPERAR "recover"	1		0				
TENER "have"	4		0	ATERRIZAR "land"	1		0	REINCIDIR "relapse"		1	100				
VENIR "come"	3	1	25	AYUDAR "help"		1	100	REVISAR "revise"	1		0				
APARECER "appear"	1	2	66.67	CANTAR "sing"		1	100	SACAR "remove"		1	100				
BAJAR "go down"	3		0	CONFIRMAR "confirm"		1	100	SALTAR "jump"	1		0				
ENTRAR "come in"	3		0	DEJAR "quit"	1		0	SAQUEAR "loot"	1		0				
IR "go"	1	2	66.67	DEMOSTRAR "show"		1	100	SEGUIR "continue"		1	100				
VOLVER "return"	2	1	33.33	DESARROLLAR "develop"	1		0	SERVIR "serve"	1		0				
CAER "fall"	1	1	50	DESPLEGAR "expand"	1		0	SOBREVIVIR "survive"	1		0				
COMENTAR "comment"		2	100	DURAR "last"	1		0	SONAR "go off"		1	100				
DAR "give"	2		0	ELUDIR "avoid"	1		0	SUBIR "go up"		1	100				
EMBARGAR "seize"	2		0	EVOLUCIONAR "evolve"		1	100	SUFRIR "suffer"	1		0				

Table 3.7 Distribution of subjunctive tense with *esperar* in Mexico for the most frequent 100 verbs in the data.

ESPERAR															
Embedded V	Past	Pres	%	Embedded V	Past	Pres	%	Embedded V	Past	Pres	%	Embedded V	Past	Pres	%
SER (be)	69	2	2.82	TROPEZAR (trip over)	3		0	CONFIRMAR (confirm)	1		0	MORIR (die)	1		0
HACER (make)	22	1	4.35	VIVIR (live)	3		0	CONSEGUIR (achieve)	1		0	MOSTRAR (show)	1		0
LLEGAR (arrive)	14	6	30	ACTUAR (act)	2		0	CONTINUAR (continue)	1		0	OBSERVAR (observe)	1		0
ESTAR (be)	11	1	8.33	ALCANZAR (reach)	2		0	COSTAR (cost)		1	100	OCURRIR (happen)	1		0
DECIR (say)	11		0	CAMBIAR (change)	2		0	CUMPLIR (comply)	1		0	PARIR (give birth)	1		0
IR (go)	10	1	9.09	COGER (take)	2		0	DEJAR (leave)	1		0	PERDER (lose)		1	100
SALIR (leave)	11		0	COMENZAR (begin)	2		0	DEMOSTRAR (demonstrate)	1		0	PERMANECER (remain)	1		0
SEGUIR (continue)	10		0	COMPARAR (compare)	2		0	DIRIGIR (lead)	1		0	PRESENTAR (present)	1		0
HABER (be)	8	1	11.11	COMPARTIR (share)		2	100	DURAR (last)	1		0	PRODUCIR (produce)	1		0
TENER (have)	8	1	11.11	ECHAR (lay off)	2		0	ELUDIR (avoid)	1		0	PROGRAMAR (programe)	1		0
APARECER (appear)	8		0	LLAMAR (call)	2		0	ESCAMPAR (stop raining)	1		0	PROYECTAR (project)	1		0
PASAR (spend)	7	1	12.5	MANDAR (send)	2		0	ESCOGER (choose)	1		0	QUITAR (remove)	1		0
PODER (be able to)	7	1	12.5	QUEDAR (stay)	2		0	ESCUPIR (spit)	1		0	REGRESAR (return)	1		0
DAR (give)	4		0	REALIZAR (do)	2		0	ESTALLAR (explode)	1		0	RESOLVER (solve)	1		0
SOBREVIVIR (survive)	4		0	SERVIR (serve)	2		0	EXISTIR (exist)	1		0	RESPETAR (respect)	1		0
SUCEDER (happen)	3	1	25	SURGIR (come up)	2		0	EXPLICAR (explain)	1		0	RETOMAR (resume)	1		0
TERMINAR (finish)	4		0	VENIR (come)	2		0	FRACASAR (fail)	1		0	REVIVIR (come to)	1		0
VOLVER (return)	4		0	ABATIR (bring down)	1		0	GANAR (win)	1		0	ROMPER (break)	1		0
ASISTIR (attend)	3		0	ACABAR (finish)	1		0	GOBERNAR (govern)	1		0	SOBREPASAR (overwhelm)	1		0
CAER (fall)	3		0	ACEPTAR (accept)	1		0	HABILITAR (enable)		1	100	SONAR (go off)	1		0
CONTESTAR (answer)	2	1	33.33	AMANECER (dawn)	1		0	HABLAR (talk)	1		0	SUBIR (increase)	1		0
EMPEZAR (start)	3		0	APLASTAR (crush)	1		0	LLEVAR (take)	1		0	SUPERAR (exceed)	1		0
ENCONTRAR (find)	3		0	ARRESTAR (arrest)	1		0	MANTENER (keep)	1		0	TRAER (bring)	1		0
REACCIONAR (react)	3		0	BAJAR (go down)	1		0	MEJORAR (improve)	1		0	TRANSCURRIR (elapse)	1		0
SUFRIR (suffer)	3		0	BUSCAR (search)		1	100	MENCIONAR (mention)	1		0	USAR (use)	1		0

Table 3.8 Distribution of subjunctive tense with *esperar* in Spain the most frequent 100 verbs in the data.

ESPERAR															
Embedded V	Past	Pres	%	Embedded V	Past	Pres	%	Embedded V	Past	Pres	%	Embedded V	Past	Pres	%
SER (be)	148	4	2.63	CONTAR (tell)	3		0	SABER (know)	2		0	COMPETIR (cpmpete)	1		0
HACER (make)	29		0	DESAPARECER (disappear)	3		0	SOBREVIVIR (survive)	2		0	CONFESAR (confess)	1		0
IR (go)	28		0	EJERCER (exert)	3		0	SORPRENDER (surprise)	2		0	CONSEGUIR achieve	1		0
LLEGAR (arrive)	23	2	8	MENCIONAR (mention)	3		0	SUPERAR (overcome)	2		0	CONSTITUIR (constitute)	1		0
TENER (have)	24	1	4	QUEDAR (stay)	3		0	SURGIR (come up)	2		0	CORRER (run)	1		0
PODER (be able to)	23		0	SACAR (remove)	3		0	USAR (use)	2		0	DEBER (must)	1		0
ESTAR (be)	19	1	5	VER (see)	3		0	ACEPTAR (accept)	1		0	DEFENDER (defend)	1		0
HABER (be)	20		0	ACABAR (finish)	2		0	ACUDIR (turn up)	1		0	DESEMPEÑAR (play)	1		0
PASAR (spend)	12		0	ALCANZAR (reach)	2		0	ADMITIR (admit)	1		0	DESTACAR (stand out)	1		0
DECIR (say)	10		0	ATENDER (assist)	2		0	AGUANTAR (bear)	1		0	DESTRUIR (destroy)	1		0
OCURRIR (happen)	7		0	BAJAR (go down)	2		0	ALBERGAR (host)	1		0	ELEGIR (choose)	1		0
SUCEDER (happen)	7		0	CAUSAR (cause)	2		0	ANUNCIAR (announce)	1		0	EMPEZAR (start)	1		0
APARECER (appear)	6		0	COMENZAR (begin)	2		0	APLICAR (apply)	1		0	ENGANCHAR (hook)	1		0
DAR (give)	6		0	CUMPLIR (comply)	2		0	APRENDER (learn)	1		0	ENTENDER (understand)	1		0
SALIR (leave)	6		0	DESENCADENAR (trigger)	2		0	APROVECHAR (take advantage)	1		0	ESTIRAR (stretch)	1		0
SEGUIR (continue)	6		0	DOBLAR (double)	2		0	ARDER (burn)	1		0	FORMAR (form)	1		0
TERMINAR (finish)	6		0	ESCRIBIR (write)	2		0	ARRIESGAR (risk)	1		0	GRITAR (scream)	1		0
RESPONDER (reply)	5		0	EXISTIR (exist)	2		0	ASUMIR (assume)	1		0	IMPULSAR (boost)	1		0
VOLVER (return)	5		0	GANAR (win)	2		0	AYUDAR (help)	1		0	INCLUIR (include)	1		0
CONTINUAR (continue)	4		0	LLENAR (fill up)	2		0	CADUCAR (expire)	1		0	INCUMPLIR (break)	1		0
CRECER (grow)	4		0	MORIR (die)	2		0	CAMBIAR (change)	1		0	INDICAR (indicate)	1		0
DURAR (last)	3	1	25	PROFUNDIZAR (deepen)	2		0	COLABORAR (collaborate)	1		0	INTENTAR (try)	1		0
HABLAR (talk)	4		0	QUITAR (remove)	2		0	COLAPSAR (collapse)	1		0	JUGAR (play)	1		0
SUBIR (go up)	4		0	RESPETAR (respect)	2		0	COMENTAR (comment)		1	100	JUNTAR (gather)	1		0
VENIR (come)	4		0	RESULTAR (turn out)	2		0	COMPARTIR (share)	1		0	LLEVAR (take)	1		0

In tables 3.9, 3.10 and 3.11 are the results for *lograr* "to manage". As token frequency shows, *lograr* presents a lot of variation across the three varieties. In Argentina, 46.6% of the verbs appear with present subjunctive as many times as or more than the past subjunctive, while in Mexico this figure is 12.2% and in Spain 14.2%. Out of the 10 top most frequent predicates, we find that half of them appear more times or an equal number of times with the present subjunctive in Argentina. These are the predicates *dejar* "to allow/ leave", *hacer* "to do/make", *haber* "(existential) to be", *estar* "to be", *llegar* "to arrive". Of these, the case of *haber* is interesting as it appears three times and only in the present subjunctive. In Mexico and Spain, most of the predicates with more present subjunctive only have one data point, except for *pagar* "to pay" in Spain. They are mostly from the most numerous –*ar* verb class, with the exceptions of *poder* "to be able to" and *ver* "to see" in Spain.

Table 3.9. Distribution of subjunctive tense woth *lograr* in Argentina.

LOGRAR						
Embedded V	**Past**	**Pres**	**%**	**Embedded V**	**Past**	**Pres**	**%**
SER "be"	6	1	14.29	EXISTIR "exist"	1		0
DEJAR "quit"	3	3	50	EXPRESAR "express"		1	100
HACER "make"	2	3	60	FRENAR "stop"		1	100
ACEPTAR "accept"	4		0	HABLAR "talk"	1		0
CAER "fall"	2	1	33.33	INSTALAR "install"		1	100
HABER "be"		3	100	LEGALIZAR "legalize"		1	100
BORRAR "erase"	2		0	PAGAR "pay"	1		0
DESISTIR "desist"	2		0	PARECER "seem"		1	100
ESTAR "be"		2	100	PODER "be able to"		1	100
LLEGAR "arrive"	1	1	50	PONER "put"	1		0
REACCIONAR "react"	2		0	PREVALECER "prevail"		1	100
RECONOCER "recognize"	2		0	PRODUCIR "produce"		1	100
VER "see"	1	1	50	RENUNCIAR "quit"	1		0
ACABAR "finish"	1		0	RETORNAR "return"		1	100
APARTAR "set aside"	1		0	SOBREVIVIR "survive"	1		0
ATRAVESAR "go through"	1		0	SUCEDER "happen"		1	100
AVANZAR "advance"		1	100	TERMINAR "finish"	1		0
CABER "fit"	1		0	VIAJAR "travel"		1	100
CERRAR "close"	1		0	VOLVER "return"		1	100
COMENZAR "begin"		1	100	VOTAR "vote"	1		0
COMER "eat"	1		0				
COMPRENDER "understand"	1		0				
CUMPLIR "comply"	1		0				
DESAPARECER "disappear"	1		0				
ESPERAR "wait"		1	100				

Table 3.10. Distribution of subjunctive tense with *lograr* in Mexico.

LOGRAR						
Embedded V	**Past**	**Pres**	**%**	**Embedded V**	**Past**	**Pres**	**%**
SER (be)	7		0	CREER (believe)	1		0
FUNCIONAR (work)	4		0	DESBANCAR (unseat)	1		0
CAMBIAR (change)	3		0	DESEAR (wish)	1		0
LANZAR (launch)	3		0	DETENER (arrest)	1		0
SALIR (leave)	3		0	FLORECER (flourish)	1		0
ACEPTAR (accept)	2		0	HABLAR (talk)	1		0
DAR (give)	1	1	50	INGRESAR (enter)	1		0
DEJAR (let)	1	1	50	INSERTAR (insert)	1		0
ENTRAR (come in)	2		0	IRRADIAR (give off)		1	100
LLEGAR (arrive)	2		0	LLEVAR (take)	1		0
NACER (be born)	2		0	MOVILIZAR (mobilize)	1		0
PODER (be able to)	2		0	OLER (smell)	1		0
PREVALECER (prevail)	2		0	PASAR (spend)	1		0
VOLVER (return)	2		0	PROHIBIR (forbid)	1		0
ABANDERAR (support)		1	100	REALIZAR (do)	1		0
ADQUIRIR (acquire)	1		0	REBAJAR (reduce)	1		0
APRENDER (learn)	1		0	RECUPERAR (recover)	1		0
AUMENTAR (increase)	1		0	REMODELAR (remodel)	1		0
CESAR (cease)	1		0	REMOVER (remove)	1		0
CONFESAR (confess)	1		0	SOBREVIVIR (survive)	1		0
CONFORMAR (conform)	1		0	SOLTAR (let go)	1		0
CONSUMIR (consume)	1		0	TENER (have)	1		0
CONTROLAR (control)		1	100	TRABAJAR (work)		1	100
CREAR (create)	1		0	VENIR (come)	1		0
CRECER (grow)	1		0				

Table 3.11. Distribution of subjunctive tense with *lograr* in Spain.

LOGRAR							
Embedded V	**Past**	**Pres**	**%**	**Embedded V**	**Past**	**Pres**	**%**
SER (be)	11		0	FORTALECER (strengthen)	1		0
FUNCIONAR (work)	3	1	25	INSTALAR (install)		1	100
SENTIR (feel)	4		0	LEVANTAR (get up)	1		0
COMENZAR (begin)	2		0	NOMBRAR (name)	1		0
CONFESAR (confess)	2		0	ODIAR (hate)	1		0
CONTACTAR (contact)	2		0	PASAR (spend)	1		0
DEJAR (let)	2		0	PERDER (lose)	1		0
DESAPARECER (disappea	2		0	PICAR (chop)	1		0
DESISTIR (desist)	2		0	PODER (be able to)		1	100
PAGAR (pay)		2	100	POSTEAR (post)	1		0
PARECER (seem)	2		0	RECONSIDERAR (reconsider)	1		0
QUEDAR (stay)	2		0	REFLEXIONAR (reflect)		1	100
QUERER (want)	2		0	REGRESAR (return)	1		0
VER (see)	1	1	50	RENACER (be reborn)	1		0
VOLVER (return)	2		0	SOBREVIVIR (survive)	1		0
ABANDONAR (abandon)	1		0	TERMINAR (finish)		1	100
ACEPTAR (accept)	1		0	TRANSMITIR (transmit)	1		0
ADMITIR (admit)	1		0				
AGUANTAR (bear)	1		0				
ALCANZAR (reach)	1		0				
APARECER (appear)	1		0				
CALAR (permeate)	1		0				
CONDUCIR (drive)	1		0				
CUMPLIR (comply)	1		0				
FLUIR (flow)	1		0				

Tables 3.12, 3.13 and 3.14 report the results for *hacer* "to do/make". The predicate *hacer* shows the lowest variation both in token frequency and in the number of predicates with a higher number of present subjunctive. In Argentina there is 21% of verbs that appear as many times as or more than with the past subjunctive, whereas Mexico and Spain have 6% and 4%, respectively. Unlike the other three verbs, we do not find any of the top ten verbs with a majority of present subjunctive. Having said that, there are two top ten verbs that have quite high occurrences of present subjunctive, namely *tener* "to have" with 13 past and 12 present subjunctive

occurrences, and *haber* "to be" with 8 in the past and 6 in the present. As with the previous main verbs, *seguir* again appears more times with present than with past subjunctive (2/5). Interestingly, and rather surprisingly, in Mexico *querer* "to want" appears *only* in the present subjunctive. This behavior may be due to the fact that the past subjunctive of *querer* (i.e., *quisiera*) is used as a modal verb in polite requests and conditionals in lieu of the actual conditional form *querría* "I would like". It may be the case that in Mexico the modal meaning has gained ground more strongly than in other varieties, causing the form *quisiera* to be more strongly associated with the modal meaning than with its more literal subjunctive meaning.

Table 3.12. Distribution of subjunctive tense with *hacer* in Argentina for the most frequent 100 verbs.

HACER																
Embedded V	**Past**	**Pres**	**%**	**Embedded V**	**Past**	**Pres**	**%**	**Embedded V**	**Past**	**Pres**	**%**	**Embedded V**	**Past**	**Pres**	**%**	
SER "be"	34	6	15	LOGRAR "manage"	3	1	25	IR "go"	2		0	CAPTAR "capture"	1		0	
TENER "have"	13	12	48	AFLORAR "surface"	3		0	LEER "read"	2		0	COBRAR "charge"	1		0	
PERDER "lose"	17	4	19.05	CREER "believe"	3		0	MERMAR "diminish"	1	1	50	COMENTAR "comment"		1	100	
HABER "be"	8	6	42.86	DECIDIR "decide"	2	1	33.33	MODIFICAR "modify"	2		0	COMETER "commit"	1		0	
DEJAR "quit"	9	4	30.77	EMPEZAR "start"	3		0	PARAR "stop"	2		0	CONFUNDIR "confuse"	1		0	
PODER "be able to"	9	3	25	ESTALLAR "explode"	3		0	PRESENTAR "present"	2		0	CONOCER "know"		1	100	
QUEDAR "stay"	9	1	10	NACER "be born"	2	1	33.33	RECORDAR "remember"	2		0	CONSEGUIR "achieve"	1		0	
APARECER "appear"	7	2	22.22	PARECER "seem"	3		0	SABER "know"	1	1	50	CONSIDERAR "consider"	1		0	
BAJAR "go down"	6	3	33.33	PENSAR "think"	3		0	SACAR "remove"	2		0	CONVERTIR "convert"		1	100	
PASAR "spend"	6	3	33.33	SOBREVIVIR "survive"	3		0	SALTAR "jump"	2		0	COSTAR "cost"		1	100	
COMENZAR "begin"	7	1	12.5	SURGIR "come up"	3		0	SENTIR "feel"	2		0	CREAR "create"	1		0	
CAER "fall"	5	2	28.57	TERMINAR "finish"	2	1	33.33	VALER "cost"	1	1	50	CRECER "grow"	1		0	
CAMBIAR "change"	6	1	14.29	VENIR "come"	3		0	ABORTAR "abort"	1		0	CRUZAR "cross"	1		0	
QUERER "want"	6	1	14.29	VER "see"	3		0	ACEPTAR "accept"	1		0	DAR "give"	1		0	
SEGUIR "continue"	2	5	71.43	VIVIR "live"	3		0	ACOMPAÑAR "accompany"	1		0	DEBER "must"	1		0	
VOLVER "return"	6	1	14.29	ABANDONAR "abandon"		2	100	ACUÑAR "coin"	1		0	DECLARAR "declare"		1	100	
AUMENTAR "increase"	4	2	33.33	ASUMIR "assume"		2	100	ADELANTAR "move ahead"	1		0	DEDICAR "dedicate"	1		0	
SUBIR "go up"	5	1	16.67	CESAR "cease"	1	1	50	ALARGAR "lengthen"	1		0	DENUNCIAR "denounce"	1		0	
TOMAR "take"	6		0	COINCIDIR "coincide"		2	100	ALERTAR "alert"		1	100	DEPENDER "depend"		1	100	
ESTAR "be"	3	2	40	COLAPSAR "collapse"	2		0	APARTAR "set aside"		1	100	DERIVAR "derive"		1	100	
LLEGAR "be"	3	2	40	CONFLUIR "join"	2		0	APRENDER "teach"	1		0	DERRAMAR "spill"	1		0	
SALIR "leave"	3	2	40	CORTAR "cut"	2		0	APRESAR "capture"	1		0	DESCUBRIR "discover"	1		0	
BUSCAR "search"	2	2	50	DESAPARECER "disappear"	2		0	ARRANCAR "start up"		1	100	DESEAR "desire"	1		0	
FUNCIONAR "work"	2	2	50	DISMINUIR "decrease"	2		0	ARRIESGAR "risk"	1		0	DESPERTAR "wake up"	1		0	
GANAR "win"	3	1	25	EMIGRAR "emmigrate"	2		0	BORRAR "erase"		1	100	DESTRONAR "dethrone"	1		0	

Table 3.13. Distribution of subjunctive tense with *hacer* in Mexico for the most frequent 100 verbs.

HACER															
Embedded V	**Past**	**Pres**	**%**	**Embedded V**	**Past**	**Pres**	**%**	**Embedded V**	**Past**	**Pres**	**%**	**Embedded V**	**Past**	**Pres**	**%**
SER (be)	48	2	4	SURGIR (come up)	3	1	25	BROTAR (sprout)	2		0	PERMANECER (remain)	2		0
DEJAR (let)	17		0	VALER (cost)	2	2	50	BUSCAR (search)	2		0	QUEDAR (stay)	2		0
TENER (have)	15	2	11.76	ACTUAR (act)	3		0	COMENZAR (begin)	2		0	RECIBIR (receive)	2		0
PERDER (lose)	11		0	APARECER (appear)	2	1	33.33	CONOCER (know)	2		0	RECORDAR (remember)	2		0
LLEGAR (arrive)	10		0	CAMINAR (walk)	3		0	CORRER (run)	2		0	REGRESAR (return)	2		0
SALIR (leave)	10		0	DESAPARECER (disappear)	3		0	CREAR (create)	2		0	RESULTAR (turn out)	1	1	50
VOLVER (return)	10		0	DESCUBRIR (discover)	2	1	33.33	CRECER (grow)	2		0	ROMPER (break)	2		0
CAER (fall)	7	2	22.22	DISMINUIR (diminish)	3		0	DESCENDER (descend)	2		0	SANCIONAR (sanction)	2		0
CAMBIAR (change)	9		0	ENTRAR (come in)	3		0	DESECHAR (get rid of)	2		0	SONAR (go off)	2		0
HABER (be)	7	2	22.22	ESCRIBIR (write)	3		0	DESISTIR (desist)	2		0	SUBIR (go up)	2		0
SENTIR (feel)	9		0	IR (go)	3		0	DESTRUIR (destroy)	2		0	TRAER (bring)	2		0
ESTAR (be)	4	2	33.33	PASAR (spend)	3		0	DISFRUTAR (enjoy)	2		0	TRIUNFAR (succeed)	2		0
TOMAR (take)	5	1	16.67	PODER (be able to)	3		0	DUDAR (last)	2		0	VALORAR (value)	2		0
APRENDER (learn)	5		0	QUERER (want)		3	100	ENCONTRAR (find)	2		0	VENIR (come)	2		0
BAJAR (go down)	4	1	20	RENUNCIAR (resign)	3		0	ENTENDER (understand)	2		0	VIVIR (live)	1	1	50
CREER (believe)	5		0	RESISTIR (resist)	3		0	ESCALAR (climb)	2		0	ACABAR (finish)	1		0
DECIDIR (decide)	4	1	20	VER (see)	2	1	33.33	ESCUCHAR (listen)	2		0	ACERCAR (get closer)	1		0
TERMINAR (finish)	5		0	ABANDONAR (abandon)	2		0	ESPERAR (wait)	2		0	ADELGAZAR (lose weight)	1		0
DAR (give)	4		0	ABORTAR (abort)	2		0	EXISTIR (exist)	1	1	50	ADMIRAR (admire)	1		0
GANAR (win)	4		0	ABRIR (open)	2		0	FUNCIONAR (work)	2		0	ADOPTAR (adopt)	1		0
LAVAR (wash)	4		0	AFLORAR (appear)	2		0	LEVANTAR (get up)	2		0	AFIRMAR (affirm)	1		0
NACER (be born)	4		0	ALCANZAR (reach)	2		0	LOGRAR (manage)	2		0	AGREGAR (add)	1		0
PENSAR (think)	4		0	ATASCAR (get stuck)	2		0	MIRAR (look)	2		0	ALQUILAR (rent)		1	100
SEGUIR (continue)	2	2	50	ATRAVESAR (go through)	2		0	MORIR (die)	2		0	APLAUDIR (applaud)	1		0
SOBREVIVIR (survive)	4		0	AUMENTAR (increase)	2		0	PARECER (appear)	2		0	ASCENDER (ascend)	1		0

Table 3.14. Distribution of subjunctive tense with *hacer* in Spain for the most frequent 100 verbs.

HACER															
Embedded V	Past	Pres	%	Embedded V	Past	Pres	%	Embedded V	Past	Pres	%	Embedded V	Past	Pres	%
SER (be)	65	5	7.14	DAR (give)	7	7	0	DESCUBRIR (discover)	3		0	MORIR (die)	2		0
TENER (have)	51		0	NACER (be born)	7	7	0	ENCONTRAR (find)	3		0	OCUPAR (occupy)	2		0
CAMBIAR (change)	22		0	QUEDAR (stay)	7	7	0	LLAMAR (call)	3		0	OCURRIR (happen)	2		0
ESTAR (be)	19	1	5	SONAR (go off)	7	7	0	LOGRAR (manage)	3		0	ORDENAR (order)	2		0
PERDER (lose)	18		0	VER (see)	7	7	0	OLVIDAR (forget)	3		0	PARTICIPAR (participate)	2		0
EMPEZAR (start)	14	2	12.5	CRECER (grow)	6	6	0	PARECER (seem)	3		0	PEDIR (request)	2		0
SALIR (leave)	16		0	DISFRUTAR (enjoy)	6	6	0	SALTAR (jump)	3		0	PRESTAR (lend)	2		0
PODER (be able to)	12	3	20	GANAR (win)	6	6	0	ACERTAR (hit)	2		0	PROFUNDIZAR (deepen)	2		0
DEJAR (let)	13		0	SUBIR (go up)	6	6	0	ADORAR (adore)	2		0	REPETIR (repeat0)	2		0
COMENZAR (begin)	11	1	8.33	AUMENTAR (increase)	5	5	0	APRENDER (learn)	2		0	SACAR (remove)	2		0
LLEGAR (arrive)	11	1	8.33	BAJAR (decrease)	5	5	0	ARDER (burn)	2		0	SEGUIR (continue)	2		0
PASAR (spend)	9	3	25	CAER (fall)	5	5	0	ARRASAR (sweep)	2		0	SENTIR (feel)	2		0
SURGIR (come up)	12		0	CONSEGUIR (achieve))	5	5	0	BROTAR (sprout)	2		0	SIMPATIZAR (feel sympathetic)	2		0
DESAPARECER (disappear)	11		0	MIRAR (look)	5	5	0	CAUTIVAR (captivate)	2		0	SOBREVIVIR (survive)	2		0
QUERER (want)	11		0	ACABAR (finish)	4	4	0	COMPRENDER (understand)	2		0	SOLTAR (let go)	2		0
HABER (be)	7	3	30	CORRER (run)	4	4	0	DESESTIMAR (underestimate)	2		0	SUFRIR (suffer)	2		0
TERMINAR (finish)	10		0	DISMINUIR (diminish)	4	4	0	DEVOLVER (return)		2	100	SUPERAR (exceed)	1	1	50
ABANDONAR (abandon)	9		0	REFLEXIONAR (reflect)	4	4	0	EMERGER (emerge)	2		0	TARDAR (last)	2		0
IR (go)	9		0	VENIR (come)	4	4	0	ESTUDIAR (study)	2		0	TIRAR (throw)	2		0
VOLVER (return)	9		0	ABRIR (open)	3	3	0	EXISTIR (exist)	1	1	50	TRAER (bring)	2		0
APARECER (appear)	8		0	ACEPTAR (accept)	3	3	0	FRACASAR (fail)	2		0	TRAZAR (draw)	2		0
DECIDIR (decide)	8		0	COGER (take)	3	3	0	FUNCIONAR (work)	2		0	VENDER (sell)	1	1	50
PENSAR (think)	8		0	COINCIDIR (coincide)	3	3	0	JUGAR (play)	2		0	ABORTAR (abort)	1		0
ROMPER (break)	8		0	CONOCER (know)	3	3	0	MATAR (kill)	2		0	ACTUAR (act)	1		0
BUSCAR (search)	7		0	CONSIDERAR (consider)	3	3	0	MEJORAR (improve)	2		0	ACUDIR (attend)	1		0

In sum, the data show that frequency of the embedded verb does not appear to be a factor in cases of violations of CT in any of the three varieties. The rate of present subjunctive remains the same at roughly 30% for Argentina, 6% for Mexico and 3% for Spain. There is evidence, however, that the rate of present subjunctive is affected by the matrix verb in all three varieties.

6.2 Type Frequency

Now I will present type frequency of each embedded verb by main predicate and country. To calculate type frequency, each verb lemma is counted in the tense it appears in. For example, if there are 4 different forms of *ser* in present subjunctive (e.g., *vayas; vaya;*

vaya; vayan) and 5 in past subjunctive (e.g., *fuera; fueran; fueras; fuéramos; fuera)*, *ser* contributes one type for each tense.

The results are reported in table 3.15, and the statistical analysis using pairwise chi-squared tests is presented in table 3.16 below.

Table 3.15. Type Frequency of the Embedded Verb with each Main Verb per Country

	Argentina					Mexico					Spain				
	Past		Pres		% Pres Types	Past		Pres		% Pres Types	Past		Pres		% Pres Types
	Tokens	Types	Tokens	Types	Pres	Tokens	Types	Tokens	Types	Pres	Tokens	Types	Tokens	Types	Pres
querer	361	101	185	70	40.94	688	135	45	28	17.18	1021	171	37	22	11.40
esperar	154	62	58	36	36.73	326	98	23	16	14.04	550	124	10	6	4.62
lograr	44	28	23	23	45.10	67	45	6	6	11.76	62	37	8	7	15.91
hacer	328	130	113	65	33.33	445	187	29	20	9.66	712	212	30	18	7.83

Table 3.16. Pairwise Chi-Squared Tests of Type Frequency of Embedded Verbs with each Main Verb per Country

	Arg-Mex		Arg-Sp		Mex-Sp	
	χ^2	*p* value	χ^2	*p* value	χ^2	*p* value
querer	21.60	< 0.001	40.33	< 0.001	1.98	0.16
esperar	13.47	< 0.001	36.25	< 0.001	5.47	0.02
lograr	12.33	< 0.001	8.01	0.004	0.08	0.77
hacer	32.34	< 0.001	42.08	< 0.001	0.26	0.61

As I discussed above, there are three possible outcomes from type frequency: (i) no difference with token frequency, (ii) the results of type frequency are more extreme than token frequency and (iii) the results of token frequency are more extreme than type frequency. The results in table 3.15 exemplify the possibility in (i); no difference with token frequency. The fact that all the proportions have increased

across the three countries suggests that the present subjunctive is relatively productive in violations of CT and, as I have shown above, it is not lexically conditioned. As table 3.16 shows, the only significant difference between Mexico and Spain is with the main predicate *esperar*. The results from the comparisons between Argentina and the other two countries are significant across the board. Note, however, the smaller, though still significant, difference with *lograr* between Argentina and Spain.

These results suggest that the difference in token frequency between Mexico and Spain is unlikely to be significant. Recall that the analysis of token frequency yielded no significant difference between Mexico and Spain with the causative predicates. With volitionals, the differences were significant for both verbs. Now, with the type frequency analysis we see that volitionals also behave differently with respect to each other and only *esperar* resulted in a significant difference between Mexico and Spain. So it seems that the difference between Mexico and Spain with *querer* is simply due to higher token frequency in Mexico but the present subjunctive does not appear with more verb types in Mexico than in Spain. These results are also in line with the results in tables 3.5 and 3.6, where we can see that Mexico and Spain are very similar with respect to the number of embedded verbs in present subjunctive appearing as many times as, or more than, the past subjunctive: 5 in Mexico and 3 in Spain. In fact, a Fisher's exact test reveals this difference is not statistically significant ($p = 0.72$).

7. Discussion of Major Findings

In this section, I will summarize the major findings I have presented throughout this chapter.

First, we saw that there is a very large difference in violations of CT between Argentina and the other two groups. This difference is maintained in both token frequency and type frequency. With token frequency we saw that violations of CT in Argentina range between 25% and 34% depending on the main predicate. In Mexico and Spain violations of CT do not reach 10%, with Mexico hovering around 7% and Spain around 5%. There is one exception to this generalization in Spain with the main predicate *lograr* that exhibits 11% violations of CT. In Argentina, type frequency reveals that violations of CT occur with quite a high proportion of different verb types, ranging between 45% and 33% of the total number of types found for each main predicate. Interestingly, type frequency also shows an increased proportion of violations of CT in Mexico and Spain; Mexico ranges between 10% and 17% and Spain between 4.5% and 16%. The increase of proportions in type frequency, compared to token frequency, suggests that the phenomenon of violations of CT is not limited to a certain few verbs but that is spread out and can potentially apply to any verb type, other things being equal. In other words, violations of CT do not appear to be driven by properties of the embedded verb. As I mentioned above, if token frequency were the result of a small set of verbs alternating between present and past then we would expect the opposite results; type frequency would have been lower than token frequency. This result is very interesting, especially for Mexico and Spain, which show such low token frequency, because it suggests that the present subjunctive is somewhat productive in the context of violations of CT as it is applying to a great variety of verb types.

In order to confirm the conclusion that there appear to be no lexical effects in the variation between present and past subjunctive, the top ten most frequent verbs in the entire corpus were analyzed. I recorded how many times each of these top ten verbs appeared with each subjunctive tense per main predicate. The rationale behind this analysis is that high frequency items are resistant to engage in language change processes because their high token frequency increases their autonomy as linguistic units and decreases their integration into the lexicon (Bybee 2001).

The top ten verbs in Corpus del Español/ Web Dialects version (Davies 2016) are shown in table 3.17. Table 3.18, 3.19, 3.20 and 3.21 report the counts of present and past subjunctive and percentages of present subjunctive of the top ten verbs.

The results show that the pattern of variation for Argentina stays almost the same as with token frequency. The range of occurrences of present subjunctive ranges from 11 out of 20 verbs with *lograr* to 67 out of 209 verbs with *querer*. It is worth noting that *lograr* has a majority of verbs with present subjunctive resulting in 55% of the verbs in the present. The lowest percentage was found with *esperar* and this holds true of Argentina (25%) and Spain (1.9%). Mexico has the same percentage with both volitional predicates (4.43%). However, none of the differences between Mexico and Spain proved to be significant (*querer*: $p = 0.08$; *esperar: p = 0.19*; *lograr: p = 0.99*; *hacer: p = 0.83*). These results show a major difference between Mexico and Spain, on the one hand, and Argentina on the other. In Argentina the present subjunctive appears very frequently with the top ten verbs in the corpus, whereas Mexico and Spain both show very few counts of present subjunctive and they pattern together for every one of the four main predicates.

Table 3.17. Top Ten Verbs in Corpus del Español

dar	give	*ir*	go
decir	say	*poder*	can
estar	be	*ser*	be
haber	be	*tener*	have
hacer	do/make	*ver*	see

Table 3.18. Counts of Present and Past Subjunctive and Percentages of Present Subjunctive for the Top Ten Verbs in Corpus del Español for the main predicate *querer*.

	Argentina			Mexico			Spain		
	Past	Pres	%	Past	Pres	%	Past	Pres	%
dar	3	0	0.00	1	0	0.00	6	0	0.00
decir	5	1	16.67	8	1	11.11	8	0	0.00
estar	22	7	24.14	25	4	13.79	42	1	2.33
haber	7	2	22.22	14	0	0.00	20	0	0.00
hacer	32	12	27.27	52	3	5.45	66	2	2.94
ir	3	9	75.00	12	0	0.00	16	0	0.00
poder	0	0	0.00	1	0	0.00	1	0	0.00
ser	54	27	33.33	154	6	3.75	257	3	1.15
tener	10	5	33.33	17	0	0.00	30	3	9.09
ver	6	4	40.00	18	0	0.00	31	1	3.13
TOTAL	142	67	**32.06**	302	14	**4.43**	477	10	**2.05**

Table 3.19. Counts of Present and Past Subjunctive and Percentages of Present Subjunctive for the Top Ten Verbs in Corpus del Español for the main predicate *esperar*.

	Argentina			Mexico			Spain		
	Past	Pres	%	Past	Pres	%	Past	Pres	%
dar	2	0	0.00	4	0	0.00	6	0	0.00
decir	4	1	20.00	11	0	0.00	10	0	0.00
estar	3	1	25.00	11	1	8.33	19	1	5.00
haber	6	3	33.33	8	1	11.11	20	0	0.00
hacer	4	1	20.00	22	1	4.35	29	0	0.00
ir	1	2	66.67	10	1	9.09	28	0	0.00
poder	6	2	25.00	7	1	12.50	23	0	0.00
ser	27	9	25.00	69	1	1.43	148	4	2.63
tener	4	0	0.00	8	1	11.11	24	1	4.00
ver	0	0	0.00	1	0	0.00	3	0	0.00
TOTAL	57	19	**25.00**	151	7	**4.43**	310	6	**1.90**

Table 3.20. Counts of Present and Past Subjunctive and Percentages of Present Subjunctive for the Top Ten Verbs in Corpus del Español for the main predicate *lograr*.

	Argentina			Mexico			Spain		
	Past	Pres	%	Past	Pres	%	Past	Pres	%
dar	0	0	0.00	1	1	50.00	0	0	0.00
decir	0	0	0.00	0	0	0.00	0	0	0.00
estar	0	2	100.00	0	0	0.00	0	0	0.00
haber	0	3	100.00	0	0	0.00	0	0	0.00
hacer	2	3	60.00	0	0	0.00	0	0	0.00
ir	0	0	0.00	0	0	0.00	0	0	0.00
poder	0	1	100.00	2	0	0.00	0	1	100.00
ser	6	1	14.29	7	0	0.00	11	0	0.00
tener	0	0	0.00	1	0	0.00	0	0	0.00
ver	1	1	50.00	0	0	0.00	1	1	50.00
TOTAL	9	11	**55.00**	11	1	**8.33**	12	2	**14.29**

Table 3.21. Counts of Present and Past Subjunctive and Percentages of Present Subjunctive for the Top Ten Verbs in Corpus del Español for the main predicate *hacer.*

	Argentina			Mexico			Spain		
	Past	Pres	%	Past	Pres	%	Past	Pres	%
dar	1	0	0.00	4	0	0.00	7	0	0.00
decir	0	0	0.00	0	0	0.00	0	0	0.00
estar	3	2	40.00	4	2	33.33	19	1	5.00
haber	8	6	42.86	7	2	22.22	7	3	30.00
hacer	0	1	100.00	0	0	0.00	0	0	0.00
ir	2	0	0.00	3	0	0.00	9	0	0.00
poder	9	3	25.00	3	0	0.00	12	3	20.00
ser	34	6	15.00	48	2	4.00	65	5	7.14
tener	13	12	48.00	15	2	11.76	51	10	16.39
ver	3	0	0.00	2	1	33.33	7	0	0.00
TOTAL	73	30	**29.13**	86	9	**9.47**	177	22	**11.06**

A question that becomes relevant from these results is whether the predicates within each semantic category behave alike; volitionals (*querer* "to want" *esperar* "to hope/expect"*)* and causatives (*lograr* "to manage" *hacer* "to make"*)*. In other words, are these categories meaningful with regard to CT or does each predicate behave in its own way? We did see that volitionals and causatives pattern differently in Mexico and Spain when we looked at token frequency. Neither of the causative predicates showed a significant difference in token frequency between Mexico and Spain but both volitional predicates did. The differences between Mexico/Spain and Argentina were all significant so it is hard to tell whether the predicates in each semantic class are behaving alike. To answer this question, we can look at the differences between each predicate per country using token frequency, or we can look at each difference using type frequency. We saw that the differences between each predicate in type frequency were much more pronounced than with token frequency, so let us look at token

frequency because if we find any differences here we can be sure that these differences will increase with type frequency. If semantic class is playing a role in the phenomenon of violations of CT, we would expect to find no differences within semantic class but we should find differences across the two classes, assuming that volitionals are more strict in enforcing CT than causatives.

Pairwise chi-squared tests were conducted comparing each main predicate with one another per country using token frequency. The results are reported in table 3.22 below; shaded areas indicate significant differences. As can be seen in table 3.22, the results differ by country. We find no differences across or within semantic class in Mexico. There is only one significant difference across the classes in Argentina with *querer-hacer*, and Spain is the "best behaved" of the three. There is no significant difference between the two volitional predicates *querer-esperar*, but there are significant differences across the two classes. The only exception to this is the difference between *querer-hacer,* which appears not to be significant. Interestingly enough, this same pair is the only one that yielded a significant difference in Argentina.

These results strongly suggest that semantic class does not seem to be a significant factor in CT. Rather, it suggests that the degree to which CT is applied (or not) is a property of individual lexical verbs and each verb behaves independently of the semantic class it may belong to. In addition, we can speculate that semantic class *may* play a role when variation is very low as is the case with Spain; as variation increases semantic class of each main predicate may become less and less relevant. The exception to this generalization is the difference between *querer-hacer* in

Argentina that turned out to be significant, which seems to support the first generalization I mentioned that CT seems to be a property of lexical verbs and not of whole semantic classes. If this is indeed the case, then one would expect that specific verbs may pattern differently across different dialects. Another logical conclusion is that these semantic classes are not the relevant ones for CT. It may be the case that the only relevant property among these predicates is that they must be predicates that take an obligatory subjunctive clause. If this second possibility were true, the entire literature on CT would have to be rethought.

Table 3.22. Pairwise Chi-squared Tests Results of the Differences between each Main Predicate per Country using Token Frequency.

	Argentina		Mexico		Spain	
	χ^2	p-value	χ^2	p-value	χ^2	p-value
querer-esperar	0.005	0.94	0.02	0.87	3.22	0.07
querer-lograr	1.82	0.17	0.19	0.65	8.81	0.003
querer-hacer	7.5	0.006	0.0002	0.98	0.22	0.63
esperar-lograr	0.88	0.34	0.06	0.80	17.51	< 0.001
esperar-hacer	0.14	0.70	0.016	0.89	4.72	0.02
lograr-hacer	1.82	0.17	0.18	0.67	6.25	0.01

A relevant question that variation always raises is the nature of speakers' grammars. It has been suggested in the literature that language variation must be the result of speakers having two grammars with two conflicting values (Kroch 1989, Yang 2002, Eide and Sollid 2011). Kroch *et al* have shown that the grammatical variation found in historical texts must be the result of the existence of multiple grammars within the same speaker (Kroch 1989, Pintzuk 1991, Kroch and Taylor

1997, Kroch 2001). The natural question to ask then is whether we find any evidence about the nature of the variation in CT. Do we have any evidence that speakers may have a two-value grammar for CT (i.e., [±CT])? And what would this evidence look like? We would need to find that the very same speaker, all things being equal, sometimes produces a present subjunctive and sometimes a past subjunctive. Given the nature of our corpus, we do not have a way to match data and speakers across sentences. What we can do is to try and find data points with more than one verb in the subjunctive per sentence. The findings are shown in table 22.

Table 3.23. Number and percentage of sentences with more than one verb in the subjunctive.

Tense	Argentina	Mexico	Spain
Same	17	7	4
Different	7	1	1
Total	24	8	5
Percentage	29.16%	12.50%	25%

Given the small data sample, we conducted a Fisher exact test to test for significant differences. The results show that the differences across countries in the data are not significant ($p = 0.99$). Although with such a small data set it is hard to reach any definite conclusions, the fact that we find within speaker variability across dialects may suggest that some speakers do in fact have a two-value grammar with respect to CT even in those varieties where there is not much variation to begin with.

There are two possible ways to interpret these data. According to Koch's proposal, the data may be evidence for the existence of certain speakers that have a two-value grammar of CT. This is interesting because it points to the possibility that this might be the locus of variation where change may start if the number of speakers with the underspecified value for CT should happen to increase. Another possibility is what Yang's model proposes that competing grammars are acquired in different proportions per speaker such that most speakers end up with different proportions of each grammar. These are questions that go beyond what the corpus data can provide so I will leave them for future research. An example from each variety is presented below; present subjunctive forms are bolded and past subjunctive is underlined.

5. Ella   me   pidió   que   **sea**   fuerte, que   no
   she   me   ask.3S.PRET   that   **be.1S.PRES.SUBJ**   strong that   not

   me   entregara
   me   surrender.1S.PAST.SUBJ
   'She asked me to be strong, not to surrender'   (Argentina)

6. El   auditor me   pidió   que   **tome**   las
   the   auditor me   ask.3S.PRET   that   **take.1S.PRES.SUBJ** the

   latitas   y   que   mentalmente   hiciera   el
   cans.DIM   and   that   mentally   do.1S.PAST.SUBJ   the

   recorrido   desde   mi   casa
   journey   from   my   house
   'The auditor asked me to take the little cans and to mentally do the journey from my home'   (Mexico)

7. […]   no   quería   que   me   <u>contestaras</u>   porque

        not   want.1S.IMP   that   me   answer.2S.PAST.SUBJ because

        no   quería   que   **destroces**   la   vida   que

        not   want.1S.IMP   that   **destroy.2S.PRES.SUBJ**   the   life   that

        tenías […]

        have.2S.IMP

        'I didn't want you to answer me because I didn't want you to destroy the life you had'   (Spain)

The last issue I will address in this section is whether there is enough evidence to suggest that the variation in Argentina is due to language change and if there is, what has changed?

We have seen three pieces of evidence suggesting that the difference between Argentina, Mexico and Spain is very large and that in Argentina violations of CT occur at a much higher rate than in Mexico-Spain. First, we saw the large and significant differences in token frequency between Argentina and Mexico-Spain. Second, type frequency revealed that the high amounts of token frequency are not the result of a few verbs that tend to appear in the present subjunctive. On the contrary, when type frequency was calculated we saw that the proportions increased in each of the three countries. However, we saw that we were unable to find a significant difference between Mexico and Spain, except for the predicate *esperar*. The third analysis I presented was the amount of present subjunctive among the top ten most frequent verbs in the corpus. Looking at the top ten verbs just confirmed the earlier

conclusions: No lexical effects, and Argentina has a higher rate of present subjunctive than Mexico or Spain.

The immediate question that these results raise is why does Argentina produce such high rates of present subjunctive compared to the other two varieties? What is it that has changed in Argentina and what is the status of CT in this system? For the first question, I have proposed in Guajardo (2010) that the present subjunctive has become tenseless in Argentina. By being tenseless it is now free to occur embedded under any matrix tense in the same way an infinitive is not restricted in its distribution based on the tense of the matrix clause. With regard to the second question, there are several routes that the system may have taken and I will try to narrow down the one option that seems the most plausible. In a nutshell, I will argue that an embedded subjunctive clause with a present subjunctive can have the same types of temporal interpretations as an infinitival clause.

The property of CT in Spanish is equivalent to a property that many languages, including English, exhibit in embedded clauses known as sequence of tense (SOT) (see Chapter 3 for details). Broadly speaking there are two types of languages with respect to the tenses that can appear in embedded clauses and the interpretations they can get. Spanish and English are both SOT languages. This means that these languages require a past tense in the embedded clause to express simultaneity with a past matrix event (8a). This is referred to as the *simultaneous* reading. Languages like Japanese or Russian, on the other hand, use a present tense for this type of interpretation (8b). In these languages, called non-SOT languages, a past tense can only receive an interpretation where the event described in the embedded clause refers to a time prior

to that of the matrix event (8c). This interpretation is the *past-shifted* reading. Note that English past tense is ambiguous between a simultaneous and a past-shifted reading as (8a) could also mean that Mary was pregnant at some point in the past but no longer is.

8. a.   John said that Mary was sick (interpretation: Mary is still sick now).

   b.   John-wa   Mary-ga   nininsinsi-te-i-ru   to   it-ta
        John-TOP   Mary-NOM   pregnant.Prog-Pres   Comp say.Past
        "John said that Mary was pregnant" (lit: John said that Mary is pregnant)

   c.   John-wa   Mary-ga   nininsinsi-te-i-ta   to   it-ta
        John-TOP   Mary-NOM   pregnant.Prog-Past   Comp say.Past
        "John said that Mary was pregnant" (lit: John said that Mary had been pregnant)

(Japanese; Demirdache and Lungu 2011: 239)

The results for Argentina show that the present subjunctive can very often appear in embedded clauses with a past matrix verb. At first glance, this would seem to suggest that Argentinean Spanish behaves like a non-SOT language. In other words, the present subjunctive may be licit to appear under past so long as its interpretation is simultaneous with the matrix event. The data in (9) would seem to support this hypothesis.

(9a) refers to the account of a robbery victim and she is saying that she wanted the robbers to go away (at the time of the robbery). In (9b) the speaker is describing a frequent habit of one of the staff members at his high school that would touch him (non-sexually) whenever he would talk to him. These two sentences show that the

present subjunctive is being used to refer to an embedded event that is simultaneous with a past matrix event.

9. a. Quería   que   se   vayan
       want.1S.Imp   that   reflx.3P   go.3P.Pres.Subj
       "I wanted them to go away"

   b. Me   molestaba   que   me   toque
       me   bother.3S.Past that   me   touch.3S.Pres.Subj
       "It bothered me that he would touch me"

However, the prediction that falls out of this hypothesis is that the present subjunctive should not appear in embedded clauses that describe an event or state that occurs prior to the event in the matrix clause; in a non-SOT language only a past tense is available in this configuration. The data in (10) shows this prediction is not borne out. Both of these examples describe embedded events that took place before the matrix event. These data then suggest that Argentinean Spanish has not become a non-SOT language in subjunctive clauses.

10. a. Me   molestó   que   llegue   tarde.
         me   bother.3S.Past that   arrive.3S.Pres.Subj   late
         "It bothered me that he was late"

     b. Se   alegró   que   lo   visites.
         3.reflex   be.glad.3S.past that   him   visit.2S.Pres.Subj
         "He was glad that you visited him"

I claim that the reason why Argentinean Spanish does not behave like a non-SOT language is because the present subjunctive is not actually a *present* verb form in current Argentinean Spanish. As I have argued before, when a verb form is free to

occur in any embedded clause independently of its temporal interpretation, the only plausible conclusion is that such form must be tenseless. Wurmbrand (2014) argues that infinitival clauses are not all the same syntactically and that the syntactic structure projected in the infinitival clause is dependent on the type of matrix verb. Attitude predicates such as *claim* and *believe* project full-fledged T-phrases. Predicates that enforce a forward-shifted interpretation of the infinitival clause project a phrase headed by WOLL, a temporal-modal operator that yields posteriority. Last, predicates such as *try* and *begin,* which yield a simultaneous interpretation of the infinitival clause only select a v-Phrase (or Asp-Phrase). Adapting this classification to subjunctives, Laca (2010a) proposes that in Standard Spanish some volitional predicates (e.g., *esperar* "to wait/hope) would select for fully-fledged T-phrases because they allow for all types of temporal interpretations. Future-oriented subjunctive clauses such as those embedded under causatives, directives and *querer* would be Asp-Phrases or v-Phrases. On the other hand, non-obligatory subjunctives (i.e., those triggered by negation or interrogatives) would always be C/T-Phrases. Based on these distinctions in Standard Spanish, I would like to suggest that in Argentinean Spanish, subjunctive clauses with a present subjunctive never contain a T projection; they can only project a v-Phrase.

The proposal that the present subjunctive is tenseless (i.e., it's a v-P) is supported by data where an intermediate verb appears between a past matrix verb and another embedded verb in the past. SOT is subject to minimality conditions such that if a present tense, for example, is to intervene between a matrix past and an embedded

past tense then SOT is blocked (Ogihara 1995). This configuration is illustrated in (11) and an example is given in (12).

11.　　　*[PAST … [PRES … [PAST]]]

12.　　　*Juan　me　**aseguró**　que　mañana　le　**cuenta**
　　　　　Juan　me　assure.3S.Past that　tomorrow　her　tell.3S.Pres

　　　　　a　su　madre que　**iban**　a　cenar
　　　　　to　his　mother that　go.3PL.Past　to　have.dinner
　　　　　*"Juan assured me that tomorrow he will tell his mother that they would have　dinner"

In (12) the most embedded finite verb *iban* "(they) were going to" cannot appear in the past tense because the present tense in *cuenta* "(he) tells" blocks application of SOT from the matrix clause. Note that if we replace the present tense of the intervening verb with its infinitive form, then there is no non-past tense intervening between *iban* and the matrix predicate so SOT can apply and the sentence becomes grammatical.

13.　　　Juan　me　**aseguró**　**contarle**　mañana　a　su
　　　　　Juan　me　assure.3S.Past tell.Inf.　tomorrow　to　his

　　　　　madre que　**iban**　a　cenar　juntos
　　　　　mother that　go.3PL.Past　to　have.dinner　together
　　　　　"Juan assured me to tell his mother that they were going to have dinner together"

When we insert an intervening present subjunctive between two past tenses as in (11) SOT is not blocked. The three sentences in (14) are grammatical. The grammaticality of (14a) and (14b) can be explained if no tense is intervening between

the matrix and the most embedded verb. (14c) is grammatical because the intervening

tense is past so this past tense then triggers SOT on the following verb.

14. a. Juan **quería** ayer que le **cuente** a
   Juan want.3S.Past yesterday that her tell.3S.Pres.Subj to

   su madre que **iban** a cenar juntos
   his mother that go.3PL.Past to have.dinner together
   "Juan wanted me yesterday to tell his mother that they would have
   dinner together"

   b. Juan **quería** ayer contarle a su madre
   Juan want.3S.Past yesterday tell-her.Inf to his mother

   que **iban** a cenar juntos
   that go.3PL.Past to have.dinner together
   "Juan wanted yesterday to tell his mother that they would have dinner
   together"

   c. Juan **quería** ayer que le **contara** a
   Juan want.3S.Past yesterday that her tell.3S.Pres.Subj to

   su madre que iban a cenar juntos
   his mother that go.3PL.Past to have.dinner together
   "Juan wanted me yesterday to tell his mother that they would have
   dinner together"

Sentence (14a) also supports the proposal that embedded clauses with a present

subjunctive are v-Phrases and cannot be woll-Phrases. Under Wurmbrand's analysis,

woll-Ps contain a tense component that can be either PRES or PAST. When the tense

is PRES, we get a future (e.g., *will)* and with PAST we get the future of the past (i.e.,

would). If there was a PRES component to the structure of the present subjunctive (by

virtue of the fact that its morphology is/was present), then SOT would be blocked in

(14a).

In short, in Argentinean Spanish there is evidence to suggest that the present subjunctive is a tenseless finite verb form. As a result, it can appear embedded under past tense matrix predicates and its behavior in the syntax resembles that of an infinitive. SOT being a property of tensed clauses; this development suggests that SOT is now only active with the past subjunctive in Argentinean Spanish. When the present subjunctive appears in an embedded clause to a past matrix clause, the temporal interpretation is derived by the syntax of tenseless forms (structure of vp-Phrase and matrix predicate).

8. Conclusion

By looking at variation in the tense of the subjunctive in complement clauses from corpus data, we have shown that the rate of violations of CT is different in the three countries under investigation. Argentinean Spanish is much more different than the other two countries because violations of CT occur at a much higher rate than in Mexico or Spain. In addition, no lexical effects of the embedded verb in violations of CT were found, but we did find that the matrix predicates differ in the amount of variation found in each one. We also saw that the semantic categories usually associated with the predicates we used (volitionals and causatives) do not seem to behave as a category. Rather, it seems that CT and violations thereof are a property of lexical verbs and not of larger semantic categories.

I also discussed the nature of what may allow violations of CT to appear at higher rates in Argentina. I claimed that the change involves the loss of tense in the

present subjunctive. As a result of this change, SOT is now a property of clauses with past subjunctive only in Argentina Spanish. In other words, the past subjunctive signals application of SOT. The temporal interpretation of the present subjunctive, on the other hand, is subject to the same syntactic mechanisms as infinitival clauses. I presented data supporting the argument that the present subjunctive is tenseless showing that it patterns with infinitives, not with present tenses, in cases where SOT is subject to minimality conditions.

CHAPTER 4

SENTENCE ACCEPTABILITY EXPERIMENT

1.   Introduction

In the previous chapter we looked at the results of the corpus study and saw that in Argentinean Spanish there is a lot of variation between present and past subjunctive in complement clauses of past matrix verbs. Mexico and Spain both show comparatively little variation but the difference in variation between the two was statistically significant. However, we were unable to determine what was driving the choice of present or past subjunctive in any of the three varieties. We showed that type frequency of the embedded verb was not a determining factor as it appeared that any verb could potentially appear in either subjunctive tense. In order to account for the higher rates of present subjunctive found in Argentina, I claimed that the present subjunctive is tenseless and proposed that Sequence of Tense (SOT) in Argentina was only a property of the past subjunctive because SOT only applies to tensed clauses. The present subjunctive being tenseless entails that it is subject to the same syntactic principles as infinitival clauses and therefore no SOT applies in present subjunctive clauses.

A question that remains unanswered is whether there is any relationship between the temporal interpretation of the embedded clause and the possibility of the present subjunctive as an alternative variant to the past. In other words, we do not yet know whether the present subjunctive is allowed in *any* embedded clause of a past matrix tense regardless of its temporal interpretation. Recall that in standard Spanish

we can find a present subjunctive embedded under a past matrix verb if the context allows for a Double Access Reading. As we saw in Chapter 2, a DAR interpretation becomes available when the context allows the embedded event to be interpreted either simultaneous with the matrix event and utterance time or subsequent to them (Laca 2010b). Although I have provided data to show that the present subjunctive does appear in absence of DAR, we do not have quantitative data regarding the role of the temporal interpretation of the embedded clause in the variation of the present/past subjunctive in any dialect. In order to explore this question, we conducted an acceptability judgment task with speakers from the three countries.

The main goals of the experiment were to (i) examine and compare the acceptability of the present subjunctive under a past matrix clause in each country and (ii) determine which factors may or may not mitigate its acceptability.

We will show that Mexico and Spain tend to pattern together with respect to the behavior of the subjunctive tenses and the availability of DAR effects. In addition, we find strong application of *Concordantia Temporum* (CT) in Mexico and Spain when the embedded clause refers to past events. Argentina behaves quite differently from the other two countries. Regarding Argentina, we will show that the two subjunctive tenses behave differently than in Mexico and Spain, and they appear to be in free variation. DAR effects are found but they are much smaller than in the other two groups. We conclude that Argentina is in a transitional state and that the free variation in subjunctive tense found under past matrix clauses is the result of the

expansion in the distribution of the present subjunctive into contexts that were originally characteristic of the past subjunctive.

2. Loss of Subjunctive Tense: What are the signs?

As I mentioned above, one of the main goals of this experiment was to determine what factors play a role in the availability of the present subjunctive under a past matrix clause. Based on the corpus study, we knew Argentina allows for a much higher rate of present subjunctive under a past matrix clause. I also showed evidence that supports the claim that the present subjunctive in Argentina must be tenseless and this is why it appears under past tense matrix clauses at a much higher rate.

From the corpus data, however, the contexts of the CT violations could not always be established. In particular, it was unclear whether the present was allowed only with DAR (*Quería que me ayudes mañana* "I wanted you to help me tomorrow") or whether it was also allowed for unambiguously past contexts (*Quería que me ayudes hace dos días* "I wanted you to help me two days ago). With this in mind, an experiment was designed to manipulate the interpretation of the embedded clause with the presence of temporal adverbials. We had two possible interpretations of the embedded clause: *future* to test for DAR effects, and *past* to test for the possibility of the present subjunctive appearing in unequivocally past contexts (i.e., in absence of DAR).

If the present subjunctive is tenseless in Argentina, we expect that interpretation of the embedded clause would be irrelevant in the choice of the subjunctive. If present and past subjunctive are essentially equivalent for these

speakers, we then expect both tenses to be equally possible regardless of the temporal interpretation of the clause. If, on the other hand, the past subjunctive has taken on some other, more specialized meaning for these speakers, we might then expect a strong preference for present subjunctive, again regardless of the temporal interpretation. We illustrate each of these scenarios in figure 4.1.
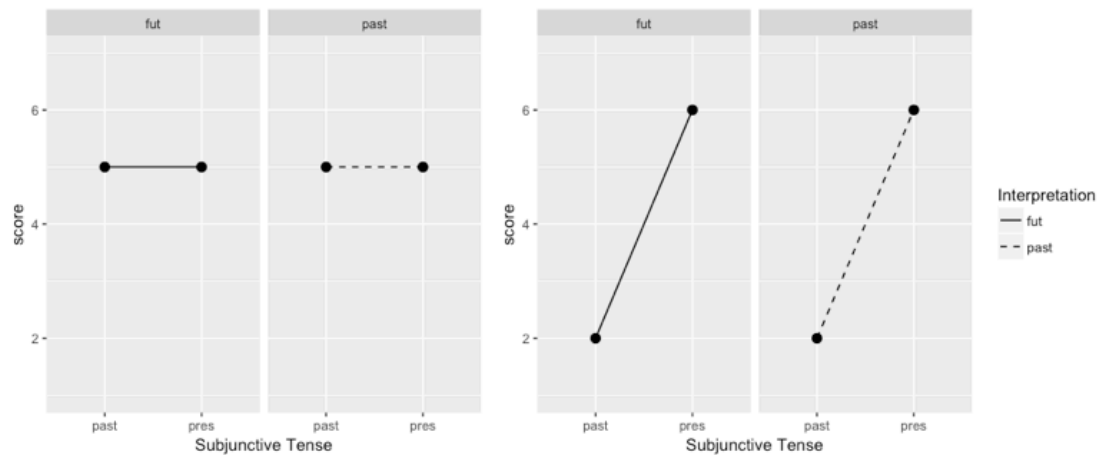
Figure 4.1. (Left) Expected results if no tense distinctions are found. (Right) Expected results if present is preferred over the past subjunctive.

Speakers who maintain a tense distinction between present and past subjunctive should allow present when the clause has a future interpretation (the "DAR interpretation"), but should not when it has a past interpretation. This scenario is represented in Figure 4.2 (left) below. Speakers for whom CT is an absolute requirement, regardless of the temporal interpretation of the clause, should always show a strong preference for the past subjunctive, as shown in Figure 4.2. (right).
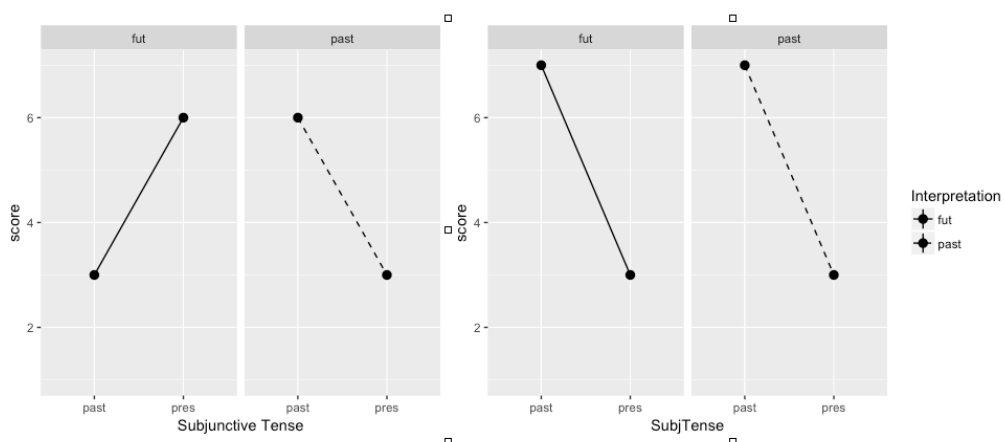
Figure 4.2. (Left) Expected results with DAR effects. (Right) Expected results with no DAR.

Three predicate types representative of their class were chosen: volitionals (*querer* "want"), directives (*pedir* "ask") and causatives (*lograr* "manage"). These are the three classes of predicates that take obligatory subjunctive: that is, they never allow an indicative embedded clause. Moreover, predicates with obligatory subjunctive, also known as *intensional* subjunctives, (Stowell 1997, Quer 1998) are the type claimed to enforce CT proper (Quer 1998, Laca 2010b).

Having said this, it is also expected these three predicates will behave differently with respect to CT. As I discussed in Chapter 3, volitional predicates have been found to place very strict CT requirements and do not allow a present subjunctive under a past matrix clause (Suñer and Padilla-Rivera 1987). On the other hand, directives and causatives are potentially more flexible because, in terms of Suñer and Padilla-Rivera analysis, they are lexically specified with a [PRECEDENCE] feature that requires that the embedded event be interpreted after the matrix event. This feature should make a DAR interpretation more easily accepted. Once more, if we find no CT

with volitionals (assuming there is no CT with the other two predicates as well) it is likely that the distinction between present and past subjunctive has been lost in this environment.

In short, the experiment will help us characterize the variation in subjunctive tense in each country in a more precise and systematic way in terms of the possible interpretations of the embedded clause (future or past) and the type of matrix predicate (volitional, directive and causatives). If present and past subjunctive are not distinct when embedded under a past matrix clause then we expect the scenario in Figure 4.1. If present subjunctive is the preferred form in general because the past subjunctive has been lost, then we expect to obtain results as in Figure 4.2. If interpretation of the embedded clause matters such that speakers distinguish between future (DAR) vs. past embedded events then the scenario in Figure 4.3 should obtain; this possibility should be stronger with causatives and directives. If interpretation does not matter and CT is always applied then we should obtain results as in Figure 4; this is how the volitional predicate should behave based on the theoretical analyses.

3.   The Experiment

3.1   Participants

A total of 129 native Spanish speakers participated in the study. The participants from Mexico and Spain were recruited on Amazon Mechanical Turk (mTurk). Argentinean speakers were recruited on social media[12]. All participants were

---

[12] Since very few Argentinean speakers were available on Amazon Mechanical Turk (AMT), speakers from this country were recruited outside the AMT platform.

native speakers of Spanish, were natives of the country in which they were tested, and were living in that country at the time of the experiment.

Mexican and Peninsular Spanish participants were paid through mTurk but Argentinean participants were not paid. However, they were not aware that there were other participants being paid for participating.

We had to remove certain participants for various reasons. We used the fillers to gauge participants' attention to the task. We calculated the mean and standard deviation for each filler and counted how many responses deviated 2 standard deviations from the mean per participant. Participants whose performance on the filler items suggested they were not attending to the task (more than 20 responses that were more than 2 standard deviations away from the mean for that item) were removed before analysis. 3 participants from Argentina, 1 from Mexico, and 3 from Spain were removed for this reason. 5 participants were also removed from Spain because they were not native speakers of Spanish or were not natives of Spain. In addition, 3 speakers from Mexico and 4 from Spain were selected at random for removal in order to maintain proper counterbalancing (i.e., the same number of participants across lists of stimuli).

This left us with a total of 110 participants that were analyzed. Number of participants and mean age of participants in each country are presented in table 4.1.

Table 4.1. Number of participants and mean ages by country.

	Argentina	Mexico	Spain
N	34	38	38
Mean Age	31.76	32.13	31.84

3.2 Materials

The acceptability judgment experiment had a 2x2x3 design with INTERPRETATION, SUBJUNCTIVE TENSE and MAIN PREDICATE as factors. Interpretation refers to whether the embedded clause had a future or past adverbial to eliminate ambiguity about its interpretation with respect to the matrix clause. By manipulating the interpretation of the embedded clauses we were trying to establish whether the possibility of a DAR interpretation had any effect on acceptability. Subjunctive tense was either present or past and the predicates used were *querer* "to want"*, lograr* "to manage to make somebody do something" and *pedir* "to ask". These three predicates were chosen because of the different degrees to which they have been claimed to allow violations of SOT and they are taken to be representative of their whole semantic class: *querer* "want" is a volitional predicate, *pedir* "ask" belongs to the class of directives and *lograr* "manage to make somebody do something" is a causative predicate. In terms of their flexibility as to violations of SOT, volitionals are the strictest predicates and this seems to simply be a lexical characteristic of this group. In theory, volitionals should allow violations of SOT (under DAR effects) because their clausal complement always receives a forward-shifted interpretation, meaning that the event of the embedded clause is always understood to take place after

event time (with non-perfect forms) in the past, and after event time and utterance time in the present tense. In this regard they pattern with directives and causatives. However, it has been claimed that native speakers do not accept violations of SOT with volitionals (Suñer and Padilla-Rivera 1987). Directives and causatives both have a lexical [+SUBSEQUENT] feature that requires that the event in the complement clause be interpreted after the event time of the matrix clause (Suñer and Padilla-Rivero 1987, Laca 2010b). In addition, causatives, unlike directives or volitionals, presuppose the truth of the proposition in the embedded clause (e.g., #I made John go but he didn't go) and do not allow a temporal interpretation of the embedded clause that is different from the matrix clause (Wurmbrand 2014). This strongly suggests that a violation of CT with a causative in the matrix clause should not give rise to DAR effects because DAR entails that the event has not happened, whereas causatives require the event to have happened.

The following is an example of the four experimental conditions with the predicate *querer* "to want" for the test item "I wanted Maria to clean her room yesterday/ tomorrow"

(a) PAST INTERPRETATION, PRESENT SUBJ, PREDICATE: QUERER
Quería que Marina limpie el cuarto ayer.

(b) PAST INTERPRETATION, PAST SUBJ, PREDICATE: QUERER
Quería que Marina limpiara el cuarto ayer.

(c) FUTURE INTERPRETATION, PAST SUBJ, PREDICATE: QUERER
Quería que Marina limpiara el cuarto mañana.

(d) FUTURE INTERPRETATION, PRES SUBJ, PREDICATE: QUERER
Quería que Marina limpie el cuarto mañana.

The stimuli were created by creating lexical sets and then switching the main predicates. Each embedded clause was given a time adverbial in the past and in the future (last night → tomorrow night; last week → next week; two days ago → in two days, etc). We created 360 sentences. Once the sentences were done, I checked that they sounded natural with the three predicates and adjusted those that did not. The next step involved applying a Latin Square design to create 12 sets with 5 sentences of the same condition, totaling 60 test items each (5x4(conditions)x3(predicates)). The test items were pseudo-randomized. 68 fillers with varying degrees of grammaticality (random assortment of words, agreement mismatch (gender and/or number) and fully grammatical sentences) were interspersed manually to ensure items with the same predicate did not appear consecutively and to prevent participants from figuring out the point of the experiment. No filler had the same structure as the test items, meaning there was no filler that had a matrix past and a subjunctive embedded clause (in any subjunctive tense). The grammatical and medium-level fillers were all bi-clausal with a main verb in the present if it was a subjunctive triggering predicate. If the main verb required the indicative in the embedded clause, either present or past tense was used for the matrix verb. The fillers appeared in the same order of presentation in each set. An example of a filler for each degree of grammaticality is shown in table 2.
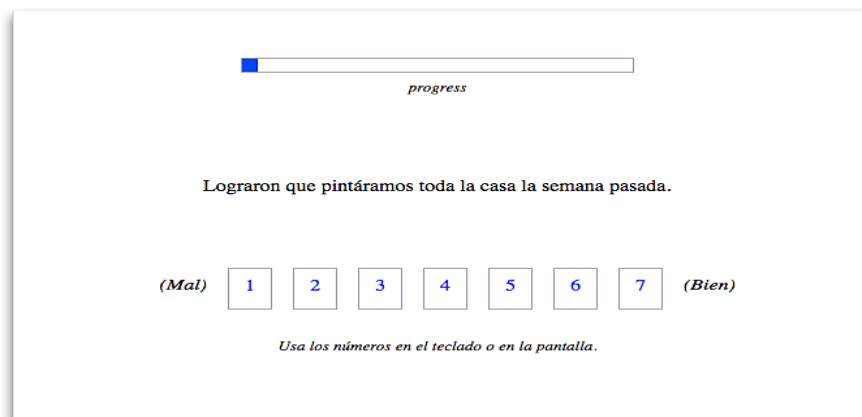
Table 4.2. Examples of a filler of each type.

Type	Filler
BAD	Basura los tener pensó la hombres. trash the.masc.pl to.have he.thought the.fm.sg men
MEDIUM	Creen que **la día** fue caluroso. they.believe that the.sg.fem day(masc) was hot "They think the day was hot" (gender mismatch between determiner and noun)
GRAMMATICAL	Espero que el jefe no me despida. "I hope my boss won't fire me"
GRAMMATICAL	Creen que las olas son peligrosas "They think the waves are dangerous"

3.3 Procedure

The experiment was conducted using the Ibex platform (http://spellout.net/ibexfarm/) for linguistics experiments. For Mexican and Peninsular speakers, the link to the experiment was posted on Mturk and the participants were given a code to enter on Mturk once the experiment was finished. Argentinean speakers were given the link to the experiment via email.

Each participant saw a sentence and had to rate the sentence using a scale from 1 (bad) to 7 (good). Sentences were presented one by one on a computer screen with the number scale below the sentence. Participants could either click on the number on the screen or tap the number on the computer keyboard. The scale was arranged from 1 to 7, left to right. The word *mal* "bad" appeared next to 1, and *bien* "good" appeared next to the number 7. After the participant had rated the sentence, the next sentence appeared automatically. Participants saw each sentence once, and could not go back after rating the sentence. An example of the layout of the screen is shown in figure 4.3.

progress

Lograron que pintáramos toda la casa la semana pasada.

(Mal) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | (Bien)

Usa los números en el teclado o en la pantalla.

Figure 4.3. Sample question on Ibex.

4. Predictions

Based on our corpus results and the theoretical analyses of SOT in Spanish presented in Chapter 2, we came up with predictions regarding SubjTense, Interpretation and DAR. Before introducing each prediction, I will go over what each possible scenario would look like in a graph as in section 1, but here a statistical definition for each of these theoretical scenarios will be provided as well.
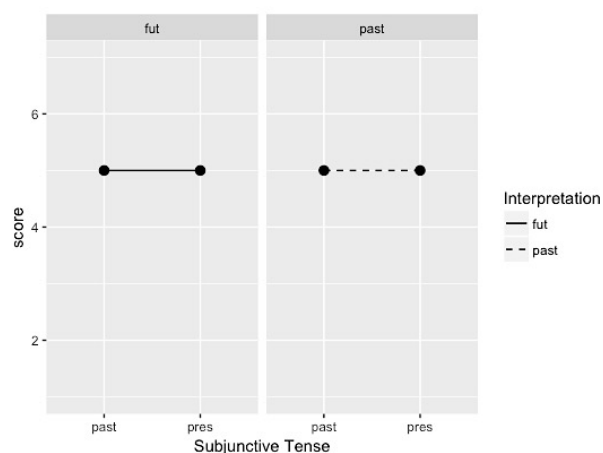
1. Definition

- No main effect for SubjTense

- No interaction between SubjTense & Interpretation

Figure. 4.4. Expected results if no tense distinctions in subjunctive are found
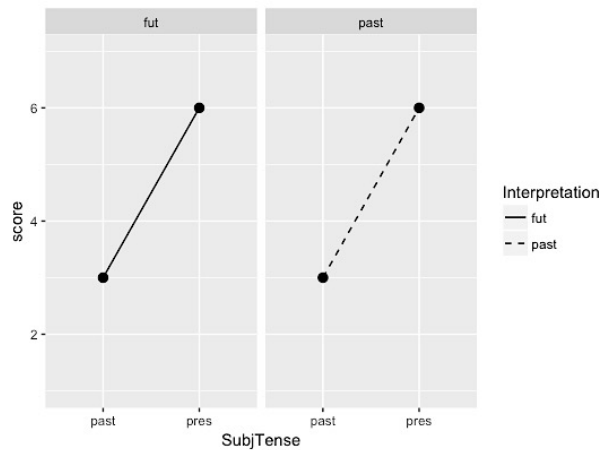
Figure. 4.5. Expected results if present is preferred over past subjunctive.

2. Definition

- Main effect for Tense (with present higher than past)

- No interaction between Tense & Interpretation

3. Definition

- Interaction between Tense & Interpretation

- Positive Differences-in-Difference score (DD)[13]
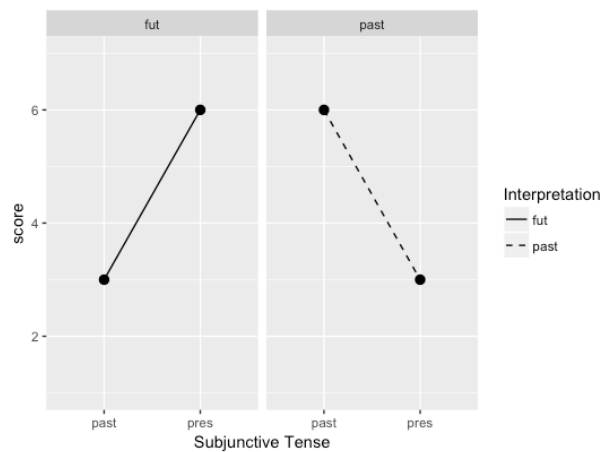
Figure. 4.6. Expected results if DAR effects are available and CT is obeyed

---

[13] The formula and explanation for the DD score is given in section 5.2.

score (y-axis), SubjTense (x-axis), panels: fut, past; Interpretation: fut, past

4. Definition

- Main effect for SubjTense (with past higher than

- No interaction between SubjTense*Interpretation
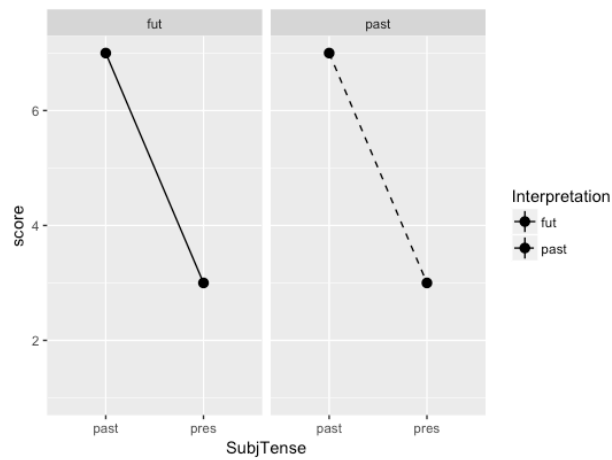
Figure. 4.7. Expected results if DAR effects are not available and CT is obeyed

With these definitions and scenarios in mind, I will now present the predictions for the experiment.

4.1   Tense

If speakers treat present and past subjunctive tense as equivalent, we expect to find no significant difference between these two tenses for any given interpretation. That is to say, there should be no main effect for SubjTense and no interaction between SubjTense and Interpretation. The corpus study suggested that this might be the case for Argentina speakers. Other speakers appear to distinguish between the two tenses, and if this is true, we expect to find significant differences between the two tenses for any given interpretation.

4.2   Interpretation

If speakers allow a DAR reading, we should find an interaction between SubjTense and Interpretation. More specifically, there should be a greater increase in acceptability from past to present with the future interpretation than with the past interpretation. Moreover the DD score for size effect should result in a positive value.

4.3   Predicate type

4.3.1   QUERER

As I discussed in Chapter 2, the literature is not in complete agreement as to whether violations of CT with a DAR reading are possible with volitional predicates. One analysis argues that although we should find DAR effects with volitionals because of their future-oriented semantics, native speakers uniformly regard violations of CT as ungrammatical (Suñer and Padilla-Rivero 1987). Laca (2010b), however, argues that DAR effects are perfectly compatible with volitionals, the only difference being that DAR effects arise from a temporal configuration where the time of the embedded clause follows the time of the matrix (unlike the better studied configuration where DAR effects arise from double simultaneity: the time of the embedded clause must be simultaneous both with the time of the matrix clause and utterance time). If the claims by Suñer and Padilla-Rivera are on the right track, then we should find no DAR effects with *querer*, which would mean there should be no interaction between SubjTense and Interpretation. On the other hand, if the claims advanced by Laca are correct, we should find a significant interaction between these two factors.

4.3.2 LOGRAR

Although causatives are also future-oriented predicates, thereby allowing for DAR effects, we expect that the presupposition they impose on the embedded proposition will block a DAR interpretation. Therefore we expect no interaction between SubjTense and Interpretation and a negative value for the DD score.

4.3.3 PEDIR

Since directive predicates readily allow for DAR effects, we predict that a future interpretation of the embedded clause will improve acceptability of the present subjunctive in Mexico and Spain (provided they are sensitive to DAR effects).

5. Results

5.1 Fillers

Before discussing the results of the test items, I will present and discuss the results of the fillers. All in all, the results of the fillers confirm and strengthen the results from the test items in that the three countries are behaving in a similar fashion with the three types of fillers. Table 4.3 reports the means of the raw scores for each country.[14]

---

[14] Because Argentina differed so much from Mexico and Spain in the test items, we decided to analyze the fillers with the raw scores instead of the standardized z-score because the mean of each test item was much higher than for the other two groups and therefore the z-scores for the fillers would be affected by this difference in a non-meaningful way.

Table 4.3. Mean and SD of filler raw scores

Country	Mean	SD
Argentina	3.33	2.74
Mexico	3.73	2.61
Spain	3.81	2.55

In Figure 4.8 we report the mean of each filler type per country. Figure. 4.8 shows that all three groups made the same distinctions across the three types of fillers. The Argentina group appears to use the lower end of the numerical scale more (note that their mean ratings for the M and R fillers are slightly lower than for the other two groups), but they still make the same three-way distinction that the other groups do. As will be seen below, the results of the test items will be transformed to z-scores, which are designed to account for these small differences in the use of the scale.
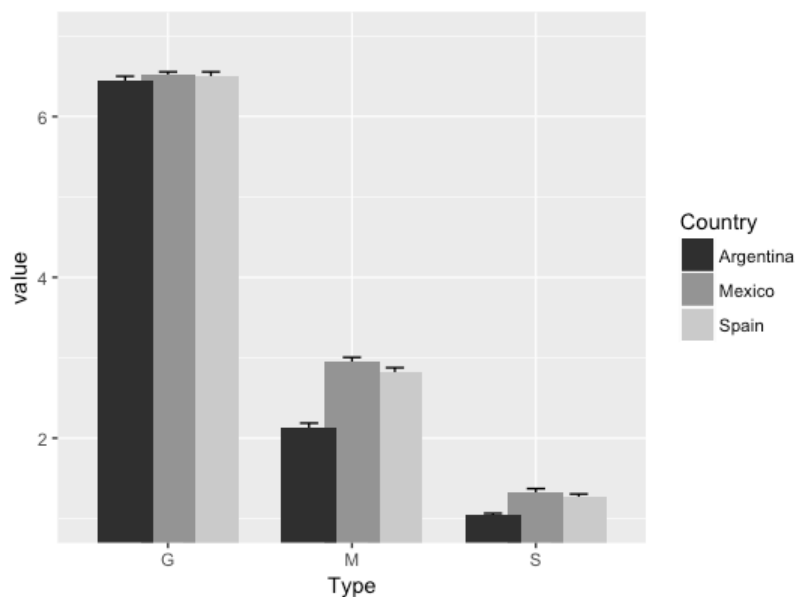
Figure 4.8. Raw Mean Scores per Filler Type (G: grammatical; M: medium; R: random)

5.2   Test Items

Raw scores were z-score transformed prior to analysis to eliminate individual variation in the use of the numerical scale. Table 4.4 shows the overall means and standard deviations in z-scores and figure 4.9 shows the overall means with standard error.

Table 4.4. Overall means and standard deviations.

Interpretation/SubjTense	Argentina		Mexico		Spain	
	Mean	SD	Mean	SD	Mean	SD
fut/ past	0.3337	0.7594	0.4432	0.7352	0.4584	0.7589
fut/pres	0.4463	0.7313	0.371	0.7397	0.1907	0.7852
past/past	0.489	0.6741	0.5475	0.692	0.5876	0.7114
past/pres	0.3778	0.7419	-0.067	0.7848	-0.1692	0.7696
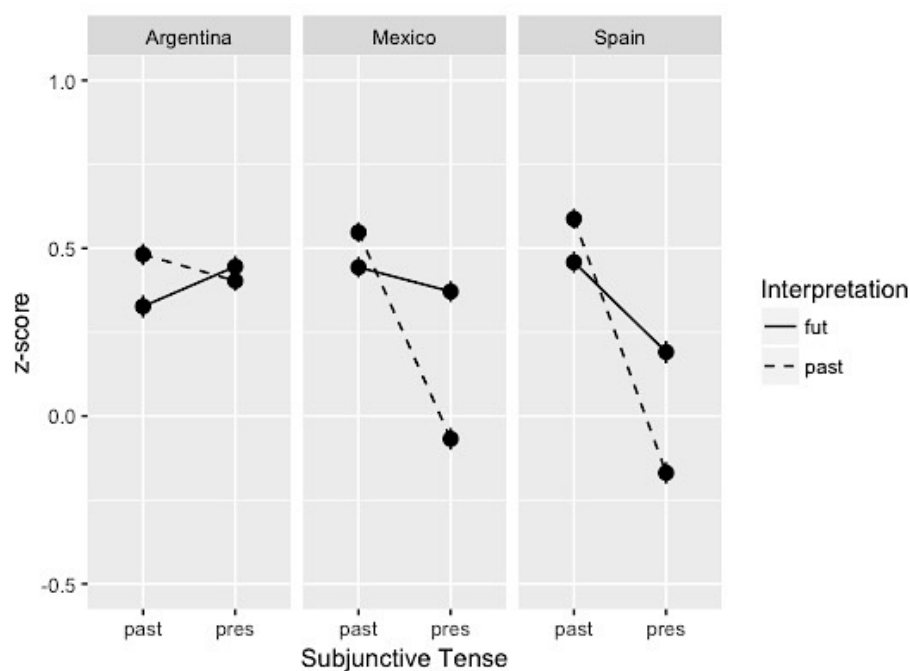
Figure 4.9. Total Results of Interaction of Subjunctive Tense and Interpretation

To test for main effects and interactions, we ran linear mixed effects models with items and participants as random factors and INTERPRETATION, SUBJUNCTIVE TENSE and PREDICATE as fixed factors. To obtain p-values we used the Likelihood Ratio test, which is a test that compares two models, one with the factor or interaction of interest and the other without it. Table 4.5 reports the p-values for each fixed factor and their interactions per country.

Table 4.5. *P*-values for each factor in the linear mixed-effects model. Significant effects are shaded.

	Argentina	Mexico	Spain
Subj Tense	0.980	< 0.001	< 0.001
Interpretation	0.364	< 0.001	< 0.001
Predicate	0.05	< 0.001	< 0.001
Subj Tense*Interpretation	0.0021	< 0.001	< 0.001
Predicate*Interpretation	< 0.001	0.114	0.2837
Predicate*Subj Tense	0.7532	< 0.001	< 0.001

Except for the interaction between Predicate and Interpretation, all main effects and interactions are highly significant in Mexico and Spain. In Argentina, there is a significant main effect for Predicate, but there is no main effect for Subjunctive Tense or Interpretation. The two interactions involving the factor Interpretation are significant, but no significance was found for the interaction between Predicate and SubjTense.

We also looked at Country as a factor. When all three countries are combined into one single experiment, Country is a highly significant factor ($p < 0.001$).

Next, each predicate was analyzed individually beginning with *querer* "to want". Figure 4.10 reports the predicate *querer* across conditions in each country.
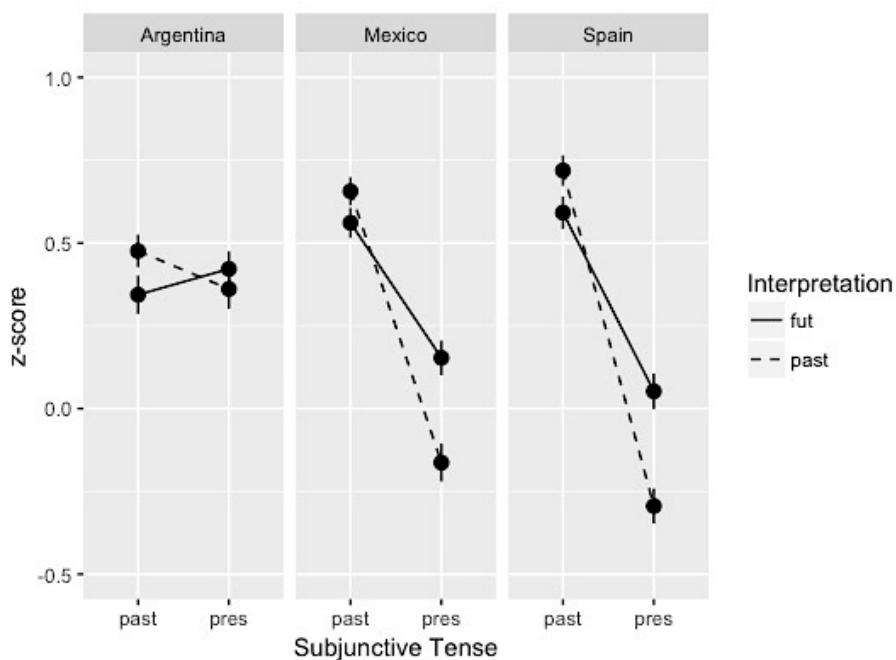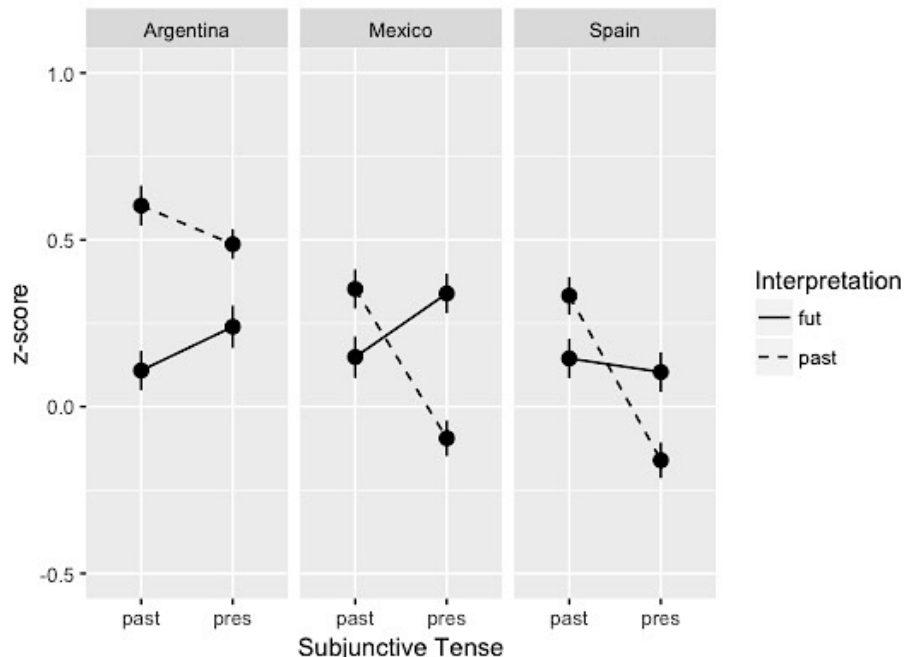

Figure 4.10. Predicate *querer* across conditions per country.

In both Mexico and Spain, there is a main effect for Subjunctive Tense (Mexico: $p < 0.001$; Spain: $p < 0.001$), and an almost significant effect for Interpretation (Mexico: $p = 0.056$; Spain: $p = 0.055$). In both groups, there is also a significant interaction between Subjunctive Tense and Interpretation (Mexico: $p < 0.001$; Spain: $p < 0.001$). In Argentina, on the other hand, there is no main effect for either Subjunctive Tense ($p = 0.765$) or Interpretation ($p = 0.564$), and there is no interaction between these two factors ($p = 0.06$). In addition, in order to determine whether there was a distinction between present and past subjunctive, we looked at the differences between the two subjunctive tenses within each interpretation per country.

In Argentina, this difference was not significant in either interpretation (Future: $p = 0.28$; Past: $p = 0.12$). In Mexico and Spain, the difference was highly significant with the present subjunctive degrading acceptability in both interpretations in both countries (Spain: Fut: $p < 0.01$; Past: $p < 0.01$; Mexico: Fut: $p < 0.01$; Past: $p < 0.01$).

In sum, with the predicate *querer* "to want", there is no evidence for the past and present subjunctive having different interpretations in Argentina as the lack of a significant main effect of SubjTense, and the absence of a significant effect in the differences between the two tenses within each interpretation reveal. The marginal effect for the interaction between SubjTense and Interpretation suggests that there might be a small DAR effect. In Mexico and Spain, on the other hand, the present subjunctive shows a significant decrease in acceptability and the differences between the two tenses within each interpretation is highly significant, suggesting that, unlike Argentina, these two tenses are treated differently by speakers. In addition, the highly significant interaction between SubjTense and Interpretation suggests that *querer* is sensitive to the interpretation of the embedded clause (contra Suñer and Padilla-Rivera 1987). As we mentioned in our predictions, both these countries appear to obey the CT requirement with *querer*.

The following predicate is *lograr* "to manage" and the results are shown in figure 4.11 below.
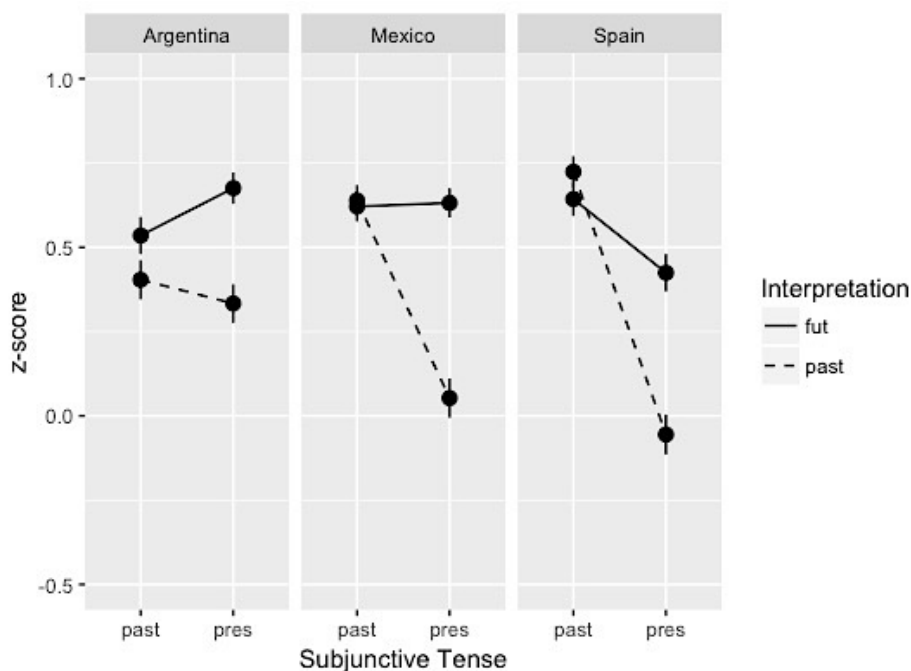
Figure 4.11. Predicate *lograr* across conditions per country.

There is a significant main effect for SubjTense in Mexico (p = 0.0041) and

Spain (p < 0.001) but no such effect in Argentina (p = 0.96). On the other hand, there

is a significant effect for Interpretation in Argentina (p < 0.001) but no effect was

found in Mexico (p = 0.08) and Spain (p = 0.36). In addition, there is a significant

interaction between SubjTense and Interpretation in the three groups (Argentina: p =

0.04; Mexico p < 0.001; Spain: p < 0.001). Regarding the differences between the two

tenses within each interpretation, we found again no significant difference between

present and past subjunctive for either interpretation in Argentina (Fut: p = 0.17; Past:

p = 0.19). We found a significant difference in Mexico in Interpretation: Past (p <

0.001) but no significant difference was found in Interpretation: Fut (p = 0.07). Spain

shows a similar result to Mexico with a significant effect for Interpretaion: Past (p =

0.001) but no such effect was found for Interpretation: Fut (p = 0.7). Contrary to our

prediction, *lograr* is the predicate that shows the highest acceptability for present subjunctive in Interpretation: Fut given the absence of a statistically significant difference between present and past subjunctive across the three groups in this interpretation (Argentina: $p = 0.17$; Mexico: $p = 0.07$; Spain: $p = 0.70$). With *lograr* we had predicted that the presupposition it imposes on the embedded clause would block DAR effects and therefore the present subjunctive would degrade acceptability. However, we see that there is a significant interaction between SubjTense and Interpretation in the three countries suggesting that DAR effects are indeed available.

Next I will present the results for the predicate *pedir* "to ask" shown in figure 4.12.

Figure 4.12. Predicate *pedir* across conditions per country.

In Mexico and Spain there is a strong main effect for SubjTense (Mexico: $p <$ 0.001; Spain: $p < 0.001$) and Interpretation (Mexico: $p < 0.001$; Spain; $p = 0.002$) and a significant interaction between these two factors (Mexico: $p < 0.001$; Spain: $p <$ 0.001). On the other hand, there is only a significant effect for Interpretation in Argentina ($p < 0.001$) but no significant effect of SubjTense ($p = 0.57$) or an interaction between SubjTense and Interpretation ($p = 0.09$) was found. As we expected, Interpretation: Future improves acceptability of the present subjunctive, giving rise to a DAR effect in Mexico and Spain manifested by the significant interaction between SubjTense and Interpretation in these two groups. In Argentina, however, we find no interaction between these two factors so no DAR effects seem to be available for *pedir*. Moreover, as with the previous two predicates, in Argentina we found no significant differences between present and past subjunctive in either interpretation (Fut: $p = 0.08$; Past: $p = 0.46$). In Mexico, we found a similar pattern as with *lograr*; there is a highly significant difference between the two tenses in Interpretation: Past ($p < 0.001$) but no such difference was found in Interpretation: Fut ($p = 0.8$). In Spain, we found a highly significant difference in Interpretation: Past ($p =$ 0.001) as well as a significant difference in Interpretation: Fut ($p = 0.02$), where the present subjunctive degraded acceptability. The lack of a DAR effect in Argentina, coupled with no significant main effect for SubjTense and no differences between the two tenses in each interpretation, suggest that with *pedir* the two subjunctive tenses may not be distinct from each other.

## 6.	Discussion

In this section I will discuss the results in more detail focusing on the subjunctive tense and DAR effects. Finally I will discuss what the results mean in terms of the type of grammar that might be responsible for the behavior of each country with respect to these two factors.

### 6.1	Tense

The results confirm the prediction that the distinction between present and past subjunctive is much less sharp in Argentina than in the other two countries, as no significant main effect for SubjTense was found across the three predicates. In table 8^{15}, I summarize the p-values of the difference between present and past subjunctive for each interpretation per country. As shown in table 4.8, no significant difference was found in Argentina between present and past subjunctive in either interpretation across the three predicates. On the other hand, in Mexico and Spain we find a clear difference between present and past subjunctive in the past interpretation.

The slight difference between Mexico and Spain lies in the extent to which the present subjunctive degrades acceptability in Interpretation: Fut. Mexico seems to accept the present subjunctive more so than Spain, as the column Future contains no significant differences for *lograr* and *pedir* in Mexico. This means that with these two main predicates, when the embedded clause contains a future adverbial, not only does the present subjunctive not degrade acceptability, but it was rated as acceptable as the past subjunctive. In Spain, this only happens with *lograr*. However, as Suñer and

---

[15] The arrows in Mexico and Spain show the direction of the slope. An upward pointing arrow means higher acceptability and a downward arrow means lower acceptability of present subjunctive.

Padilla-Rivera claim, *querer* shows a strong CT requirement in both Mexico and Spain as is shown by the highly significant *p*-values in both interpretations. This means that both of these groups show a strong preference for the past subjunctive irrespective of the availability of a future interpretation.

Table 4.6. *p*-values of the difference between present and past subjunctive tense by predicate and interpretation

	Argentina		Mexico		Spain	
	Interpretation		Interpretation		Interpretation	
	Past	**Future**	**Past**	**Future**	**Past**	**Future**
querer	0.12	0.28	< 0.001	< 0.001 ↘	< 0.001	< 0.001 ↘
lograr	0.19	0.17	< 0.001	0.07 ↗	< 0.001	0.7
pedir	0.46	0.08	< 0.001	0.8	< 0.001	0.02 ↘

6.2. DAR Effects

Recall that DAR effects were defined as an interaction between SubjTense and Interpretation. The results of this interaction by country and main predicate are summarized in table 9 below, shaded areas show significant effects. In table 9, we can observe that Mexico and Spain pattern together in that they both show a highly significant interaction between SubjTense and Interpretation across the three predicates. On the other hand, DAR effects in Argentina are not available neither with *pedir* nor with *querer*. The only main predicate that shows a clearly significant interaction between SubjTense and Interpretation is *lograr*. Even so, we will see below that the DAR effect size is about half of what it is in Mexico and Spain.

Table 4.7. P-values for the interaction between SubjTense and Interpretation by country and main predicate

	SubjTense*Interpretation		
	Argentina	**Mexico**	**Spain**
querer	0.06	< 0.001	< 0.001
lograr	0.04	< 0.001	< 0.001
pedir	0.09	< 0.001	< 0.001
Total	0.002	< 0.001	< 0.001

In order to measure the effect size of DAR effects, we calculated the Differences-in-Differences (DD) score (Maxwell and Delaney 2003) of each predicate by country. The DD score was calculated as follows. First, we considered the two past interpretation conditions as the baseline to make the DD scores as intuitively as possible. Second, we subtracted the two means in this interpretation (past-pres). Then we subtracted the two means in the future interpretation (past-pres). Finally, we calculated the difference between these two scores. This means that if there are no DAR effects, we should get a DD score of 0. The equation we used is illustrated in (i) below.

i. $\text{DD score} = (\text{past- pres})_{\text{Interpretation: Past}} - (\text{past} - \text{pres})_{\text{Interpretation: Fut}}$

The DD score results are reported in table 4.10. In Mexico and Spain the effect size is comparable, with Mexico exhibiting an overall slightly larger effect than Spain. In Argentina, the effect size is only about half of what it is in Mexico and Spain,

which is congruent with the results in table 9 above. Recall that the interaction between SubjTense and Interpretation is not significant for *querer* and *pedir* so the small DD score for these two predicates is a reflection of this.

From the results in table 4.9 and table 4.10 we can conclude that in Argentina the interpretation of the embedded clause has only a weak effect on the choice of tense in the subjunctive; there is an interaction of tense and interpretation, but the effect size (DD score) is relatively small (0.22) and the results in table 4.9 show that the differences between the two tenses are not significant in either interpretation. Mexico and Spain appear to be more sensitive to the interpretation of the embedded clause, resulting in a significant interaction between SubjTense and Interpretation and in a larger effect size for DAR.

Table 4.8. DD Scores per Country and Main Predicate

	Argentina	Mexico	Spain
querer	0.21	0.40	0.47
lograr	0.26	0.64	0.45
pedir	0.16	0.64	0.57
Total	0.22	0.54	0.49

A question raised by the results in table 4.10 concerns interspeaker variability in DAR effects in each dialect. How similar to each other are speakers in and across each variety? In order to explore this further, DD scores of each participant were calculated in each country. The results are reported in Figures 4.13-4.15. Argentina

shows the lowest variability in DD scores and Mexico shows the highest with Spain in between the two. These are some interesting results because the dialect that is arguably going through language change (i.e., Argentina) shows the lowest variability in DAR effects, which is contrary to what one would expect from a system that is changing. In addition, it is worth noting that in the three countries there appears to be more speakers to the left of the total mean (Argentina: 0.22; Mexico: 0.54; Spain: 0.49) than to the right, suggesting that variability in DAR effects is similar in the three countries with respect to the direction of the variability: there are more speakers for whom DAR effects are lower than the mean than there are speakers for whom it is higher than the mean.
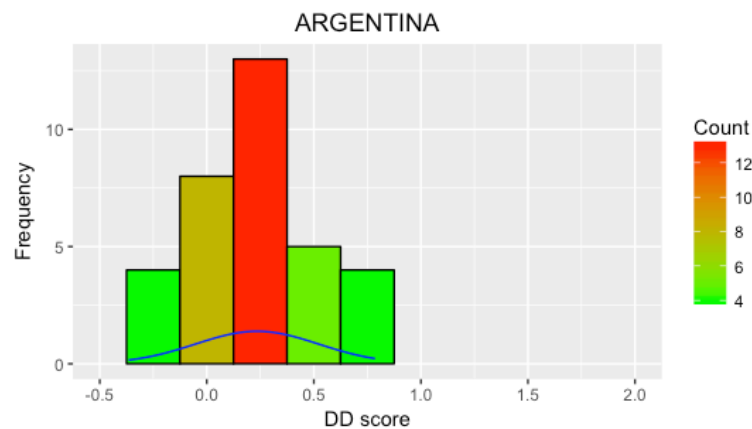
Figure 4.13. Distribution of DD scores per Participants in Argentina
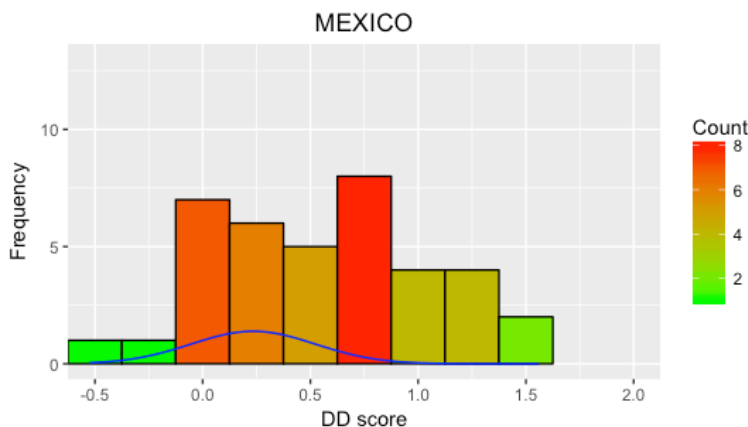
Figure 4.14. Distribution of DD scores per Participants in Mexico.
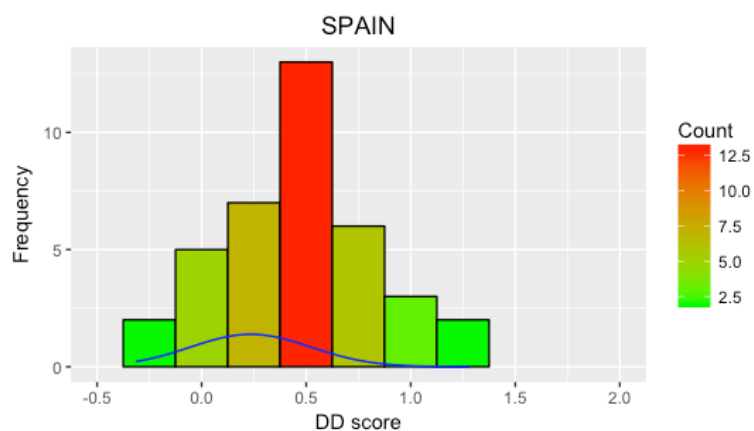
Figure 4.15. Distribution of DD scores per Participants in Spain

The fact that the present subjunctive does not lower acceptability with *lograr* in both Mexico and Spain (per Table 4.8) and that it is sensitive to DAR effects (per table 4.9) is quite unexpected. On the one hand, causatives presuppose the truth of the embedded proposition, which would seem to be at odds with a DAR interpretation where the embedded event must be unfulfilled. On the other hand, causatives like

lograr are said to impose a simultaneous requirement between the matrix and the embedded clause and do not allow a future interpretation of the embedded clause (Wurmbrand 2014), therefore a DAR interpretation should also be barred on these grounds. These results seem to reject the simultaneity requirement that this predicate is claimed to impose. It may be the case that either *lograr* behaves differently from its English counterpart (cf. *manage)* or more likely that the simultaneous requirement is only enforced for infinitival clauses. Since subjunctive clauses are finite (i.e., there is person and number agreement) the presence of agreement may allow the embedded clause to have a future interpretation.

As for the predicate *pedir* "to ask" the claim is that there is a [+SUBSEQUENT] lexical feature that allows violations of SOT because the embedded event is always interpreted after the matrix event time giving rise to DAR effects (Suñer and Padilla-Rivera 1987, Laca 2010b). The results show that the interpretation of the embedded clause does influence acceptability of the present subjunctive. This results in both Mexico and Spain exhibiting a highly significant interaction between SubjTense and Interpretation and a relatively larger DAR effect size (though in Mexico the DD score is the same as with *lograr*). On the other hand, in Argentina there is no significant interaction between SubjTense and Interpretation and a very small DAR effect size.

6.3   The Nature of the Grammar in Each Country

In this section I will try and characterize the grammar that is responsible for the type of variation that I have just described. Clearly, the same grammar cannot account for all the three countries; the question is how many different grammars do we

need? In order to do this, I summarize the major findings per country in table 11, where *yes* means a significant result and *no* means not significant.

Table 4.9. Summary of Results for SubjTense and DAR (= Interprt*SubjTense)

	SubjTense			DAR		
	querer	lograr	pedir	querer	lograr	pedir
Argentina	No	No	No	No	Yes	No
Mexico	Yes	Yes	Yes	Yes	Yes	Yes
Spain	Yes	Yes	Yes	Yes	Yes	Yes

The results in table 4.11 show very clear results with respect to SubjTense. In Mexico and Spain speakers treat these two tenses differently, as would be expected if there is a distinction between present and past tense. In Argentina, however, we were unable to find any significant differences between present and past tense across the three predicates. I interpret this result to mean that in complement clauses the distinction between present and past subjunctive, clearly present in the other two countries, has weakened substantially. This is consistent with the results obtained in the corpus study where *querer* and *lograr* both appeared around 35% of the time with each tense.

In addition, the weakening of tense distinctions entails that there are two forms in Argentinean Spanish that used to be in complimentary distribution that are now close to being in free variation under past matrix clauses. However, these two forms are not in free variation when there is a present tense in the main clause as the data in (1) shows; only the present subjunctive is grammatical.

1.   Quiero   que   comas/   *comieras
        want.1S.PRES   that   eat.2S.PRES.SUBJ   eat.2S.PAST.SUBJ
        "I want you to eat"

This means that (i) the past subjunctive is still a past tense and because it is anaphoric in CT contexts (Laca 2010b) it requires a past matrix tense to be licensed, and (ii) the present subjunctive is expanding its distribution (i.e., becoming tenseless). In other words, it is not the case that the two forms have lost their tense specification and are equally accepted anywhere. Only the present tense has changed its status in the language by becoming tenseless. By alternating in the same syntactic environment, these two forms appear to be in a doublet relationship in the language. Doublets have been argued to be dispreferred in linguistic systems (Aronoff 1976) and are said to be the result of competing forms in the process of language change (Kroch 1994). These observations suggest that the present/ past alternation in complement clauses may become unstable over time and one of these two forms could eventually displace the other. The question is, can we predict somehow which of the two forms is likely to persist in this environment at the expense of the other? I believe we can, based on theoretical and empirical arguments, and I propose an answer to this question in Chapter 5.

The fact that Mexico and Spain show a clear distinction in interpretation between present and past subjunctive entails that both subjunctives in these two varieties are [+TENSE] resulting in strong DAR effects and SOT. In Argentina, the

present subjunctive is becoming tenseless, so the distinction in interpretation between present and past subjunctive is weak, so this results in weak DAR effects and SOT.

In short, in answer to the question I posed at the beginning of this section regarding how many grammars we needed to account for these results, the answer is two: Grammar (1) with a [+TENSE] subjunctive system for Mexico and Spain (SOT and DAR come for free), and Grammar (2) with a [+TENSE] past subjunctive and a [−TENSE] present subjunctive for Argentina.

7.   Conclusion

In this chapter I have presented and discussed the results of the sentence acceptability experiment conducted with speakers from Argentina, Mexico and Spain. This experiment was designed to control for the temporal interpretation of the main clause and investigate whether it would have any effect on the acceptability of the present subjunctive under a past tense matrix clause. The balanced design of the experiment where each main predicate appeared with the same embedded clause across conditions allowed us to control for random factors that corpus data is susceptible to. The experiment yielded very clear and interpretable differences among the three countries that would have been very difficult or impossible to get with corpus data for the reasons already mentioned.

The results show that Mexico and Spain apply CT strictly whenever the interpretation of the embedded clause is past. We also saw that both of these countries exhibit a significant interaction between SubjTense and Interpretation, which we defined as DAR effects. By calculating DD scores for effect size, we determined that,

though DAR effects are available, they are relatively small and vary by main predicate. Argentina behaves very differently from these two groups, and shows no main effect for SubjTense across the three predicates. Moreover, no significant difference was found between either subjunctive tense in either interpretation, suggesting that tense distinctions in complement clauses have weakened. Argentina also exhibits DAR effects but the effect size is about half the effect size in the other two countries.

More specifically, the present subjunctive is no longer restricted to present or future contexts but can also be embedded in embedded clauses that refer to past events. Being able to appear in all embedded clauses, independently from the temporal meaning of the clause, the results support my claim that the present subjunctive in Argentinean Spanish must be tenseless.

CHAPTER 5

DIRECTIONALITY OF THE CHANGE AND THE ACTUATION PROBLEM

1. Introduction

The corpus study showed that under a past matrix clause present and past subjunctive are both used very frequently in Argentina at rates of 30% and 70% respectively. The experimental study showed lack of tense distinctions between present and past subjunctive and this was evident by the lack of significant differences between past and present subjunctive across the different interpretations of the embedded clause.

In the first part of this chapter, I will address two questions that I have touched upon in previous chapters but did not discuss in detail. The first question concerns the future development of the subjunctive system in Argentina. Relatedly, I will examine the status of the past subjunctive in the other context in which it appears, namely counterfactual *if*-clauses. Concretely, the two questions are:

(i)   Is the present situation between the present and past subjunctive stable or is the expansion of the present subjunctive likely to push the past subjunctive out of the language?

(ii)   Is the past subjunctive disappearing entirely in Argentina or just in this environment?

For questions (i) I will argue that the present subjunctive will eventually win out and become the only form available for subjunctive complement clauses. In addition, I will

show with corpus data that the past subjunctive is stable in counterfactual *if*-clauses and therefore it is not likely to disappear from the language.

The answer to these two questions points to the conclusion that these two subjunctive forms might be on a specialization path: past subjunctive for counterfactuality and present subjunctive anywhere else.

In the last part of the Chapter, I will discuss possible reasons why the loss of subjunctive tense has happened in Argentina and in the Andean varieties reported in the literature. I will show that Argentina, Peru, Bolivia and Ecuador, all countries where violations of SOT are especially high, are countries that have had, or still have, high numbers of L2 and/or bilingual speakers. This high contact situation, I claim, has resulted in the loss of a formal but semantically vacuous mechanism as SOT.

2.   Development of the Subjunctive Paradigm in Argentinean Spanish

In this section I will address the question of whether we have any kind of evidence to predict the course of development of the current subjunctive system in Argentinean Spanish. I will present two arguments to suggest that the subjunctive paradigm is likely to end up with a system where the two subjunctives will appear in separate semantic and syntactic contexts leading to specialization of forms: past subjunctive in counterfactuals and present subjunctive anywhere else.

2.1   The Principle of Contrast

The Principle of Contrast is a strategy that children use while acquiring language and it is stated as in (1) (Clark 1987).

1.   Principle of Contrast: Every two forms contrast in meaning

The Principle of Contrast operates both at the lexical and morphosyntactic level. Since the type of phenomenon this dissertation is concerned with is morphosyntactic, I will discuss the Principle of Contrast regarding morphosyntax (see Clark 1987 for a full discussion of the Principle of Contrast at other levels of language).

Clark claims that whenever there is a choice of two or more variants for the same construction a contrast in meaning must exist (also Bolinger 1977, Chafe 1971). Among the evidence he presents are the different word orders in verb-particle constructions (2a-b), the dative alternation (3a-b) and passive-active voice (4a-b).

2.   a.   They pulled the ropes in.

        b.   They pulled in the ropes

3.   a.   Jan taught Rob French.

        b.   Jan taught French to Rob.

4.   a.   Jon lit the fire

        b.   The fire was lit by Jon.

(Clark 1987: 5)

The claimed contrast in (1) is between completion of the event in (1a) versus non-completion in (1b) (Bolinger 1977). In (2), (2a) is claimed to entail that Rob learned some French but no such entailment is claimed to exist in (2b). In (4) the contrast is between focus on the agent of the event in (4a) and focus on the object in (4b).

The Principle of Contrast makes certain predictions about language acquisition, the most important of which for our purposes is that children assume that different words contrast in meaning. By assigning separate meanings to contrastive forms, children may "tidy up" the language by application of a one-to-one mapping between meaning and form in a way that may be different from the adult system (Clark 1987). For example, Mulford (1983) reports that children learning Icelandic used the agentive suffix *–ari* only for agentive terms like English nouns *walker* and *speaker,* and chose a pattern of X+N for instrument terms similar in meaning to *work-machine* in English. However, adults use both patterns for both types of meanings. A French-speaking child also analyzed the semantics of contracted form of *de* + definite determiner as only partitive in meaning (e.g, *du vin* "[some] wine") whereas the uncontracted form was used for possession (e.g., *de l'homme* " of the man, the man's) (Vinson 1915-16). In adult French, the contracted forms only appear with masculine nouns and with both partitive and possessive meanings. The child, however, extended the partitive (contracted) construction to feminine nouns producing phrases such as

da neige "[some] snow". He also used uncontracted forms for masculine nouns to mark possession (e.g., *de le garçon* instead of *du garçon* "of the boy/ the boy's). For Clark this shows that children consistently behave as if they assume that different word forms have contrastive meanings. In addition, they assume that new word forms contrast with those they have already learned.

Wexler and Culicover (1980) propose a similar learning mechanism for syntax that they call the Uniqueness Principle. They argue that children take each individual surface form in the input as the expression of one unique deep structure, corresponding to one single meaning, unless they hear evidence that the same form can be used for more than one meaning. In other words, Uniqueness constrains the mapping of surface structures onto deep structures and it states that the same meaning cannot be expressed by two different forms. In extending Uniqueness to morphology, Pinker (1984) claims that there may at most be a single realization of a given form in a language unless there is positive evidence that two forms have the same meaning. However, the existence of two distinct, yet semantically equivalent forms, violates the Principle of Contrast. This observation in turn underscores the issue of whether true optionality exists and, if it does, how stable over time it can be given the pressure of the Principle of Contrast during language acquisition.

In the case of the present and past subjunctive in complement clauses with a past matrix clause, the experiment results (Chapter 4) show that these two forms are not distinctive in Argentina and as such they are doublets: they are two morphologically distinct forms expressing the same meaning. From the point of view

of language change, a doublet is two variants competing for finite resources; in language, variants compete for use (Wallenberg 2016). Wallenberg claims that there are three possible outcomes of the competition between two variants: (i) one variant has an advantage and replaces the other, (ii) neither variant has an advantage and their use is driven by frequency, and (iii) stable variation where the two variants specialize along a continuous dimension (e.g., style). However, they argue that the Principle of Contrast ensures that the scenario in (ii) cannot persist indefinitely. This scenario is likely to result in specialization of forms to two different functions or meanings or replacement. I will argue that specialization of forms is likely to take place in Argentinean Spanish, where the present subjunctive will specialize to mark subjunctive complement clauses and the past subjunctive counterfactuality. In the next section I present corpus data to support this claim.

2.2. The Past Subjunctive and Counterfactuality

Besides appearing in SOT contexts, the past subjunctive can appear in present counterfactual constructions as in (5) below.

5. a. Si   estudiara,   me   iría   mejor.
        if   study.1S.Past.Subj   me   go.3S.Cond   better
        "If I studied, I would do better"

    b. No   lo   compraría   ni   aunque fuera   gratis
        not   it   buy.1S.Cond not   though be.3S.Past.Subj free
        "I wouldn't buy it even if it was free"

    c. Habla   como si   supiera
        talk.3S.Pres   as   if   know.3S.Past.Subj
        "He talks as if he knew (how to do it)"

In this construction, variation has been reported between the past subjunctive and the conditional (Espinoza 1930, Lavandera 1975, Corvalán 1984). For example, (5a) would become (6) for a speaker who uses this variant.

6.   Si   estudiaría,   me   iría   mejor
      if   study.1S.Cond me   go.3S.Cond better
      "If I studied (lit: would study), I would do better"

In order to examine this type of variation, a corpus study was conducted using the same corpus that was used for Chapter 3 (i.e., Web/Dialect version of Corpus del Español). We extracted all instances of *if* + *past subjunctive/conditional* + *conditional* and the reverse order *conditional* + *if* + *past subjunctive/conditional*. Table 5.1 reports the results. As can be seen from the data, we find very little variation in the corpus across the three countries. Moreover, a Fisher exact test reveals the differences among the three countries are not statistically significant ($p = 0.33$).

Table 5.1. Counts of Conditional and Past Subjunctive Percentage of Conditional in *if*-clauses.

Country	Conditional	Past Subj	% Conditional
Argentina	4	390	1.02
Mexico	2	667	0.30
Spain	6	1218	0.49

These results suggest that the change that the subjunctive paradigm is going through in Argentinean Spanish is not one of loss of the past subjunctive, but rather it appears

that it is a kind of restructuring of the system where the two forms are taking on more specialized functions. Subjunctive systems have been argued to be unstable systems (Bybee 1985) and the development of the Spanish subjunctive seems to corroborate this claim. In the next section, I will discuss the evolution of the past subjunctive in Spanish in order to show how versatile and unstable this form has been throughout the history of Spanish.

2.3.   The Evolution of the Past Subjunctive Paradigm in Spanish

As I mentioned in Chapter 3, the past subjunctive paradigm in modern Spanish contains a doublet already. Recall that there are two possible endings for past subjunctive usually referred to as the *–ra* and the *–se* forms for their corresponding endings (*cantara/ cantase* "sing.3S.Past.Subj", *tuviera/ tuviese* "have.3S.Past.Subj"). Diachronically, these two verb forms have two separate sources. The *–ra* form evolved from the pluperfect indicative in Classic Latin and it retained its indicative meaning in Old Spanish (e.g., *cantara* "I had sung"). By the 16th century the *–ra* form had lost its pluperfect indicative value, this form being replaced by the periphrastic perfect with the auxiliary *haber* "to have" (e.g. *había cantado* "I had sung") (Lathrop 1980, Klein-Andreu 1990, Penny 1991, Lapesa 1997). As the periphrastic forms continued to increase in use, the *–ra* form began to be used as a pluperfect subjunctive together with the *–se* form. By the end of the Middle Ages, the *–ra* forms had taken on the value of imperfect subjunctive (or past subjunctive more broadly) (Penny 1991).

On the other hand, the *–se* form evolved from the Latin pluperfect subjunctive. So the two contemporary past subjunctive forms were both pluperfect but one was

originally an indicative form (i.e., the *–ra* form) and the other was already a subjunctive (i.e., the *–se* form). By the end of the 17th century both of these pluperfect forms had lost the perfect value due to the increase of periphrastic forms in Spanish. The development of the *–ra* form into a past subjunctive is quite complex and proceeded gradually. The first environment in which they became interchangeable was *if*-clauses and then the *–ra* form went on to appear in purpose and complement clauses. Only in the 19th century was total interchangeability of the two past subjunctives achieved (Penny 1991).

The development of the past subjunctive paradigm, however, did not stop when the two forms became interchangeable. Per The Principle of Contrast and models of grammar competition (Kroch 1994, Yang 2002) the state where both forms became interchangeable was not stable. In fact, the competing grammars models claim that the only time when doublets exist in language is when there is grammar competition. Yang's (2002) model, which I will discuss in the next section, predicts that the grammar that is likely to win out is the grammar that is expanding and taking on meanings of the competing grammar. As expected, the new past subjunctive (i.e., the *–ra* form) kept encroaching on the older past subjunctive (i.e., the *–se* form). In contemporary Spanish, the frequency of the older form is much lower and it mainly appears with high frequency verbs. For example in the entire Corpus del Español, Web/Dialects version (Davies 2002), the *–se* form has a token frequency of 324,898 whereas the token frequency of the *–ra* form is 1,951,971, which translates into 14.2% for *–se* and 85.7% for *–ra.* The development of the two forms and the increase through time of the *–ra* form can be illustrated with Google n-grams (Michel *et al* 2010).
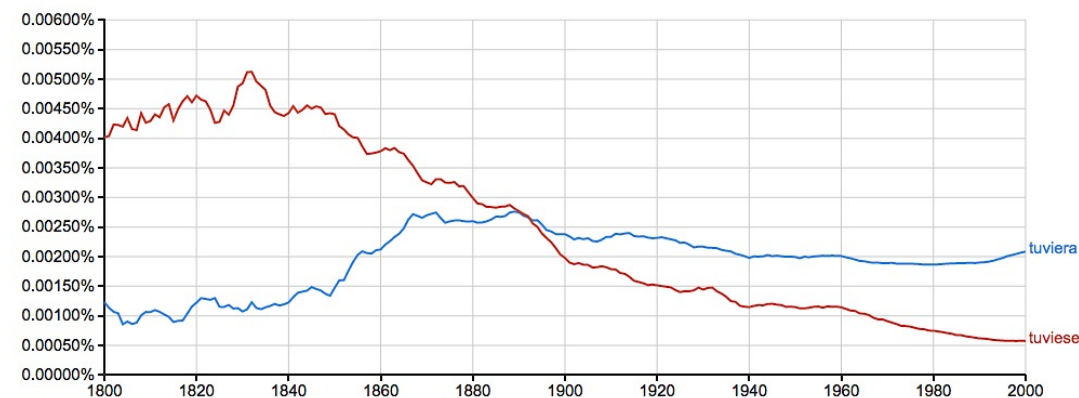
Figure 1-3 show the development of three very frequent verbs, namely *hablar* "to talk/speak", *comer* "to eat" and *tener* "to have" in both forms.

**Figure. 5.1 Development of *hablara* vs. *hablase* between 1800-2000**

Figure. 5.2 Development of *comiera* vs. *comiese* between 1800-2000

Figure. 5.3 Development of *tuviera* vs. *tuviese* between 1800-2000

The trend of these three verbs can be further generalized to the entire language by comparing the frequency of the –*se* and the –*ra* forms in the two versions of the Corpus del Español (Davies 2002). The Historical version contains 100 million words and texts from the 1200s to the 1900s. The Web/Dialects version has 2 billion words from 2000-2015. Since the development of the –*ra* form as a subjunctive did not start until the 15th century, figure 5.4 shows token frequency per million words of the two past subjunctive forms in the periods 1500-1700, 1800-1900 and 2000-2015.
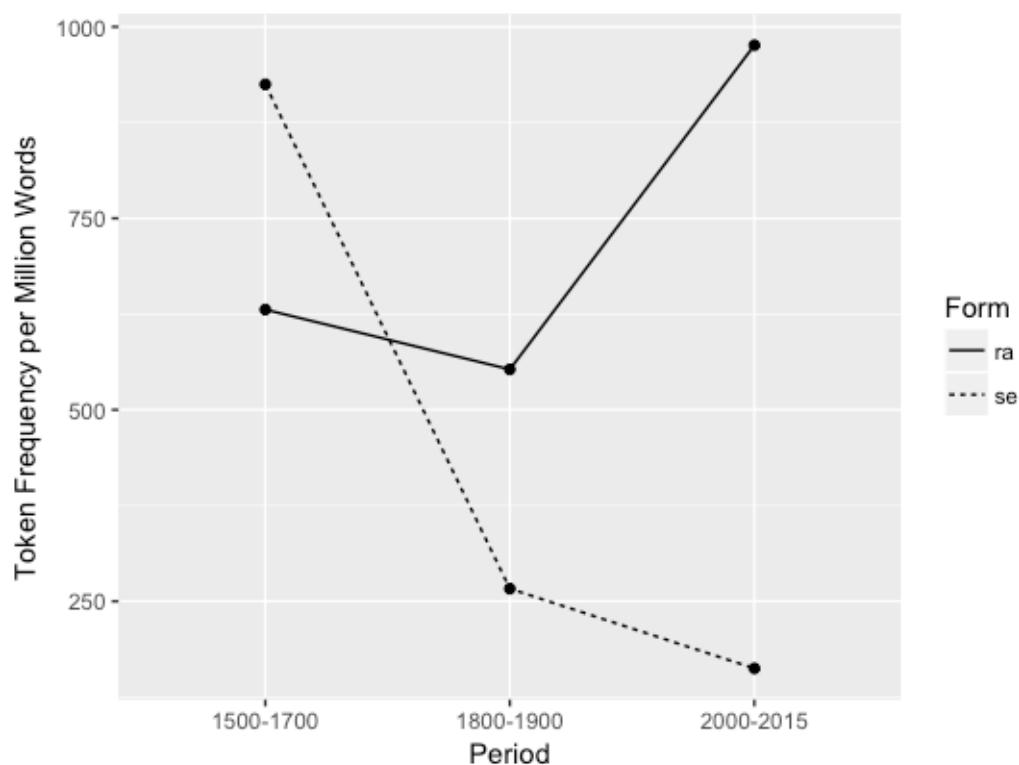
Figure 5.4. Development of the two past subjunctive forms in Spanish between the 16th and 21st century.

Another relevant development in the Spanish subjunctive was the loss of the future subjunctive. This tense developed in the Latin of Spain so it did not exist in

Classical Latin (Penny 1991). Two facts are of interest about the eventual loss of this tense. One is that this tense had barely any exclusive functions (Penny 1991). It was used in conditional clauses that expressed probability in the future, but here it alternated with the present indicative. It also appeared in future temporal clauses but in this case it alternated with the present subjunctive. Additionally, it was used in relative clauses with an indefinite antecedent with a future meaning. In this construction it has been replaced by the present subjunctive in Modern Spanish. This lack of an exclusive meaning means that the future subjunctive was always a member of a doublet, be it with the present indicative or the present subjunctive. Per the Principle of Contrast this situation was bound to be resolved somehow. In this case, the outcome was loss of the future subjunctive. The second relevant fact is what I have just described, that the future subjunctive has been replaced in most of its uses by the present subjunctive. Even in idioms where remnants of the future subjunctive may still be found, we also find an alternative of the idiom with a present subjunctive (e.g., *sea lo que **fuere*** (FUT) vs. *sea lo que **sea*** (PRES) "be that as it may"). This fact illustrates a growing trend of the present subjunctive in its distribution, which appears to be continuing to the present day in Argentinean Spanish.

The development of the past subjunctive and the replacement of the future subjunctive by the present subjunctive show an interesting case of two forms that have expanded their syntactic contexts. When the past subjunctive in *–ra* lost its indicative status and became a subjunctive, its distribution was limited to *if*-clauses where it competed with the *–se* form. Eventually, it spread into all the contexts originally limited to the *–se* form. On the other hand, the present subjunctive alternated with the

future only in future-oriented temporal clauses but it eventually took over relative clauses with indefinite antecedents, which formerly only appeared with future subjunctive. The development of the tenseless subjunctive in Argentina seems to be a step further in the process of expansion of the present subjunctive with the result that it can appear in all clauses that require non-counterfactual subjunctive.

The expansion of the present subjunctive at the expense of the past is an example of a claim that has been made about language change, namely that when a new grammar starts to encroach on the competing grammar, increasing the types of sentences that it can parse, the change is irreversible (Yang 2000). Therefore, this change in progress of the present subjunctive into contexts of the past subjunctive in Argentinean Spanish is expected to end up with the total replacement of the older form by the newer variant. In order to qualify these statements and to explore in more detail the direction the modern subjunctive system may take in Argentinean Spanish, in the next section I present Yang's (2002) model of Language Variation and Change.

2.4.   A Model of Language Variation and Change

In this section I will outline Yang's (2002) Model of Language Variation and Change in order to (i) show how the evolution of the past subjunctives in Spanish follows from this model and (ii) predict what the likely outcome of the current situation in the Argentinean subjunctive paradigm might be.

An assumption of this model is that linguistic change happens when a generation of learners is exposed to a substantially different linguistic environment

from the previous generation. The reason for this assumption is that learners have been found to be very conservative and robust learners so it is unlikely that language acquisition *per se* will introduce new changes into the grammar.

Let us assume for the sake of argument that, due to migration, social or historical factors, a linguistic environment is created for a generation of learners that is substantially different from the previous generation. This type of environment can be formally expressed as $E_{G1, G2}$, namely a mixture of expressions generated by two independent grammars: G_1 and G_2. Moreover, suppose there is a proportion α of G_1 expressions that is incompatible with G_2, and a proportion β of G_2 that is incompatible with G_1. Call $\alpha(\beta)$ the advantage of G_1 over G_2.

Under this model language acquisition is the result of competition among a population of grammars. The distribution of grammars changes in response to the evidence present in the input. Learning the target grammar is achieved by eliminating grammatical hypotheses that are not attested in the input. Formally, the model assigns a certain probability to G_i based on the algorithm in (1).

(1)   For an input sentence *s*, the child
   a.   with probability P_i selects a grammar G_i
   b.   analyzes *s* with G_i
   c.   i.   if successful, reward G_i by increasing P_i
          ii.   otherwise punish G_i by decreasing P_i

From (1) we can see that the growth of a grammar is dependent on its success to parse a sentence and on the failure of the competing grammar to do so. The failure to

successfully analyze a grammar can be calculated mathematically and is called the penalty probability.

(2) The penalty probability of G_i in a linguistic environment E is:

$$c_i = \Pr(G_i \not\to s \mid s \in E)$$

According to Yang, the penalty probabilities determine the outcome of language acquisition; as the input favors G_1 over G_2, G_2's penalty probability will increase and G_1's decrease, rendering G_1 the more successful grammar. This is illustrated in (3).

(3)

$$\lim_{t \to \infty} P_1(t) = \frac{c_2}{c_1 + c_2} \qquad\qquad \lim_{t \to \infty} P_2(t) = \frac{c_1}{c_1 + c_2}$$

At generation n the linguistic environment $E_{G1,\ G2} = pG_1 + qG_2$, where $p + q = 1$. This means that a proportion p of expressions is generated by G_1, and a proportion q is generated by G_2. Together, they make up the total linguistic evidence that is available to the learners in generation $n + 1$. This means that the penalty probabilities c_1 and c_2 are βq and αp. From (3), the weights of G_1 and G_2 that are internalized in the learners of generation $n + 1$ are calculated, namely p' and q'. The equations in (4) illustrate the dynamics of a two-grammar system.

4)

$$p' = \frac{\alpha p}{\alpha p + \beta p} \qquad\qquad q' = \frac{\beta q}{\alpha p + \beta q}$$

From the equations in (4) it can be derived that p'/q'= αp/βq. So in order for G_2 to drive out G_1, the weight of G_2 must increase in future generations until the weight of G_1 becomes 0. In other words, it must be true that *q' >* q, which means *p'/q' < p/q*. The conclusion is that this is a sufficient and necessary condition for grammar competition in a population.

5)   The Fundamental Theorem of Language Change

G_2 overtakes G_1 if β > α: the advantage of G_2 is greater than that of G_1.

From (5), we obtain that if *q' > q* (G_2 is increasing), it must be true that *β > α*, and if *β > α*, G_2 will necessarily replace G_1. From this, Yang proposes the following corollary:

6)   Once a grammar is on the rise, it is unstoppable

This model makes clear predictions with respect to language change, which are relevant to the present/ past subjunctive alternation.

Per Yang's model, it is predicted that in a competition between a more general and a more specific grammar, the more general variant should win out because as time goes by it will be able to parse more and more sentences than the more specific one (i.e., β > α above). We saw in Chapter 4 that the past subjunctive has retained its past tense specification and that the reason why there is so much variation between present and past subjunctive in Argentinean Spanish is because the present subjunctive is

becoming tenseless (i.e., the past subjunctive has undergone no change in its tense specification). This property allows the present subjunctive to appear in *any* complement clause that requires subjunctive. On the other hand, in the grammar where the present subjunctive is tensed, the present subjunctive is only able to appear any time the context allows for an interpretation simultaneous with or posterior to utterance time. Hence, there are two competing grammars: the grammar with a tensed present subjunctive [-PAST, +AGR, -INDICATIVE] and the grammar with a tenseless subjunctive [-TENSE, +AGR, -INDICATIVE]. Clearly, the grammar with a tenseless subjunctive can parse more types of sentences than the grammar with a tensed subjunctive. In Yang's model, for a grammar G_1 to overtake a grammar G_2, it is required that G_1 have a greater advantage over G_2. This means that there must be more sentences in the environment that are incompatible with G_2 than with G_1. Following Yang, to calculate the advantage of G_1 over G_2, one must calculate the proportion of each type of sentences that each grammar cannot parse. First we need to determine what type of sentence each grammar cannot parse and then we can find the proportion of each in a corpus. In the case of the tensed (G_2) versus the tenseless subjunctive (G_1), the following are the types of sentences that each grammar cannot parse[16]:

---

[16] Remember the arrow ---> means "can parse" and the arrow with the line across means "cannot parse".

7. a. Advantage of [−Tense] grammar

    [−Tense] ---> *s* but [+Tense] --/-> s: [+PAST, −PAST]

    b. Advantage of [+Tense] grammar

    [+Tense] ---> *s* but [−Tense] --/-> s: [∅]

From (7) we can see that the [+Tense] grammar cannot parse clauses with the configuration [+PAST, −PAST]. This is, of course, when there is no availability of a DAR interpretation. The [−Tense] grammar, on the other hand, can parse every and all types of complement clauses and so the set of sentences it cannot parse is empty. So in this case, we do not really need to calculate the proportion of the pattern [+PAST, −PAST] because it will make no difference as the other grammar can parse 100% of the sentences so the proportion of [-Tense] grammar will always be larger. Therefore, per the Fundamental Theorem of Language Change, the [−Tense] grammar should overtake the [+Tense] grammar.

The corollary in (6) makes the same prediction since the grammar with the tenseless subjunctive is the one expanding (i.e., the tenseless subjunctive grammar is on the rise), this change cannot be reversed.

The question now becomes what will happen to the past subjunctive? Note that in both the [+Tense] and the [−Tense] grammar the past subjunctive is tensed and I showed that it cannot appear embedded under present tense because of this reason; the past subjunctive is a past form. So the growth of the [−Tense] grammar *per se* does not necessarily mean that the past subjunctive will be lost from complement clauses

with a past matrix. However, the Principle of Contrast and the results from the corpus study on *if*-clauses might offer an answer.

Recall that the corpus data about the variation in *if*-clauses shows that the subjunctive is quite strong in this construction, suggesting that the two subjunctive forms are specializing. Moreover, the Principle of Contrast makes two predictions: (i) the two subjunctive forms either diverge in meaning (i.e., they specialize) or (ii) one of them will disappear. With respect to (i), the split is between counterfactuality for the past subjunctive and anywhere else for the present. As for (ii), if either of them disappears it would have to be the past subjunctive. If the past subjunctive were to win out and become (again) the only form allowed under past matrix clauses, this would violate Yang's Fundamental Theorem and its corollary. For the past subjunctive to win out, it would mean that the [−Tense] grammar would lose but this is the grammar that has an advantage over the [+Tense] grammar and the one that is expanding. So this outcome would contradict the model. As a result, if one of the forms is to disappear from complement clauses, as is expected, it will be the past subjunctive. So regardless of which path the system takes, replacement or specialization, the outcome in complement clauses appears to be the same: the past subjunctive will disappear from complement clauses.

What about the change that affected the two past subjunctives? Can we use Yang's model to account for this development? The answer appears to be no. Not every case of language change is a case of grammar competition where one grammar has an advantage over the other. These two past subjunctives have the same meaning and when the form in –*ra* took over all the contexts of the form in –*se*, the form in –*se*

did not change its meaning, and so both forms can appear in the same contexts. The grammar with the –*ra* form does not appear to be able to parse more sentences than a grammar with the form in –*se.* This type of change, where grammar competition is not involved and neither variant seems to have an advantage over the other, is an example of neutral change (Lass 1997, Kauhanen 2016). Neutral change is the type of change where the probability that a language learner will adopt a certain linguistic variant only depends on the frequency of that variant in the environment. Importantly, neutral change *can* lead to replacement of one form over the other (Wallenberg 2016, Kauhanen 2016), which appears to be the result with the two past subjunctives.

In sum, in this section I have presented theoretical and empirical arguments to support the claim that a grammar with a tenseless subjunctive in Argentinean Spanish is likely to win out over a grammar with a tensed present subjunctive. Moreover, per the Principle of Contrast we saw that the absence of meaning contrasts between the tenseless and the past subjunctive cannot persist over time. The outcome of this process maybe specialization of the two subjunctives into non-overlapping contexts, or disappearance of one of them. Yang's model predicts that if one of these forms is to disappear it must be the past subjunctive. If the past subjunctive were to win, this would mean it would be the only form able to appear under past matrix clauses. Therefore, the present subjunctive would go back to its present-only contexts, which means the winning grammar would be the [+Tense] grammar, contrary to what the model predicts.

3.   The Actuation Problem: Why in Argentina?

The question that every instance of language change brings to mind is why a particular change takes place in variety A and not in variety B of the same language. This question is known as the *actuation* problem (Weinrich *et al* 1968). In order to try and answer this question, in this last section I will present historical demographic data to argue that the dialects where the present subjunctive appears in violations of SOT (i.e., Peru, Bolivia, Ecuador, Argentina) have in common the fact that they have had a large number of L2 speakers in their history.

3.1.   The Demographics of Contact in Peruvian and Argentinean Spanish

Peru has approximately 25 million people, out of whom 4 million consider themselves speakers of an indigenous language, mostly Quechua (Crespo del Río 2014). Most of these speakers are also bilingual in Spanish and over 50% of school-age children in the Andean region are bilingual as well (FUNPROEIB Andes 2009). Bilingualism in Peru has been stable since the time of Spanish colonization in the 16th century and Quechua speakers have learned Spanish as a second language giving way to a variety of Spanish characterized by linguistic transfer from Quechua (Cerrón-Palomino 2003, Escobar 1977). Andean Spanish, as the language in this region is known as, is, however, also spoken by monolingual Spanish speakers given that some bilingual speakers, themselves speakers of Andean Spanish, prefer to raise their children only in Spanish so children might acquire Andean Spanish from their parents but without actually being speakers of Quechua themselves (e.g., Cerrón-Palomino 2003, De Granda 1993, Escobar 1977).

In Argentina, especially in Buenos Aires, the largest language contact took place between Italian and Spanish[17] due to the mass Italian immigration that took place in the late 19th and early 20th century. To put this into perspective, in 1869 Argentina had a population of 1.8 million people and in less than fifty years it received 2.5 million European immigrants. By 1914, foreigners outnumbered Argentinean-born citizens two to one in the areas of Santa Fé, Córdoba and Buenos Aires. Three fourth of the adult population of Buenos Aires was immigrant. Italians comprised the largest number of immigrants making up 55% of the total immigration population, followed by Spaniards with 26% (Scobie 1974). Unlike with Quechua speakers in Peru, Italians and other immigrants as well, adjusted to Argentinean society quite rapidly and bilingualism was short-lived (Klee and Lynch 2009). However, despite the relative ease with which Italians adapted to the new country and the rapid shift to Spanish, there still developed a type of hybrid language between (Northern) Italian and Spanish called *Cocoliche* (Whinnom 1971, Fontanella de Weinberg 1979b, Lavandera 1984). The status of Cocoliche has been a source for debate. Most researchers contend that Cocoliche was not a pidgin (Whinnom 1971, Fontanella de Weinberg 1979b, Lavandera 1984) others define it mostly as what Cocoliche was not and in this regard Cocoliche is simply defined as a transitional mixed language (Cancellier 2001).

The language contact situation in Argentina is clearly different than in Peru in many respects but it is similar in one crucial aspect. In both countries there was high contact with a foreign or non-Spanish language that disrupted the normal acquisition

---

[17] Needless to say there was and still is contact with indigenous languages in northern and southern Argentina but the magnitude of the contact with Italian was far greater than with these languages and it spread throughout the country whereas the influence of indigenous languages has remained at the regional level.

of Spanish. The Italian influence on Argentinean Spanish, as well as Quechuan influence on Peruvian Spanish have been reported to have affected the language at various levels of grammar such as the lexicon, prosody and morphosyntax. In the next section I will discuss the changes in prosody in Argentinean Spanish and in morphosyntax in Peru and Argentinean Spanish that have been claimed to originate from language contact.

3.2.   Contact-Induced Language Change in Spanish

Languages in contact influence one another at all levels of grammar (e.g., Weinrich 1953, Thomason and Kaufman 1988, Harris and Campbell 1995) but the way in which this influence manifests itself is not always predictable. Heine and Kuteva (2008) define contact-induced linguistic change as change that happens when a group of speakers shows a linguistic behavior that is different from that of previous generations of speakers and where this different behavior can be demonstrated to have been influenced by language contact.

Spanish has been in contact with indigenous, African and European languages since its arrival in the Americas (Lipski 1999a, 1999b). In North America, Spanish has been in contact with English since at least the 19th century (Lipski 2010). The areas of grammar affected by this diverse type of contact have been extensive, including lexical borrowing and calquing as well as morphosyntax, semantics and phonetics/phonology. I will discuss two examples that have been reported as contact-induced change in the two Spanish varieties that exhibit high amounts of violations of SOT, namely Argentina and the Andean dialects.

Andean Spanish exhibits clitic doubling that is different from that found in Standard Spanish. Andean Spanish is the language spoken in the Highlands of Bolivia, Peru and Ecuador and northeastern Chile, northwestern Argentina and southwestern Colombia. This variety is also associated with high contact with Quechua and is sometimes the recessive language of bilingual Quechua-Spanish speakers (Lipski 2010). The type of clitic doubling found in this variety is one where the masculine singular direct object clitic *lo* is doubled with the direct object but, unlike standard Spanish, the clitic does not agree in gender and number with the direct object; it is invariably *lo* (7-8).

7. ¿Me **lo** va a firmar **la** **libreta**?
    me LO go.3S.Pres to sign the.Fem card
    "Will you sign the book for me?"
                                    (Argentina: Rojas 1980:83)

8. Le pedí que me **lo** calentara **la** **plancha**
    her ask.1S.Past that me LO heat up.3S.Past.Subj the.Fem iron
    "I asked her to heat up the iron for me"
                                    ````(Perú: Pozzi-Escot 1972: 130)

Lipski (2010) argues that this construction is a result of contact with Quechua in Andean Spanish. Quechua marks direct objects with the suffix *–ta* or *–man* with verbs of motion (e.g., Lastra 1968; Cusihuamán 1976, Catta 1985). This marker is invariable and cliticizes to all direct object nouns. Although *–ta* does not occupy the same syntactic position as the invariable clitic *lo* in Spanish, in a typical SOV Quechua sentence, where the direct object precedes the verb, *-ta* happens to appear preverbally, which is the same position where *lo* appears in Spanish (Lipski 2010). Hence, *lo* could

be interpreted as a transitive marker comparable to Quechua –*ta*. Since *lo* only appears in transitive clauses, a dominant-Quechua speaker of Spanish is likely to overgeneralize the use of *lo* to all transitive clauses similar to the marker -*ta* (Lipski 2010). This type of invariable clitic doubling is only found where Spanish is in contact with indigenous languages, which strengthens the argument that it is a case of contact-induced language change.

Another type of contact-induced linguistic change is that found in the Spanish spoken in Buenos Aires. In this case the linguistic contact is not with an indigenous language but with Italian, the language of the largest immigration group in Argentina in the late 19[th] and early 20[th] centuries (Fontanella de Weinberg 1987, Ennis 2015). In this case, change happened at the intonational or prosodic level. Colantoni and Gurlekian (2004) argue that in Buenos Aires Spanish the prosodic systems of Spanish and Italian have converged and as a result two systems that were typologically similar before contact became even more similar after contact.

Italian and Spanish are both intonation-only languages (Gussenhoven 2004) and syllable-timed (Ramus *et al* 1999, Dauer 1983). Italian exhibits more lengthening effects compared to Spanish, resulting in greater durational variability of vocalic and consonant intervals and in higher proportion of vocalic material. In Peninsular Spanish the unmarked pattern for broad focus in declaratives consists of a rise with the peak late in the tonic syllable or in the post-tonic syllable (McMahon 2004). Buenos Aires Spanish has earlier peak alignment near the beginning or center of the stressed syllable (Colantoni and Gurlekian 2004, McMahon 2004, Gabriel *et al* 2010). This pattern is found in other varieties of Spanish but only for contrastive focus. For utterance final

patterns, downstep appears frequently in Spanish, but in Buenos Aires Spanish downstep affects even the first accent in the intonation group with a very sharp fall. These two features make Buenos Spanish more like Italian (Benet *et al* 2012).

In order to test the hypothesis that Buenos Aires Spanish intonational patterns resulted from contact with Italian, Benet *et al* (2012) studied the speech of three types of speakers: native-Italian L2 Spanish learners (ITA), native Peninsular Spanish speakers (SPA L1) and native Buenos Aires speakers (BS-AS). Their hypothesis was that the Italian speakers would pattern with the Buenos Aires Spanish speakers in vocalic material (%V) and durational variability of C/V intervals. They found that SPA L1 showed lower values for both %V and variability of C/V intervals. On the other hand, BS-AS and SPA L2 patterned together showing high degrees of durational variability and %V. They conclude that the rhythmic properties of Buenos Aires Spanish can be explained as a consequence of transfer from the Italian immigrants' L1 that took place during the process of their acquisition of L2 Spanish in Argentina.

A different change that has happened in Argentina is the expansion of the preterite (e.g. *comí* "I ate") at the expense of the present perfect (e.g., *he comido* "I have eaten) to express current relevance (Fløgstad 2014). Fløgstad discusses whether this change may be a result of language contact. He acknowledges that the time span of the change coincides with the mass arrival of Italians in Argentina and points out that in Sicilian, the language which half of the Italians in Argentina spoke, the preterit is used more often than in other varieties and the present perfect is rather rare. Having said this, he rejects the hypothesis that this change may be due to contact with Italian based on theoretical considerations. He mentions that the lack of a long period of

bilingualism makes the contact-induced hypothesis relatively implausible. However, he appears to be relying on a definition of contact-induced change that only involves transfer of a structure in the speaker's L1 into the L2. Change due to language contact may take many different forms and transfer of a structure between the two languages is only one possible type (see section 3.2. below for more on this). Moreover, the situation in Argentina fits the criteria proposed by other researchers in the language change literature that for change to occur generation $n + 1$ needs to be exposed to a substantially different linguistic environment than generation $n$ (e.g.,Yang 2002, Kroch 1989). With over half the population in Buenos Aires being foreign born Italians, (and 32% countrywide) and the existence of a hybrid language like Cocoliche it seems likely that the linguistic environment changed, resulting in changes in the grammar that go beyond mere transfer of linguistic structures.

In sum, the Spanish spoken in the Andean region and in Buenos Aires shows signs of having gone through changes that were the result of contact with speakers of other languages. In the case of the Andean dialects there is still daily contact between Spanish and Quechua or other indigenous languages where bilingualism is very common. In Argentina, contact with Italian occurred during the process of settlement of the country through a mass influx of Italian immigrants during the late 19th and early 20th century.

In the next section, I will describe in more detail the influence of Italian on Argentinean Spanish to show that Italian affected not just the phonology and phonetic of Argentinean Spanish but also the lexicon and, I will claim, the syntax as well.

### 3.3. Italian Influence on Argentinean Spanish

The previous section illustrated the effects of language contact in two varieties of Spanish that exhibit large amounts of violations of SOT. In this section, I will discuss in more detail other areas of the grammar in Argentinean Spanish that have been reported to have been influenced by Italian.

The two language-contact cases reported share the characteristic that the linguistic contact resulted in the minority language affecting or changing the majority language. In the Andean dialect we saw the influence of Quechua on clitic doubling, and in Argentina Italian had an effect on the prosodic patterns of Buenos Aires Spanish. In both cases, the new structure is not a complete innovation because a similar or equivalent structure exists in non-contact varieties of Spanish. In the case of clitic doubling in the Andean dialect, the innovation is not the fact that there is clitic doubling in the contact variety, but it is the particular features of this construction that differ from the standard language; in standard Spanish the clitic must agree in gender and number with the object but in Andean Spanish the clitic is invariably *lo.* Moreover, the clitic has become a marker of transitivity making it obligatory in all transitive clauses (Lipski 2010). In Spanish, clitic doubling of direct objects is not obligatory and when it occurs it does so with human direct objects.

In the case of the prosodic changes that Italian brought about in Buenos Aires Spanish we find a similar observation. The peak alignment in Buenos Aires Spanish, which occurs near the beginning or at the center of the stressed syllable, is a prosodic pattern that exists in standard Spanish but there it is used for contrastive focus. The same applies for downstep in utterance final patterns; it is quite common in standard

Spanish but Buenos Aires Spanish has taken it further by applying a much sharper fall and earlier in the intonation group.

What these two cases illustrate is that one type of contact-induced change is one where a pragmatically marked construction or pattern becomes the syntactically unmarked form after contact (e.g., Givón 1979a, 1979b). I suggest that a similar process happened with the structure where the present subjunctive appears under a past matrix clause. This is a marked construction in Standard Spanish, only grammatical when a Double Access Reading (DAR) is available, which has become the unmarked form in these two Spanish varieties.

Italian has also been claimed to have had an effect on the variation in *if*-clauses between the past subjunctive and the conditional. Lavandera (1975) found a strong correlation between use of conditional (i.e., *comería* "I would eat" instead of *comiera* "ate") and Italian background. Silva-Corvalán (1984) finds variation between past subjunctive and conditional in two areas where Spanish was in contact with another language: the Basque Country (Spanish and Basque) and Argentina (Spanish-Italian). She concludes that this type of variation is likely to have arisen due to contact of Spanish with these two languages. However, the type of contact in the two areas is different. In the Basque country there is stable bilingualism between Spanish and Basque, but in Argentina bilingualism was a transient phenomenon (Whinnom 1971) and today most of the population is monolingual in Spanish. Another difference between the contact situation in the Basque Country and in Argentina is that Basque does not have a subjunctive and the form used in Basque *if*-clauses is equivalent to the

Spanish conditional, and both forms appear in the protasis and apodosis of the conditional sentence in Basque. Italian, on the other hand, is not only typologically closer to Spanish than Basque is, but it also uses the same verb forms that Spanish uses in counterfactual *if*-clauses (i.e., past subjunctive and conditional). On the other hand, in future *if*-clauses Italian uses the future in both clauses. Silva-Corvalán claims that the conditional sentence in Basque, and the future conditional in Italian, served as the substratal influence for the use of the conditional in both clauses in counterfactual *if*-clauses in Spanish. While this account might be possible, I would like to propose that the Basque case, as the cases that I have discussed above with Quechua and Italian prosody are a different type of contact-induced change than the cases with subjunctive variation.

Heine and Kuteva (2008) provide a typology of contact-induced linguistic transfer, where they define grammatical calquing as a process where a new grammatical structure is created based on a structure of another language. They claim that in this process meanings and structures are borrowed but not forms. Under this definition, the variation in Basque seems like a clear case of grammatical calquing as a very similar structure exists in Basque and its structure was borrowed into Spanish but using the Spanish verb forms. The same applies for the Quechua-Spanish structure and the Italian-Argentinean Spanish prosodic patterns. Both of these cases are relatively transparent cases of grammatical calquing.

Another type of contact-induced linguistic change is restructuring. Restructuring can lead to two possible outcomes, namely loss or rearrangement. In

Argentina the present/past subjunctive variation together with the lack of variation we found in *if*-clauses appear to illustrate a case of restructuring. As I have mentioned before, restructuring in this case would involve specialization of the two subjunctives into two separate and non-overlapping environments: counterfactuality for past subjunctive and anywhere else for present subjunctive. In those areas where variation between past subjunctive and conditional has been found to be higher than in our corpus, we would be in the presence of restructuring that leads to loss, in this case of the past subjunctive as it would appear to be losing ground in complement clauses and counterfactual *if*-clauses. The discrepancy between our findings and earlier findings with respect to variation in *if*-clauses needs to be explored further to determine whether variation in this construction is mostly regional or whether the differences come from the type of data collected.

In short, the varieties of Spanish where the present subjunctive freely appears under past matrix clauses share the property that both are considered contact varieties, albeit under different circumstances. Peruvian Spanish is a contact variety because of its contact with Quechua, which has resulted in a high number of bilingual speakers since colonization[18]. Argentinean Spanish is considered a contact language because of the intensive linguistic contact with Italian at the turn of the 20th century. It seems likely that the loss of a formal but semantically vacuous mechanism as SOT might have been the result of contact due to a disruption of the language acquisition process in the presence of such high numbers of adult non-native speakers in the population.

---

[18] I have focused my discussion on Peru as a way to illustrate my claim but the same facts hold of the other Andean dialects such as Ecuador and Bolivia, where there is close contact with indigenous languages and high amounts of violations of SOT have been reported.

The alternative explanation would have to stipulate that this change arose in all these varieties for different reasons, which then raises again the question of why in these varieties and not others.

**4**.    **Conclusion**

In this chapter I discussed the Principle of Contrast to argue that the variation between present and past subjunctive in Argentinean Spanish is likely not to be stable over time and that the doublet created out of the loss of tense distinctions in the subjunctive is predicted to be resolved by linguistic and cognitive pressures against doublets in language. I then introduced Yang's (2002) Model of Language Change and Variation to argue that the likely winner in this type of alternation is the tenseless subjunctive because it is the form that has extended its distribution and therefore the grammar that contains the tenseless subjunctive is more general (i.e., successfully parses more sentences) and it is the grammar that is increasing. These two predictions fall out of the Fundamental Theorem of Language Change and its corollary, respectively.

In the last section of the chapter, I explored a possible answer to the actuation problem. I discussed the linguistic scenarios in Peru and Argentina in light of each country's language contact situation with Quechua in Peru, and Italian in Argentina. I showed that these two countries have, or have had, high numbers of L2 speakers and this has had an effect on the language's grammar. Since all the varieties that exhibit loss of SOT in subjunctive are contact varieties of Spanish, it seems appropriate to conclude that this is a type of contact-induced linguistic change.

# REFERENCES

Abusch, D., (1988). *Sequence of tense, intensionality, and scope*. WCCFL 7, 1–14.

Andersen, Henning. (1973). Abductive and deductive change. *Language* 49, 765-793.

Aronoff, Mark. 1976. Word Formation in Generative Grammar. Linguistic Inquiry Monograph No. 1. Cambridge: MIT Press.

Atwood, E. B. (1953). A Survey of Verb Forms in the Eastern United States. Chicago.

Avrutin, S., & Babyonyshev, M. (1997). Obviation in subjunctive clauses and Agr: evidence from Russian. *Natural Language & Linguistic Theory*, *15*(2), 229-262.

Benet, A., Gabriel, C., Kireva, E., & Pešková, A. (2012). Prosodic transfer from Italian to Spanish: Rhythmic properties of L2 speech and Argentinean Porteño in *Speech Prosody*.

Berg, T. (2014). On the relationship between type and token frequency. *Journal of Quantitative Linguistics*, *21*(3), 199-222.

Bock, J. K., & Irwin, D. E. (1980). Syntactic effects of information availability in sentence formulation. *Journal of Verbal Learning and Verbal Behavior*, 19, 467–484.

Bock, J. K., H. Loebell, and R. Morey (1992). From conceptual roles to structural relations: Bridging the syntactic cleft. Psychological Review, 99:150–171.

Bolinger, D. (1977). *Meaning and Form*. London: Longman

Bresnan, J., A. Cueni, T. Nikitina, and R. H. Baayen (2004). Predicting the dative alternation. In G. Boume, I. Kraemer, and J. Zwarts, eds., Cognitive Foundations of Interpretation. Royal Netherlands Academy of Science, Amsterdam.

Bybee, J., & Thompson, S. (1997). Three frequency effects in syntax. In *Annual Meeting of the Berkeley Linguistics Society* (Vol. 23, No. 1, pp. 378-388

Bybee, J. (2003). 19 Mechanisms of Change in Grammaticization: The Role of Frequency. *The handbook of historical linguistics*, 602.

Bybee, J., & Hopper, P. (Eds.). (2001). Frequency and the emergence of linguistic structure. Amsterdam: Benjamins.

Cancellier, A. (2001). Italiano e spagnolo a contatto nel Río de la Plata. I fenomeni del cocoliche e del lunfardo. In Antonella, Cancellier and Renata, Londero (eds.), *Italiano*

*e spagnolo a contatto*. Atti del XIX Convegno della Associazione Ispanisti Italiani, Roma, 16–18 settembre 1999, 69–84. Padova: Unipress.

Catta, J. (1985). *Gramática del quichua ecuatoriano*. Quito: Ediciones Abya-Yala.

Cerrón-Palomino, R. (2003). *Castellano andino: aspectos sociolingüísticos, pedagógicos y gramaticales*. Fondo Editorial PUCP.

Chafe, W, L. (1971). *Directionality and paraphrase*. *Language 47*, 1-26

Chen, P. (1986). Discourse and particle movement in English. *Studies in Language. International Journal sponsored by the Foundation "Foundations of Language",* 10(1), 79-95.

Chomsky, N. (1986) Knowledge of Language: Its Nature, Origin, and Use, Praeger, New York.

Clark, E. V. (1987). The principle of contrast: A constraint on language acquisition. *Mechanisms of language acquisition*, 1, 33. Chicago

Colantoni L. and Gurlekian, J. (2004) Convergence and intonation: historical evidence from Buenos Aires Spanish. *Bilingualism: Language and Cognition* 7:107-119.

Comrie, B. (1985). *Tense* (Vol. 17). Cambridge University Press.

Corvalan, C. S. (1984). The social profile of a syntactic-semantic variable: Three verb forms in Old Castile. *Hispania*, *67*(4), 594-601.

Cottell, S. (1995). The representation of tense in Modern Irish. *Geneva generative papers*, *3*, 105-124.

Cusihuamán, Antonio 1976. Gramática quechua: Cuzco-Collao. Lima: Instituto de Estudios Peruanos.

Davies, Mark. (2016-) *Corpus del Español/ Web Dialects 2 billion words*. Available online at http://www.corpusdelespanol.org.

De Granda, Germán (1993). Quechua y el español en el noroeste argentino: una precisión y dos interrogantes. Lexis 17.2:259–74

Dehé, N. (2002). *Particle verbs in English: Syntax, information structure and intonation* (Vol. 59). John Benjamins Publishing.

Dauer, R. (1983) "Stress-timing and syllable-timing reanalyzed", *Journal of Phonetics* 11:51-

62.

Demirdache H. & Lungu, O. (2011): "Zero-tense vs. indexical construals of the present in French L1". R. Musan & M. Rathert (eds.), *Tense across Languages*, Berlin : Mouton De Gruyter, 233-256

Demirdache, H., Uribe-Etxebarria, M. (2007). Economy constraints on temporal subordination. In: Saussure, Louis de; Moeschler, Jacques; Puskás, Genoveva (eds). *Recent Advances in the Syntax and Semantics of Tense, Aspect and Modality*. Berlin, New York: Mouton de Gruyter: 169-192.

del Rio, C. C. (2014). *Tense and mood variation in Spanish nominal subordinates: The case of Peruvian varieties*. University of Illinois at Urbana-Champaign.

Eberenz, R. (1983). Sea como fuere. En torno a la historia del futuro de subjuntivo español. In Bosque, I. (ed.), 383-409.

Enç, M. (1987). Anchoring conditions for tense. *Linguistic inquiry*, 633-657.

Ennis, Juan A. (2015). Italian-Spanish Contact in Early 20[th] Century Argentina. *Journal of Language Contact 8*. 112-145.

Erker, D., & Guy, G. R. (2012). The role of lexical frequency in syntactic variability: Variable subject personal pronoun expression in Spanish. *Language*, *88*(3), 526-557.

Espinoza, A. (1930). The use of the conditional for the subjunctive in Castilian popular speech, *Modern Philology,* 27: 445-449.

Fellbaum, C. (2005). Examining the constraints on the benefactive alternation by using the World Wide Web as a corpus. In M. Reis and S. Kepser, eds., *Evidence in Linguistics: Empirical, Theoretical, and Computational Perspectives*. Mouton de Gruyter, Berlin/New York.

Fløgstad, G. (2014). The expansion of the Preterit in Rioplatense Spanish. *The sociolinguistics of grammar*, *154*, 117.

Fontanella de Weinberg, María Beatriz. (1979a). *La asimilación lingüística de los inmigrantes. Mantenimiento y cambio de lengua en el sudoeste bonaerense*. Bahía Blanca: Departamento de Humanidades de la Universidad Nacional del Sur.

Fraser, B. (1976). *The verb-particle combination in English*. Academic Press.

Gabriel, C., Feldhausen, I., Pešková, A., Colantoni, L., Lee, S., Arana, V. and Labastía, L. (2010). Argentinian Spanish Intonation, in P. Prieto and P. Roseano [Eds], *Transcription of Intonation of the Spanish Language*, 285-317, Lincom.

Geeraert, K., & Newman, J. (2011). I haven't drank in weeks: the use of past tense forms as past participles in English corpora. *Language and Computers*, *73*(1), 13-33.

Giorgi, Alessandra & Pianesi, Fabio. 1997. *Tense and aspect. From semantics to morphosyntax*. New-York/Oxford : Oxford University Press.

Givón, Talmy. (1979a). *On Understanding Grammar*. New York: Academic Press.

Givón, Talmy. 1979b. From discourse to syntax: grammar as a processing strategy. In: T. Givón, (ed.). *Discourse and syntax [Syntax and semantics 12]*. New York - San Francisco - London: Academic Press. 81- 112.

Green, G. (1971). *Some implications of an interaction among constraints*. CLS, 7:85– 100.

Gries, S. T. (2003). Towards a corpus-based identification of prototypical instances of constructions. *Annual Review of Cognitive Linguistics*, 1:1–27.

Gries, S. T. (2005). Syntactic priming: A corpus-based approach. *Journal of Psycholinguistic Research*, 34:365–399.

Guajardo, G. (2010). *The Syntax of Temporal Interpretation in Embedded Clauses: Binding Theory in the Temporal Domain*. VDM Verlag Dr. Müller. Saarbrücken: Germany

Gussenhoven, C. (2004). *The phonology of tone and intonation*. Cambridge University Press.

Halle, Morris. (1962). *Phonology in generative grammar*. Word 18, 54-72.

Harris, Alice C. & Lyle Campbell. (1995). *Historical syntax in cross-linguistic perspective*. Cambridge:Cambridge University Press.

Hawkins, J. (1994). *A Performance Theory of Order and Constituency*. Cambridge University Press: Cambridge.

Hawkins, J. A. (2002). Symmetries and asymmetries: their grammar, typology and parsing. *Theoretical Linguistics*, *28*(2), 95-150.

Heine, B., & Kuteva, T. (2008). Constraints on contact-induced linguistic change. *Journal of Language contact*, *2*(1), 57-90.

Hornstein, N. (1993). *As time goes by: Tense and universal grammar*. MIT Press.

Iatridou, S. (2000). The grammatical ingredients of counterfactuality. *Linguistic inquiry*, *31*(2), 231-270.

Kauhanen, H. (2017). Neutral change. *Journal of Linguistics*, *53*(2), 327-358.

Khomitsevich, O. (2007). *Dependencies across phases: From sequence of tense to restrictions on movement*. Netherlands Graduate School of Linguistics, Utrecht University.

Klee, C. A. (2009). *El español en contacto con otras lenguas*. Georgetown University Press.

Kratzer, A. (1998). More structural analogies between pronouns and tenses. In *Semantics and linguistic theory* (Vol. 8, pp. 92-110).

Kroch, Anthony. (1989b). Reflexes of Grammar in Patterns of Language Change. Journal of *Language Variation and Change* 1, 199-244.

Kroch, A. (1994). Morphosyntactic variation. In *Proceedings of the thirtieth annual meeting of the Chicago Linguistic Society* (Vol. 2, pp. 180-201).

Krug, M. (2000). Emerging English Modals. *A Corpus-Based Study of Grammaticalization. Berlin: Mouton de Gruyter*.

Laca, B. (2010). Mood in Spanish. *Mood in the languages of Europe. Amsterdam, John Benjamins*, 198-221.

Laca, B. (2010b). The puzzle of subjunctive tenses. *Selected Proceedings of Going Romance*, 2008, 171-194.

Ladusaw, William. (1977). Some problems with Tense in PTQ. *Texas Linguistic Forum 6*. Austin: University of Texas.

Lapata, M. (1999). Acquiring lexical generalizations from corpora: A case study for diathesis alternations. In *Proceedings of the 37th Meeting of the North American Chapter of the Association for Computational Linguistics*, pp. 397–404. College Park, Maryland.

Lapesa, R. (1997). *Historia de la Lengua Española*. Biblioteca Románica Hispánica. Credos: Madrid

Lathrop, T. A. (2003). *The evolution of Spanish* (Vol. 1). European masterpieces.

Lavandera, B. (1975). *Linguistic Structure and Sociolinguistic Conditioning in the use of verbal endings in* si-clauses. PhD. dissertation University of Pennsylvania. Ann Arvbor: University Microfilms.

Lightfoot, David W. (1979). Principles of Diachronic Syntax. Cambridge: Cambridge University Press.

Lightfoot, David W. 1988. Syntactic change. In Newmeyer, Frederick J. (ed.), Linguistics: The Cambridge Survey. Vol. 1. Cambridge: Cambridge University Press, 303-323.

Lightfoot, David W. 1981. Explaining syntactic change. In Hornstein, Norbert and David W. Lightfoot, (eds.), Explanation in Linguistics: The Logical Problem of Language Acquisition. New York: Longman, 209-240.

Lighfoot, David W. (2017). Plenary talk at Georgetown University Round Table 2017.

Lipski, J. (1999a). Creole-to-creole contacts in the Spanish Caribbean: the genesis of Afro Hispanic language. *Publications of the Afro-Latin American Research Association* (PALARA) 3: 5–46.

Lipski, J. (1999b). Chinese–Cuban pidgin Spanish: implications for the Afro-creole debate. In John Rickford and Suzanne Romaine (eds.), Creole Genesis, Attitudes and Discourse. Amsterdam: John Benjamins, pp. 215–33.

Lipski, J. (2010). Spanish and Portuguese in Contact in (ed) Raymon Hickey *The Handbook of Language Contact.*West Sussex: Wiley-Blackwell.

Lastra, Y. (1968). Cochabamba Quechua syntax. The Hague: Mouton.

Maxwell, S. E., & Delaney, H. D. (2003). *Designing experiments and analyzing data: A model comparison perspective* (Vol. 1). Psychology Press.

Jean-Baptiste Michel, Yuan Kui Shen, Aviva Presser Aiden, Adrian Veres, Matthew K. Gray, William Brockman, The Google Books Team, Joseph P. Pickett, Dale Hoiberg, Dan Clancy, Peter Norvig, Jon Orwant, Steven Pinker, Martin A. Nowak, and Erez Lieberman Aiden* (2010). Quantitative Analysis of Culture Using Millions of Digitized Books.. *Sciece*

McMahon, A. (2004) Prosodic change and language contact. *Bilingualism: Language and Cognition* 7:121-123.

Mulford, R.C. (1983). On the acquisition of derivational morphology in Icelandic: Learning about –ari. *Islenskt mál og almenn málfraedi* 5, 105-125.

Munn, Alan. (2015). Participle levelling in American English: syntactic differentiation and auxiliary have. Paper presented at *The Perfect: variation workshop. Synchrony, diachrony, and acquisition*, Trondheim, November 5–7, 2015.

Ogihara, T. (1995). The semantics of tense in embedded clauses. *Linguistic inquiry*, 663-679.

Ogihara, T. (2013). *Tense, attitudes, and scope* (Vol. 58). Springer Science & Business Media.

Partee, B. H. (1973). Some structural analogies between tenses and pronouns in English. *The Journal of Philosophy*, *70*(18), 601-609.

Penny, R. (1991). A History of the Spanish. *Language. Cambridge UP*.

Picallo, C. (1990). El nudo FLEX y el parámetro de sujeto nulo. *Indicativo y subjuntivo*, 202-33.

Pinker, S. (1984). *Language learnability and language learning*. Cambridge, MA: Harvard.

Pintzuk, Susan. (1991). Phrase structure in competition: Variation and change in Old English word order. Doctoral dissertation, University of Pennsylvania.

Poplack, S. (1991). The inherent variability of the French subjunctive. *Current issues in linguistic theory*, 235-263.

Quer, J. (1998). Mood at the interface. PhD Dissertation, University of Utrecht.

Quer, J. (2006). Subjunctives. *The Blackwell companion to syntax*, 660-684.

Radden, G., Köpcke, K. M., Berg, T., & Siemund, P. (2007). The construction of meaning in language. *Aspects of meaning construction*, 1-15.

Ramus, F., Nespor, J. and Mehler, J. (1999). Correlates of linguistic rhythm in the speech signal, *Cognition* 73:65-192.

Reichenbach, H., 1947. Elements of symbolic logic. New York: the Free Press; London: CollierMacmillan.

Ridruejo, E. (1990). ¿Cambios iterados en el subjuntivo español?. *Indicativo y subjuntivo*, 361-382.

Roberts, I., & Roussou, A. (2002). The Extended Projection Principle as a condition on the tense dependency. *Subjects, Expletives, and the EPP*, 125-155.

Ross, J.R., 1967. Constraints on Variables in Syntax. Ph.D. dissertation, Massachusetts Institute of Technology, Cambridge.

Santorini, Beatrice. (1989). *The generalization of the verb-second constraint in the history of Yiddish.* Ph.D. dissertation, University of Pennsylvania.

Santorini, Beatrice: (1992). 'Variation and Change in Yiddish Subordinate Clauses', *Natural Language and Linguistic Theory* 10, 595-640.

Sessarego, S. (2008). Spanish Concordantia Temporum: An Old Issue, New Solutions. In *Selected Proceedings of the 4th Workshop on Spanish Sociolinguistics*, ed. Maurice Westmoreland and Juan Antonio Thomas: 91-99. Somerville, MA: Cascadilla Proceedings Project.

Sessarego, S. (2010). Temporal concord and Latin American Spanish dialects: a genetic blueprint. *Revista Iberoamericana de Lingüística*, 5, 137-169.

Sprouse, J. (2011). A validation of Amazon Mechanical Turk for the collection of acceptability judgments in linguistic theory. *Behavior research methods*, *43*(1), 155-167.

Stowell, T. (1996). The phrase structure of tense. In *Phrase structure and the lexicon* (pp. 277-291). Springer Netherlands.

Stowell, T. (2007). The syntactic expression of tense. *Lingua*, *117*(2), 437-463.

Suñer, Margarita. (1990). El tiempo en las subordinadas. Tiempo y aspecto en español, ed by Ignacio Bosque. 77-105. Madrid: Cátedra.

Suñer, M., & Padilla-Rivera, J. (1987). Sequence of tenses and the subjunctive. *Hispania*, 70(3), 634-642.

Suñer, M. & Padilla Rivera, J. (1990). Concordancia temporal y subjuntivo. In Bosque, I. (ed.), 185-201.

Szmrecsányi, B. (2005). Language users as creatures of habit: A corpus-based analysis of persistence in spoken English. Corpus Linguistics and Linguistics Theory, 1:113– 149.

Taylor, J. R. (2002). *Cognitive grammar*. Oxford, UK: Oxford University Press.

Thomason, Sarah G. and Terrence Kaufman (1988). *Language Contact, Creolization, and Genetic Linguistics.* Berkeley: University of California Press.

Thompson, S. A. (1990). Information flow and dative shift in English discourse. In J. A. Edmondson, C. Feagin, and P. M¨uhlhausler, eds., Development and Diversity: Language Variation across Time and Space, pp. 239–253. Summer Institue of Linguistics and University of Texas at Arlington, Dallas.

Vinson, J. (1915-1916). Observations sur le development du langage chez l'enfant. *Revue de Linguistique et de Philologie Comparée 48*, 1-39.

Wallenberg, J. (2016). *Towards a model of variational specialization in acquisition*. Talk presented at University of Iceland.

Weinreich, Uriel (1953). Languages in Contact: Findings and Problems. The Hague: Mouton.

Weinreich, Uriel; William Labov: and Marvin I. Herzog. (1968). Empirical foundations for a theory of language change. In Winfred P. Lehmann & Yakov Malkiel (eds.), *Directions for historical linguistics*. Austin: University of Texas Press, 95-188.

Wexler, K and Culicover, P. (1980). *Formal principles of language acquisition.* Cambridge, MA: MIT Press

Whinnom, Keith. (1971). Linguistic hibridization and the 'special case' of pidgins and creoles. Dell Hymes (ed.), *Pidginization and Creolization of Languages*, 91–115. Cambridge: CUP.

Wolfram, W., & Schilling, N. (2015). *American English: dialects and variation*(Vol. 25). John Wiley & Sons.

Wurmbrand, S. (2014). Tense and aspect in English infinitives. *Linguistic Inquiry*.

Yang, C. D. (2002). *Knowledge and learning in natural language*. Oxford University Press on Demand.

Zagona, K. (2015). Sequence-of-tense and the features of finite tenses. *Nordlyd*, *41*(2), 261-276.